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TRANSITION REPORT 2025-26

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ABOUT THIS REPORT

The EBRD seeks to foster the transition to an open market-oriented economy and to promote entrepreneurship in the economies where it invests. To do this effectively, the Bank needs to analyse and understand the process of transition.

The purpose of the *Transition Report* is to advance this understanding and to share our analysis with partners.

The Office of the Chief Economist is responsible for the content of the report. The assessments and views expressed are not necessarily those of the EBRD. All analysis and data in the online country assessments are based on information available in late October 2025. In the report chapters, all assessments and data are based on information available in late August 2025.

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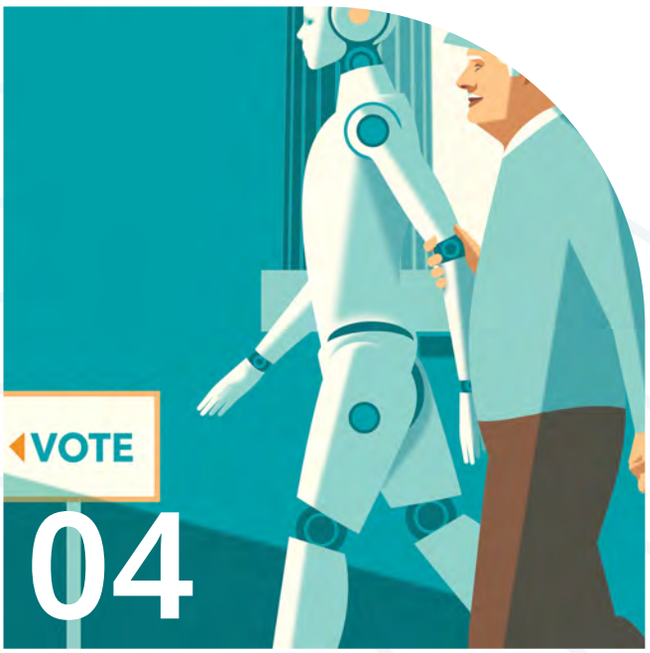


This report revisits demographic change and its profound implications, highlighting the challenges faced by rapidly ageing economies, as well as those with young, fast-growing populations.

FOREWORD

A grey wave is reshaping the global economy. Fewer births, more retirees and fewer workers to shoulder the fiscal burden of pensions and healthcare have prompted warnings about the economic consequences of ageing. At the other extreme, some argue that artificial intelligence (AI) and robots will soon conduct nearly all economically significant activities, making demographic concerns irrelevant. The reality is more complex. New technologies hold promise, but they will not fully compensate for a shrinking workforce. Demographic pressures are powerful, and their effects will weigh heavily on growth and living standards unless they are addressed using smart and proactive policies.

This report revisits demographic change and its profound implications, highlighting the challenges faced by rapidly ageing economies, as well as those with young, fast-growing populations.

Emerging Europe is ageing. Low fertility and a shrinking workforce will increasingly weigh on its growth prospects. Part of this effect can be offset by raising the pension age to prolong productive working lives, increasing the labour-force participation of women, and leveraging migration, innovation and technology to sustain prosperity.

None of these levers are straightforward, however. Raising the pension age is politically unpopular, and migration at the level required to offset demographic decline would be politically contentious. Increasing innovation is far from trivial, and while advances in AI may help some workers to become much more productive, others may be displaced and need to retrain.

For younger economies, the challenge is different, but no less urgent. Many economies in Central Asia, the southern and eastern Mediterranean and sub-Saharan Africa benefit from youthful populations that can sustain near-term growth. But this window of opportunity will be short lived. Turning a growing labour force into a genuine demographic dividend requires the rapid creation of high-quality jobs, the strengthening of education and effective initiatives to foster

entrepreneurship. Without such policies, demographic advantage risks turning into social and economic strain and a missed opportunity as fertility continues to fall and ageing eventually arrives.

As populations age, so do electorates and political leaders. Older voters, with their higher election participation rates, are increasingly shaping policy priorities, often favouring healthcare, pensions and, in some contexts, military spending, while showing less support for immigration, education and risk-taking in pursuit of economic growth. The world's leaders are also ageing, particularly in autocratic political systems. The greying of politics may ultimately prove an even bigger constraint than the greying of populations, narrowing the political space for changes such as pension reform, labour-market adjustments or large-scale migration policies. Rebalancing this dynamic will require not only daring reforms, but also efforts to mobilise younger voters, whose voices risk being drowned out as their numbers decline.

Yet demography is not destiny. Early and well-communicated reforms – from pension adjustments and migration frameworks to support for healthy ageing and investment in age-friendly jobs and the adoption of AI – can ease demographic pressures and shape long-term prosperity. Meeting this challenge will require courage. Politicians must be brave – willing to communicate difficult trade-offs, resist short-term pressures and act before demographic realities close off options. Only those who are willing to embrace bold reforms today and bring younger voters into the debate will secure shared prosperity for generations to come.

Beata Javorcik
EBRD Chief Economist

EXECUTIVE SUMMARY

The *Transition Report 2025-26* looks at the implications of demographic change for rapidly ageing economies, as well as economies with young, fast-growing populations. It outlines recent demographic trends, including declining fertility rates, and presents strategies that policymakers could deploy in response. These centre on prolonging productive working lives, boosting automation and facilitating labour mobility. The analysis focuses on artificial intelligence (AI) and migration policies in the EBRD regions and beyond, as well as ways in which demographic change shapes policy preferences and societal beliefs.

In emerging Europe, low fertility, ageing populations and shrinking workforces are increasingly weighing on economic growth. Combining greater migration, the use of technology to boost productivity growth and higher labour-force participation among older adults and women could offset some of these pressures. Parts of Central Asia and the southern and eastern Mediterranean (SEMED) region benefit from younger populations that can support near-term growth, yet they will soon experience similar ageing-related headwinds. While fertility rates in sub-Saharan Africa (SSA) are also declining rapidly, its young populations position its economies well to capture a demographic dividend over the next generation, provided they can absorb a rapidly growing labour force.

Fertility rates have fallen across EBRD economies, with many now well below the replacement rate of 2.1 children per woman, though the pace of decline and its underlying drivers vary. Delayed childbearing, shifting marriage patterns and economic circumstances combine to influence fertility outcomes, often resulting in families having fewer children than they would ideally like. Policies aimed at raising fertility range from cash transfers to enhanced childcare provision; however, their impact has been limited.

Demographic change is reshaping labour markets across the EBRD regions. In economies with ageing populations, work is gradually shifting towards more "age-friendly" jobs that reduce physical strain on the body and help older workers to stay active for longer, with such employment being especially attractive to women. As AI technology has advanced, younger, talent-rich companies have tended to be at the forefront of its adoption, expanding their workforces. While workers in some occupations are set to benefit from higher productivity thanks to AI, others face more pressure to reskill. In ageing economies, migration can help to mitigate labour shortages. In younger regions, supporting high-growth entrepreneurship is vital to creating enough good jobs for labour-market entrants.

As populations age and fertility rates decline, governments will need to respond with reforms that increase immigration, extend working lives, restructure pensions and harness technological innovation to boost productivity. Public support for these measures varies from economy to economy and is often weak – particularly among older individuals, who increasingly dominate both electorates and leadership positions. As societies age, they tend to become more conservative and less accepting of pension reforms and risk-taking in pursuit of economic growth. While cohort turnover has helped to offset some of ageing's effects on public opinion to date, views have become more polarised. Addressing these challenges will require early, inclusive and well-communicated reforms that consider economy-specific circumstances, as well as generational and geographical divides.

01

DEMOGRAPHIC TRENDS AND THE FUTURE OF GROWTH

For most of human history, population growth has been low and stable. Between 1800 and 1900, for example, annual growth rates were below 0.5 per cent. However, this changed in the early 20th century, when falling mortality and sustained high fertility led to a sharp acceleration in annual population growth, which peaked at over 2 per cent in the 1960s. The 1960s and 1970s were marked by fears that rapid population growth would outpace the growth of food supplies and infrastructure, depleting natural resources.

Today, while some economies are still experiencing the pressures of high population growth, fertility is falling fast in both high- and low-income countries, while global life expectancy has continued to rise, improving from 48 to 73 years between 1960 and 2023. When fertility rates fall and life expectancy rises, populations age rapidly. Consequently, policymakers are increasingly concerned about shrinking workforces, ageing societies, slower growth and mounting fiscal pressures.

In emerging Europe, declines in the share of the working-age population are projected to reduce annual gross domestic product (GDP) per capita growth by an average of almost 0.4 percentage point between 2024 and 2050. A combination of increased migration, the use of technology to boost productivity growth and higher labour-force participation among older adults and women could offset some of the ageing-related pressures, with no single policy tool likely to be sufficient on its own.

Younger economies in Central Asia and SEMED will, on average, benefit from a small growth premium in the near term, but they are expected to face an annual demographic headwind averaging 0.15 percentage point over the second half of the century as labour forces stop growing and populations age.

Young economies in SSA, in contrast, are projected to see a large demographic dividend over the next generation. As many young people enter the labour force while fertility declines, annual GDP per capita growth is expected to be lifted by nearly 0.4 percentage point, provided these economies are able to effectively absorb a rapidly growing labour force.

FERTILITY IN TRANSITION

Globally, the average number of children born per woman has more than halved since the 1960s, from around 5 to 2.25 today. Mirroring this trend, fertility rates have fallen across the EBRD regions, with many economies now at or below the replacement rate of 2.1 children per woman (the level needed to maintain a stable population over time in the absence of migration). This reflects both fewer women having children and a decline in the number of births per woman.

Declining fertility partly reflects shifts in social norms and cultural attitudes around family formation. A growing share of young adults are delaying starting a family, and marriage and childbearing are happening later in life. In the post-communist economies of the EBRD regions, the share of the population aged 31-35 who are married has fallen to around 65 per cent for Millennials, down from about 80 per cent for Baby Boomers. Higher educational attainment, changing gender roles and greater career aspirations have all underpinned this shift. Many people still say they would like to have two children, but as people start families later, it is increasingly common for couples to end up with fewer children than they would consider ideal.

Fertility decisions also reflect economic constraints (such as high cost of living and lack of affordable housing), as well as the fact that women tend to experience a sizeable "motherhood penalty" – a reduction in career earnings associated with having a baby. In addition, a growing share of adults continue to live with their parents, making them less likely to start a family.

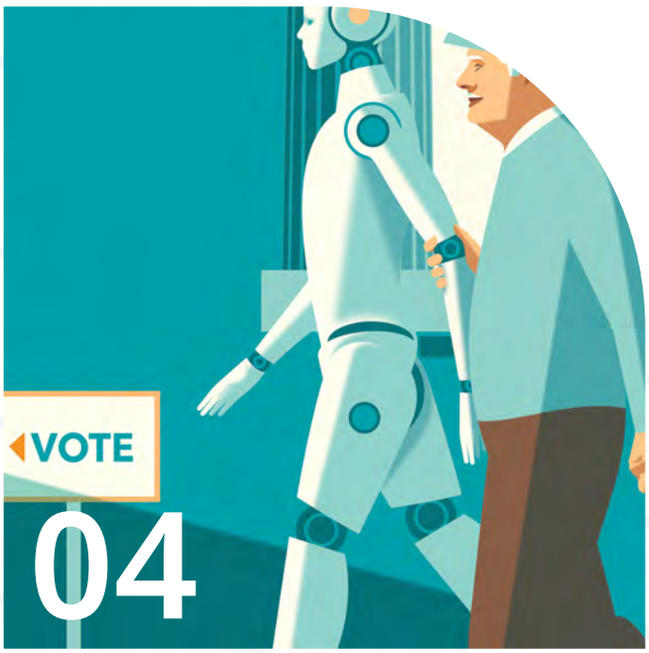
By 2019, the majority of governments in the EBRD regions had adopted policies to encourage childbearing, up from just 5 per cent of economies in 1980. These measures range from direct allowances, bonuses and extended parental leave provisions to subsidised childcare and assisted reproductive technologies. Their impact on fertility has been limited, however. While some generous benefit packages have produced short-lived upticks in births, sustaining higher fertility has proved difficult once incentives have ended. As more couples have children later in life, the share of births using assisted reproductive technologies (such as in vitro fertilisation) has increased, though it remains modest in the EBRD regions.

DEMOGRAPHIC CHANGE AND THE QUEST FOR TALENT

Demography is a primary driver of labour supply and productivity growth. As workforces have aged in advanced economies and many economies in the EBRD regions, employment has shifted towards more age-friendly jobs – jobs that have a more flexible schedule or involve less physical effort. Across the EBRD economies in the EU, older workers and highly educated women have benefited most from the availability of age-friendly jobs. As a result, countries with more age-friendly job structures exhibit higher employment rates among older workers. The shift towards age-friendly jobs has been less pronounced in EBRD economies in the EU than in advanced European economies, however.

Advances in AI technology are likely to raise workers' productivity in some occupations, but displace workers in others. In the EBRD economies in the EU, fewer workers have the types of job that can benefit most from AI-driven productivity gains relative to advanced Europe. Younger people and women are more likely to have jobs that could be displaced by AI. Evidence from a new six-country survey shows that younger firms with younger managers, better access to talent and complementary software investments are more likely to be early adopters of AI. These firms report employment growth following AI adoption, particularly where AI complements roles requiring strong science, technology, engineering and maths (STEM) skills.

Targeted migration policies can help alleviate bottlenecks in occupations where skilled labour is scarce – for example, by streamlining the recognition of foreign qualifications in healthcare and construction, matching migrants more effectively to labour shortages and ensuring sufficient support for the integration of migrants (including adequate language training and access to childcare). Younger economies face the opposite challenge of creating a sufficient number of high-quality jobs for the many entrants to the labour market. Here, policies that improve entrepreneurs' access to finance, skills and product markets can help young economies to reap the demographic dividend associated with young labour forces, which tend to have higher levels of education than in the past.



04

THE POLITICAL ECONOMY OF DEMOGRAPHIC CHANGE

Demographic change presents major policy challenges across the EBRD regions. As populations age and fertility rates decline, governments will need to mitigate those effects – for example, by increasing immigration, extending working lives, restructuring pensions and harnessing technological innovation to boost productivity. Yet public support for such reform measures is often weak, particularly among older individuals, who increasingly dominate both electorates and leadership positions.

While younger people favour spending on education, housing and climate action, older individuals tend to prioritise healthcare, pensions and military spending. They are also more sceptical of immigration, environmental protection and economic risk-taking. Because older individuals vote at higher rates, their preferences exert a disproportionate influence on policy outcomes. In contrast, younger cohorts are becoming both numerically smaller and less politically engaged.

Spatial divides exacerbate generational imbalances. Many electoral systems over-represent depopulating and ageing rural regions, which are often more socially conservative and economically stagnant. This amplifies political preferences that favour the status quo. The global median voter is now approaching the age of 44, and political leaders are becoming older as well, particularly in autocracies.

Cohort turnover has so far helped to offset some of ageing's effects on public opinion. These patterns are, for instance, reflected in votes cast in European elections between 1999 and 2021. Younger generations remain more open to change, leading to only modest shifts in average views on immigration, pension reform and growth. However, whether this pattern of generational change will extend into the future is hard to predict. And polarisation is increasing: the gap between the 20th and 80th percentiles in economic and cultural attitudes is widening.

Addressing these challenges will require early, inclusive and well-communicated reforms that take into account national circumstances and both generational and geographical divides. For instance, some societies may be more open to immigration, while others may prefer to work longer or rely more on technological advances. Gradual implementation, paired with compensation mechanisms, may improve political feasibility and support long-term economic and fiscal resilience.

05

STRUCTURAL REFORM

This chapter presents the latest assessment of transition challenges in the EBRD regions and selected comparator economies, tracking progress in the area of structural reform. The assessment focuses on six key qualities of a sustainable market economy, looking at whether economies are competitive, well governed, green, inclusive, resilient and integrated. For each quality, progress is assessed on a scale of 1 to 10, where 10 corresponds to the standards of a sustainable market economy. These ATQ scores are based on a wide range of external and internal data sources.

This year's assessment has been extended to incorporate Iraq as a new investee economy, as well as Algeria and Libya as comparators. Iraq's scores tend to be lower, on average, than those of the other economies covered by the assessment, reflecting the general weakness of its economic and political institutions. The resulting low scores contrast sharply with Iraq's income per capita at market exchange rates, whereas for most economies, ATQ assessments and income per capita are closely aligned. Indeed, the lower ATQ scores of the SSA economies are generally in line with their lower income levels. Underpinned by oil export revenues, Iraq's average per capita income is higher than that of many economies in Central Asia, SEMED and SSA.

Since 2016, the year when the ATQ scores were first published, average scores in the EBRD regions have improved most in the areas of economic integration and the green economy, with the least progress being observed in the areas of economic competitiveness and governance.

This chapter also introduces a detailed analysis of economic integration across nine distinct areas: road infrastructure, rail infrastructure, air transport, port operations, waste management, water and wastewater, energy, telecoms, and trade and investment. While an economy's scores across the various areas of integration tend to be closely aligned, in some instances, assessments in specific areas of integration may be significantly more positive or negative than the overall assessment.

01

Demographic trends and the future of growth

In emerging Europe, low fertility rates, ageing populations and shrinking workforces are increasingly weighing on economic growth. A combination of greater labour-force participation by older adults and women, increased migration, and the use of technology to boost productivity growth could offset some of these pressures. Parts of Central Asia and the southern and eastern Mediterranean (SEMED) region currently benefit from younger populations that can support near-term growth, but they will soon experience similar ageing-related headwinds. In sub-Saharan Africa (SSA), fertility rates are also declining rapidly, but the region's young populations position it well to capture a demographic dividend over the next generation – provided the economies can effectively absorb a rapidly growing labour force.

AT A GLANCE

Over

two-thirds

of the world's population lives in countries where fertility is below the long-run replacement rate

Between 2024 and 2050, demographic decline is projected to lower annual GDP per capita growth by

0.36

percentage point

in EBRD economies in the EU, the Western Balkans, and eastern Europe and the Caucasus

To offset demographic decline, many EBRD economies would need annual net immigration to exceed

1%

of their current total population through 2050

INTRODUCTION

Demographic change has long been a source of concern, but the nature of that concern has shifted profoundly. In the 1960s and 1970s, fears centred on overpopulation – the so-called "population bomb" – driven by worry that rapid population growth would outpace the growth of food supplies and infrastructure, and deplete natural resources.[1] Today, while some economies are still experiencing pressures from high population growth, fertility rates are falling in much of the world. As a result, policymakers' attention has turned to shrinking workforces, ageing societies, slower growth and mounting fiscal pressures.[2]

This shift in perspective reflects a fundamental change in global demographic trends. For most of human history, population growth has been low and stable. Between 1800 and 1900, annual growth rates remained around 0.5 per cent.[3] This changed in the early 20th century, when falling mortality and sustained high fertility rates led to a sharp acceleration in population growth, which peaked at more than 2 per cent per year in the 1960s.[4] Since then, global population growth has slowed steadily and the decline is expected to continue. According to United Nations projections, the global population will peak in the 2080s before entering a period of sustained decline.[5]

Population growth occurs when the number of children born exceeds the number of people dying. Recently, fertility rates have been falling fast in both high- and low-income countries, while life expectancy has continued to rise. Between 1960 and 2023, global life expectancy increased by more than 25 years, from 47.8 to 73.2 years. This increase was more pronounced in low- and middle-income countries (which saw life expectancy rise from 40.5 to 64.9 years and from 43.4 to 72.4 years, respectively), while life expectancy

[1] See Ehrlich (1968).
[2] See Bricker and Ibbitson (2019) and Spears and Geruso (2025).
[3] See Gapminder (2024a).
[4] See UNDESA (2024).
[5] See UNDESA (2024). Alternative modelling approaches may yield different estimates. For instance, Fernández-Villaverde (2025) projects peak population in 2055.

in advanced economies rose from 68.1 to 81.4 years.[6] On balance, global population growth is slowing, and the population decline has already begun in many advanced economies, some emerging markets and several economies in the EBRD regions. The fact that global growth is slowing despite gains in life expectancy points to decreasing fertility rates as the dominant force behind today's demographic decline.

As fertility rates fall and life expectancy rises, populations age rapidly. This chapter focuses on the economic consequences of a shrinking and ageing population, while subsequent chapters look at the drivers of fertility trends, the implications of ageing for the labour markets, and the political economy of demographic change.

The economic headwinds from ageing can be substantial. The analysis in this chapter estimates that, in the EBRD economies in the European Union (EU), the Western Balkans, and the eastern Europe and the Caucasus (EEC) region, declining working-age populations as a share of total population will reduce average annual per capita gross domestic product (GDP) growth by 0.36 percentage point between 2024 and 2050, and by 0.18 percentage point between 2050 and 2100. A combination of greater labour-force participation by older adults and women, increased migration, and the use of technology to boost productivity growth could offset some of the ageing-related pressures, though no single policy tool is likely to be sufficient on its own.

Younger economies in Central Asia and the SEMED region will, on average, benefit from a small growth premium in the near term, but are expected to face a comparable demographic drag – averaging 0.15 percentage point annually – over the second half of the century.

In contrast, median ages in the EBRD economies in sub-Saharan Africa are significantly below the global average, and these economies are positioned to experience a substantial demographic dividend over the next generation. A demographic dividend occurs when a country's age structure shifts in economically favourable ways: large cohorts of young people enter their prime working years, while birth rates simultaneously decline, creating a temporary period where the working-age population grows faster than the dependent population of children and elderly people.[7] These demographic changes in SSA are projected to boost annual GDP per capita growth by approximately 0.37 percentage point between 2024 and 2050, provided these economies are able to seize this window of opportunity and effectively absorb a rapidly growing labour force.

This chapter documents long-term demographic trends, with a focus on recent shifts in the EBRD regions. It then quantifies the macroeconomic effects of ageing. Lastly, it evaluates the potential of commonly proposed policy responses – incentivising higher fertility rates, increasing labour-force participation, increasing immigration and boosting productivity – to mitigate the demographic drag.

[6] See UNDESA (2024). "Advanced economies" are those classified as high income by the World Bank as at 8 May 2024.

[7] See Lee and Mason (2006).

SETTING THE STAGE: DEMOGRAPHIC TRENDS

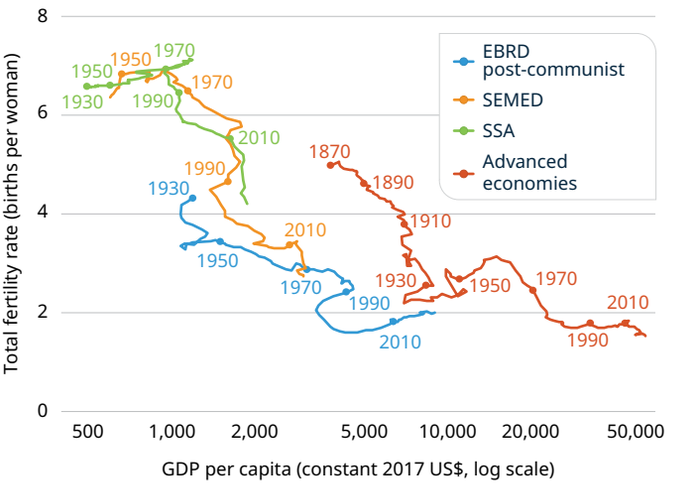
A WORLD IN TRANSITION

Around the world, countries are experiencing a profound demographic transition. Fertility rates have been falling, life expectancy has been rising and population growth has been slowing. In 2023, the global total fertility rate (the average number of children born per woman) stood at 2.25, only marginally above the long-run replacement rate – the fertility rate that would keep the size of the population constant – of roughly 2.1 births per woman (see Chapter 2 for a detailed discussion).[8]

Alternative calculations based on vital registries suggest that the global fertility rate may have slipped even lower, implying that birth rates could already be below replacement level.[9] More than two-thirds of humanity lives in countries where fertility is below the 2.1-children-per-woman threshold and birth rates are projected to decline. The expansion of the world population over the next few decades will, therefore, be largely driven by demographic momentum – in other words, by the fact that the large cohorts born when birth rates were higher are now entering their child-bearing years. United Nations World Population Prospects (UN WPP) data, for instance, suggest that momentum will account for more than 80 per cent of global population growth between 2024 and 2050.[10]

This trend is also visible across the EBRD regions, where economies are experiencing fertility decline at much earlier stages of economic development than advanced economies. As shown in Chart 1.1, fertility rates in post-communist economies have dropped below replacement levels, while GDP per capita has remained relatively low. In contrast, advanced economies have experienced similar fertility transitions at significantly higher income levels. Chapter 2 discusses how fertility rates have converged rapidly across countries, but how income growth has not always followed the same path.

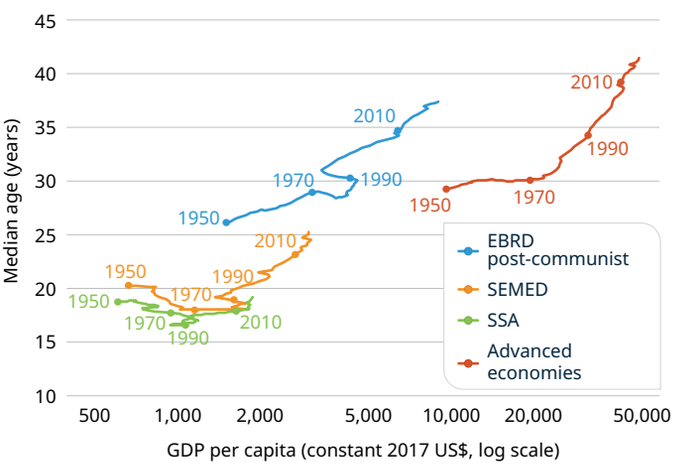
CHART 1.1. Fertility rates are falling earlier in the development paths of EBRD economies than in advanced economies



Source: Gapminder (2024a, 2024b and 2024c), World Bank (n.d.a) and authors' calculations.

Note: Lines represent population-weighted averages. "Advanced economies" are those classified as high income by the World Bank's income classification in 1990 with data available for 1870-2023. The "EBRD post-communist" grouping comprises 26 post-communist economies in the EBRD regions. SEMED comprises Egypt, Iraq, Jordan, Lebanon, Morocco and Tunisia. SSA comprises Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal.

CHART 1.2. Many EBRD economies are getting old before they get rich



Source: Gapminder (2024b), UNDESA (2024), World Bank (n.d.a) and authors' calculations.

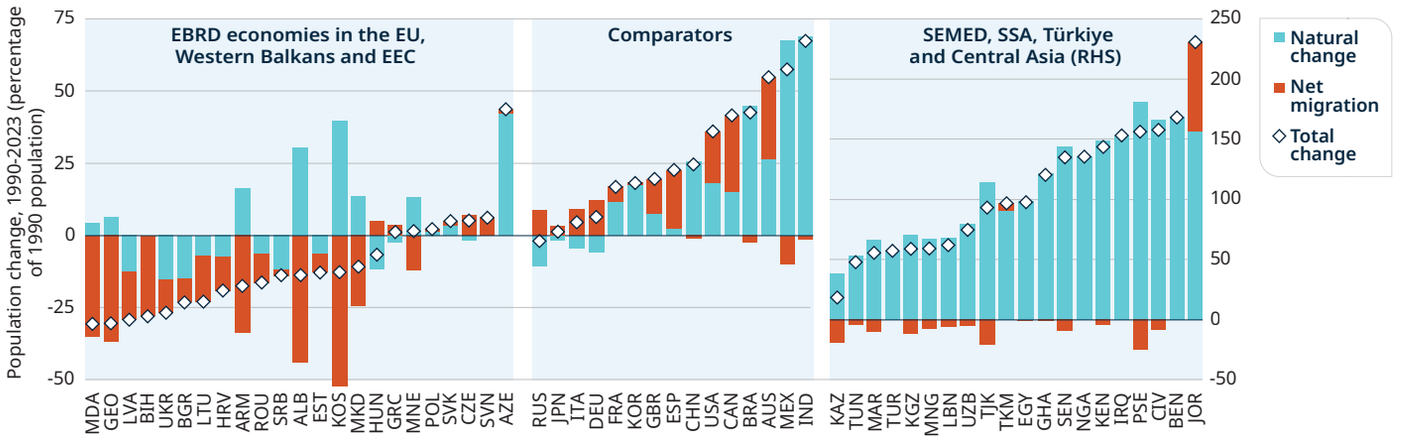
Note: Lines represent population-weighted average GDP per capita in the region and median age of the combined regional population. See the notes on Chart 1.1 for definitions of the various regions.

[8] The actual replacement rate varies across populations, as it depends on the sex ratio at birth and the probability that females will survive their reproductive age window. For instance, Fernández-Villaverde (2025) estimates a worldwide replacement rate of around 2.21.

[9] For example, Fernández-Villaverde (2025) estimates the world's total fertility rate to be around 2.17.

[10] See UNDESA (2024).

CHART 1.3. **Since 1990, populations have shrunk in most post-communist EBRD economies and surged in SEMED, SSA, Türkiye and Central Asia**



Source: UNDESA (2024) and authors' calculations.

Note: Natural change refers to births minus deaths.

While the post-communist economies in the EBRD regions have, on average, seen fertility rates fall short of replacement rates since the early 1990s, amid rapidly ageing populations, the SEMED and SSA regions continue to have higher fertility rates and younger populations. Together with Central Asia and other economies in the Middle East and North Africa, these are among the few areas globally where fertility remains above the replacement rate. However, fertility rates in the EBRD's SEMED and SSA regions have been declining far more rapidly than during the demographic transitions experienced by advanced economies, suggesting that population growth in these regions may also be reversed in a matter of decades. For instance, according to the UN medium variant scenario, population growth in Morocco and Tunisia is expected to turn negative in the 2050s.[11]

Population decline is preceded by rapid ageing: when fewer children are born and people live longer, the average age rises. Only once larger young cohorts move beyond reproductive age and are replaced by smaller cohorts do populations start to fall.

The shape of "population pyramids" changes with ageing. Lower fertility shrinks the base of the population pyramid, while longer life expectancy expands the top. The result is a rising median age, a smaller working-age population as a share of the total population, and a growing number of elderly dependants.

The median age in post-communist EBRD economies has increased sharply, now nearing that of advanced economies (see Chart 1.2). These countries are getting old before they get rich. While improvements in life expectancy have contributed to this trend, the primary driver of ageing in these countries has been the sustained decline in birth rates.[12] In some cases, this trend has been exacerbated by emigration, as discussed later on. In contrast, populations in SEMED and SSA remain much younger – with median ages of less than 26 and 20 years, respectively.

As ageing progresses and fertility rates remain low, at some point the number of deaths begins to exceed the number of births and, in the absence of immigration, populations start to decline. In several post-communist EBRD economies, this turning point has already occurred (see Chart 1.3). Countries such as Bulgaria, Hungary, Latvia, Serbia and Ukraine have recorded negative natural population change, with deaths exceeding births.

[11] Ibid.

[12] See Bussolo, Koettl and Sinnott (2015).

In most post-communist EBRD economies, emigration has played a central role in accelerating population decline. In some economies in the Caucasus and the Western Balkans, natural population change has remained positive, but large migration outflows have caused populations to shrink. For instance, Bosnia and Herzegovina, Georgia and Moldova have lost around 30 per cent of their respective populations since 1990, almost entirely due to emigration.[13] In a number of advanced economies, including Italy and Germany, in contrast, inward migration has more than offset natural population decline.

Countries in SEMED, SSA and Central Asia, as well as Türkiye, saw rapid population increases over the 1990-2023 period, often exceeding 100 per cent. This growth was driven almost entirely by births far exceeding deaths. Chapter 2 quantifies the contributions of falling fertility and other demographic forces to the population decline across the EBRD economies.

THE URBAN-RURAL DEMOGRAPHIC DIVIDE

Demographic decline is not uniformly distributed within economies. Population declines tend to be most pronounced in rural and less densely populated areas. Major urban centres, in contrast, often continue to grow, supported by both internal migration from smaller municipalities and international migration. For instance, the predominantly rural regions of the EBRD economies saw an average decline of around 11 per cent in their working-age populations in 2014-22, compared with a decline of just 1.3 per cent in the predominantly urban areas. The magnitude of rural demographic decline in the EBRD economies substantially exceeded that observed in advanced European economies, where rural areas saw a more modest average decrease of 0.9 per cent over the same period.[14]

Across the Organisation for Economic Co-operation and Development (OECD) economies, population growth over the last five years has been greater in areas with larger initial populations (see Chart 1.4), owing to the migration of younger, working-age residents from rural areas to cities.[15] Such outflows accelerate ageing and depopulation in less populated areas, leaving behind fewer individuals of childbearing age and a diminished tax base to sustain local services.

Accelerated urbanisation can create agglomeration economies, such as better matching between individuals' skills and jobs, and increased innovation, contributing to economic growth and development.[16] However, the growing spatial concentration of populations, combined with accelerated ageing in depopulating areas, poses significant policy challenges. As rural populations shrink and age, providing infrastructure and public services becomes more costly. At the same time, rural depopulation and the abandonment of land can exacerbate environmental risks, with a heightened risk of wildfires due to the accumulation of flammable vegetation.[17] Box 1.2 analyses the implications of demographic changes for regional convergence within countries. Chapter 2 discusses intra-country differences in fertility rates across the EBRD regions and comparators.

THE FISCAL CHALLENGE OF AGEING

Individual income and consumption follow a common pattern over the lifecycle. In early life, people consume more than they produce, relying on family and society for support. People of working age, typically between their mid-20s and late 50s or early 60s, tend to earn more than they consume. This surplus supports the consumption of both children and older people. In later life, labour income declines or stops altogether, while consumption remains stable or increases on account of greater demand for healthcare. This deficit is financed through a mix of private savings and public pensions and transfers.

[13] Amplifying these effects, emigration from central and eastern Europe has generally been permanent and return migration has remained limited. See Atoyan et al. (2016).

[14] Authors' calculations based on Eurostat data. "EBRD economies" comprise Albania, Bulgaria, Croatia, Czechia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Türkiye. "Advanced European economies" comprise the EU-15 (excluding Greece, Luxembourg and the United Kingdom) plus Iceland, Norway and Switzerland.

[15] See OECD (n.d.a).

[16] See Duranton and Puga (2004) and Glaeser (2011).

[17] See OECD (2023).

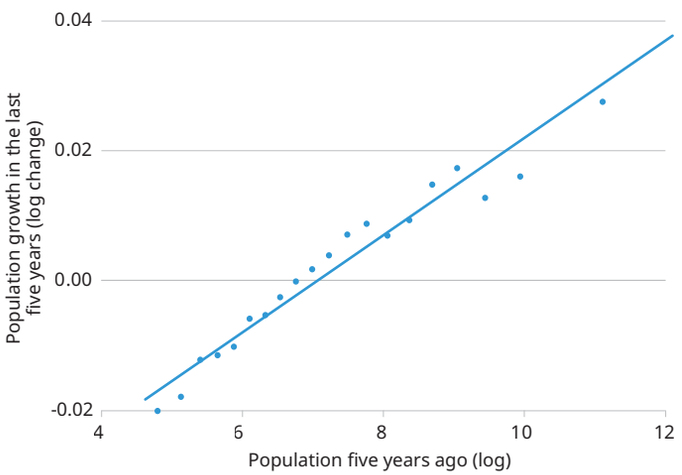
This way of funding old age relies on an implicit intergenerational contract. The taxes and contributions of today's workers support the consumption of today's retirees and, when today's workers reach retirement, they will rely on the support of future workers. In ageing societies, this balance becomes harder to sustain, as the number of elderly people relative to working-age individuals grows. This puts pressure on public finances, necessitating more debt, tax increases or cuts to pensions and social welfare.

A forward-looking simulation illustrates this challenge (see Chart 1.5). It holds age-specific profiles of per capita labour income and consumption constant over time and uses age-specific population projections to estimate changes in the income-consumption balance.

In the EBRD economies in the EU, individuals currently generate a surplus between the ages of 26 and 57 – a narrower range than the 25 to 59 observed in advanced European economies. This is down to earlier labour-market exits and shorter working lives. As the population ages, the proportion of individuals in this surplus-generating bracket declines, while the share with lifecycle deficits grows.

In response to these pressures, many EBRD economies in the EU have implemented pension reforms to improve long-term fiscal sustainability. These measures have helped reduce pension spending as a share of GDP in recent years. Nonetheless, ageing will continue to present challenges for public finances and will require further adjustments to the design of tax, transfer and social protection systems. These issues are explored in more detail in Box 1.3.

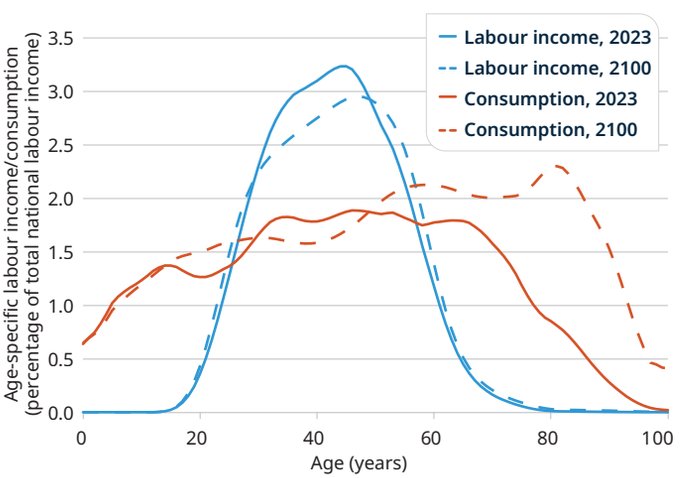
CHART 1.4. Smaller municipalities are depopulating faster



Source: OECD (n.d.a) and authors' calculations.

Note: This chart is a binned scatter plot based on an ordinary least squares (OLS) regression of the change in the logarithm of population between 2019 and 2024 (or the most recently available five-year period) on the logarithm of initial population, controlling for country fixed effects. The sample includes municipality-level data for eight economies in the EBRD regions, 16 advanced economies and three emerging markets, and it only includes municipalities with a population size of more than 100 at baseline. Municipalities and local areas are defined as administrative units corresponding to local governments at the lowest tier of administration within each country for which OECD data are available.

CHART 1.5. Old-age consumption will outpace labour income in ageing societies



Source: Istenič et al. (2016), UNDESA (2024), Eurostat data and authors' calculations.

Note: This chart shows age-specific labour income and consumption profiles as a percentage of total national labour income for 2023 and 2100 for the average EBRD economy in the EU. The sample of countries includes Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. Baseline per capita age profiles are drawn from Istenič et al. (2016), re-weighted to the 2023 population structure and re-scaled to match 2023 aggregates from national accounts. Forward-looking projections impose the age distribution under the UN medium variant scenario (see UNDESA, 2024). Profiles are smoothed using a five-point moving average with partial windows at the edges.

POPULATION STRUCTURE AND ECONOMIC GROWTH

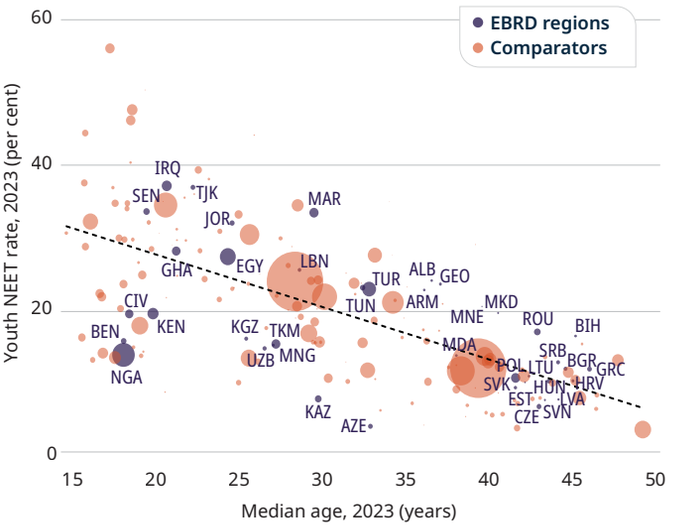
DEMOGRAPHIC DIVIDEND

In contrast to emerging Europe, the demographic profile of economies in the SEMED region, SSA and Central Asia offers a potential demographic dividend, as the working-age population is large and its share is increasing relative to the share of dependants.

At the same time, effectively absorbing a rapidly growing workforce is a challenge. Countries with younger populations often have significantly higher youth NEET rates (the share of 15- to 24-year-olds not in employment, education or training; see Chart 1.6). For instance, in Iraq, Jordan and Morocco, more than one-third of the population aged 15-24 are jobless and not engaged in formal education. In the Middle East and North Africa, youth employment tends to be constrained by rigid labour-market regulations and skill mismatches,[18] while in SSA, young entrants to the labour market often find themselves in low-productivity jobs in the informal sector.[19]

Realising the demographic dividend, therefore, requires various country-specific constraints to be addressed, including the expansion of high-quality education and health systems to build human capital, the promotion of flexible labour markets that absorb a growing workforce, and the mobilisation of domestic savings to build deeper financial systems that effectively allocate capital to young entrepreneurs (see Chapter 3 on the role of entrepreneurship and tech-enabled startups in fostering employment growth in countries with young populations).[20] The window of opportunity to reap the demographic dividend may be relatively short before ageing exerts the same fiscal pressures as in higher-income economies that are rapidly ageing today. For instance, based on the UN WPP medium variant scenario,[21] the working-age share of the population in Egypt, Morocco and Jordan can be expected to peak in the mid-2030s.

CHART 1.6. **Countries with younger populations tend to have higher youth NEET rates**



Source: ILOSTAT data, UNDESA (2024) and authors' calculations.
Note: Bubble size reflects population size in 2023.

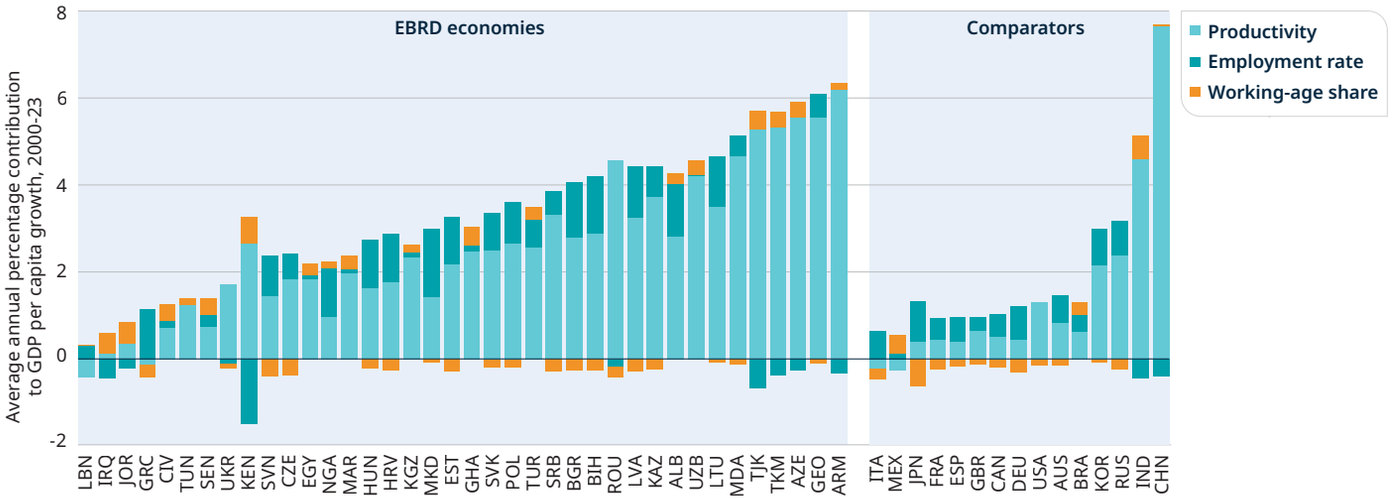
DECOMPOSING GDP PER CAPITA GROWTH

More generally, demographic shifts affect GDP and GDP per capita growth. GDP per capita growth can be decomposed into three components: productivity (output per worker), employment rate (total employment relative to the working-age population) and the share of the working-age population. Demographic change affects growth mechanically by changing the share of the working-age population. It can also influence productivity growth, which relies on the generation and diffusion of new ideas.

Productivity growth has been the dominant source of increases in income per capita in the EBRD regions, while increases in employment rates have also played an important role (see Chart 1.7). In contrast, changes in the working-age share of the population have accounted for a relatively small part of average income growth and, in some EBRD economies in the EU and parts of the Western Balkans, this contribution has been negative.

[18] See IMF (2012).
[19] See Canning, Jobanputra and Yazbeck (2015).
[20] See Bloom, Canning and Sevilla (2003).
[21] See UNDESA (2024).

CHART 1.7. **Historically, working-age population changes have been a minor growth driver in the EBRD economies relative to improvements in productivity and employment rates**



Source: UNDESA (2024), World Bank (n.d.a), The Conference Board data and authors' calculations.

Note: The average annual growth in real GDP per capita in 2000-23 is decomposed into (i) changes in labour productivity growth (GDP per employed person), (ii) changes in the employment rate (employed persons per working-age population) and (iii) changes in the working-age share of the population.

DEMOGRAPHICS AND INNOVATION: WHY PEOPLE MATTER FOR PROGRESS

Beyond the number of workers, economic growth is largely driven by people discovering new ideas. More researchers generate more ideas, and more ideas translate into higher living standards. This insight, formalised in models of endogenous growth, implies that larger populations can sustain economic growth by expanding the supply of inventors and innovators.[22]

As fertility rates decline, the reduction in the potential researcher base is threatening to weaken the rate at which new ideas are generated.[23] At the same time, ideas are becoming harder to generate, as research productivity has been falling: more researchers are now required to achieve the same pace of innovation as in the past, as innovation appears to exhibit diminishing returns to scale.[24] In economies further away from the frontier of innovation, including many economies in the EBRD regions, productivity growth is also closely tied to global technological progress, as these economies adopt innovations developed elsewhere (according to data from the World Intellectual Property Organization, no economy in the EBRD regions was ranked among the top 20 globally for patent applications in 2023).[25]

In some SEMED economies,

more than one-third

of the population aged 15-24 are not in employment, education or training

[22] See Romer (1990), Aghion and Howitt (1992), Grossman and Helpman (1991), Kremer (1993) and Peters (2022).
[23] See Hopenhayn, Neira and Singhania (2022) and Peters and Walsh (2021).
[24] See Bloom et al. (2020) and Jones (2022b).
[25] See WIPO (2024).

Consequently, in an "empty planet" scenario, living standards may stagnate not because of resource constraints, but due to insufficient populations of innovators to sustain idea generation.[26]

Slower population growth may come with environmental benefits, including lower emissions and reduced pressure on natural resources, but falling birth rates will have a negligible impact on global temperatures because their effects will come far too late to affect current climate goals.[27] At the same time, as discussed, a world that stabilises at a higher global population is likely to be richer in per capita terms than one that stabilises at a lower level, reflecting the larger pool of innovators and idea producers.[28] The economic and environmental implications of demographic trends should, therefore, be considered together,[29] with environmental challenges addressed through appropriate policies.

CAN THE INNOVATION SLOWDOWN BE OFFSET?

There are reasons for optimism, however. Large segments of the global population, sometimes referred to as the "missing Einsteins", remain under-represented in the innovation process – not because of a lack of ability, but due to systemic barriers. These include people who grow up in countries or areas without access to top education; women, who continue to be under-represented in science, technology, engineering and mathematics (STEM) fields and patenting activity;[30] and individuals from disadvantaged backgrounds.[31] Currently, around 16 million people in technological frontier economies are engaged in research and development (R&D) – around 0.2 per cent of the world population.[32] This share could rise as populations decline, if the barriers to entry for talented researchers can be lowered.

Technological advances in artificial intelligence (AI) and beyond could also make researchers more productive, reversing the long-term trend of declining productivity in research and development.[33]

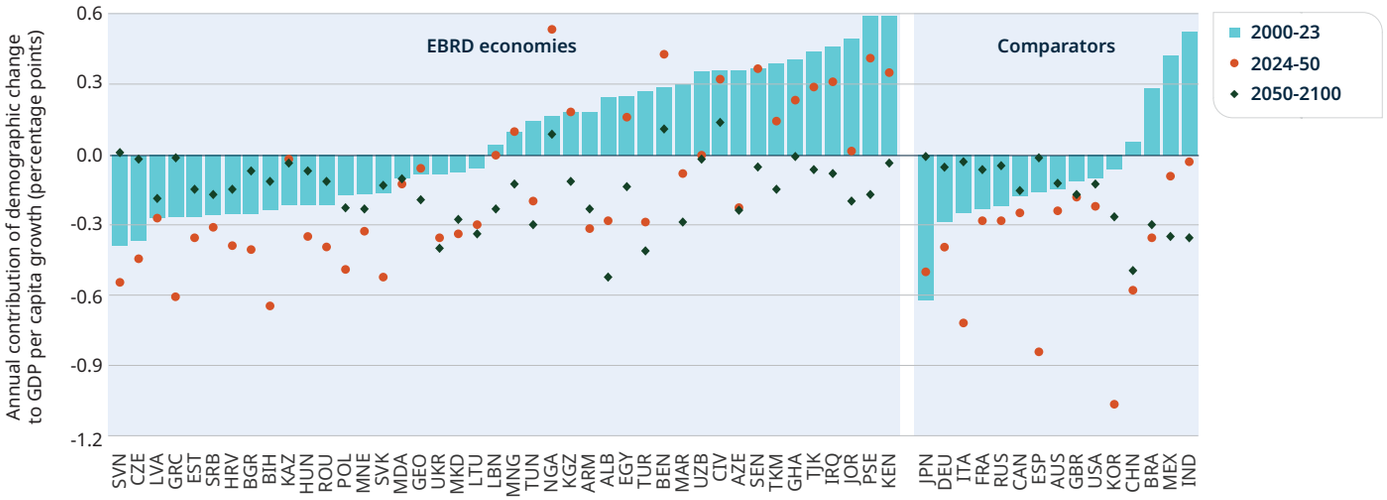
THE ECONOMIC COST OF AGEING

The following subsections quantify the impact of population ageing on per capita income growth and assess the effectiveness of potential policy responses aimed at offsetting the cost of ageing. The analysis builds on a standard neoclassical growth model[34] calibrated for the EBRD regions and compares two scenarios: one in which the working-age share of the population evolves according to the medium variant of the UN WPP demographic projections[35] and another in which it is held constant at its initial level. The difference in GDP per capita growth between these two scenarios captures the economic cost of ageing. This arises from two sources: a direct effect, as having fewer working-age individuals reduces labour input; and an indirect effect, due to lower incentives to accumulate capital, as capital and labour are used as complementary inputs to produce output (see Box 1.1).

This analysis means that in the EBRD economies in the EU, the Western Balkans and the EEC region, annual GDP per capita growth is projected to decrease by an average of 0.36 percentage point between 2024 and 2050 compared with a no-ageing scenario. This reflects the fact that, in many of these economies, the population is already relatively old. For instance, the average EBRD economy in the EU has a median age of 43 years, similar to other European economies such as Austria, Finland and Spain. As a result, the sharpest demographic headwinds are projected to occur over the next two decades. However, as current older cohorts exit the population over the second half of the century, the working-age ratio will stabilise and the impact of ageing on economic growth will ease to an average of 0.18 percentage point per year between 2050 and 2100 (see Chart 1.8).

[26] See Jones (2022a).
[27] See, for instance, Budolfson et al. (2025) on the climate implications of larger populations.
[28] See Eden and Kuruc (2023).
[29] See, for instance, Eden and Kuruc (2023) and Budolfson et al. (2025).
[30] See Jones (2022a).
[31] See Bell et al. (2019).
[32] Authors' calculations based on OECD Research and Development Statistics data (see OECD, n.d.b). "Technological frontier economies" comprise the OECD economies and China.
[33] See Jones (2022a).
[34] See Fernández-Villaverde, Ventura and Yao (2025).
[35] See UNDESA (2024).

CHART 1.8. **Demographic headwinds will increasingly weigh on GDP per capita growth in EBRD economies**



Source: UNDESA (2024), World Bank (n.d.a), Feenstra, Inklaar and Timmer (2015) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: This chart reports the annual contribution of changes in the share of the working-age population to the growth of GDP per capita in real terms. The projections are calculated under the UN medium variant scenario (see UNDESA, 2024). Estimates are generated using a calibrated neoclassical growth model with endogenous capital accumulation, where declining working-age ratios affect growth both directly through reduced labour input and indirectly through lower incentives for capital investment (see Box 1.1). No policy changes beyond the shift in population structure are assumed.

In contrast, economies in the SEMED region and Central Asia will benefit from a modest demographic dividend averaging 0.1 percentage point per year between 2024 and 2050. However, this window of opportunity may narrow rapidly, as fertility rates in some of these economies are falling at a much faster pace than the trajectory previously experienced by advanced economies (see Chart 1.1). As a result, the expected decrease in the relative size of the working-age population will lead to an average drag on GDP per capita growth of about 0.15 percentage point per year between 2050 and 2100.

EBRD economies in SSA are positioned to experience a substantial demographic dividend driven by favourable dependency ratios as large cohorts of young people enter the workforce while birth rates decline. This demographic premium is projected to boost annual GDP per capita growth by an average of 0.37 percentage point between 2024 and 2050.

These figures evaluate the cost of ageing relative to a hypothetical scenario in which the working-age ratio remains constant, rather than relative to the historical contribution of demographics to GDP per capita growth. For example, for Albania, which benefited from a rising working-age share until 2023, the cost of ageing is estimated at 0.28 percentage point, which corresponds to a decline of 0.53 percentage point compared with the average demographic dividend enjoyed in 2000-23.

Ageing and a shrinking working-age population may also have broader economic consequences beyond GDP growth. For example, while weaker aggregate demand could generate deflationary pressure, labour shortages caused by a declining workforce could push wages and prices up.[36]

[36] See Yoon, Kim and Lee (2014).

POLICY LEVERS TO COUNTERACT THE ECONOMIC IMPACT OF DEMOGRAPHIC DECLINE

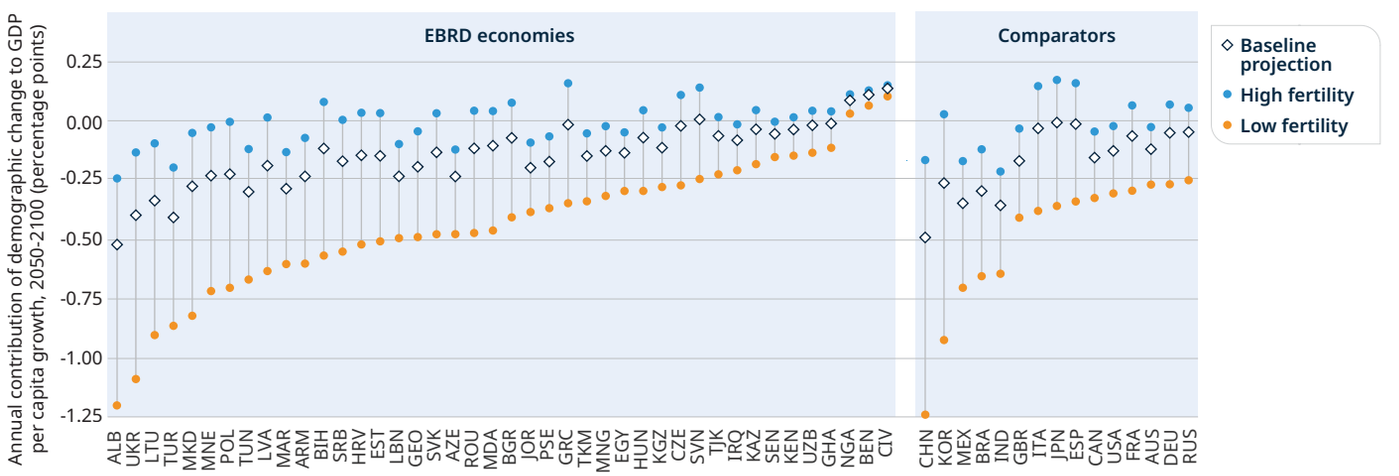
INCREASED FERTILITY

Changes in fertility trajectories can ease pressures from demographic decline, but their effects materialise with a delay. Even if fertility rates rebound, there will be a delay of around 20 years before newly born individuals enter the labour force and raise the ratio of workers to total population. In the intervening period, higher fertility will further increase the number of dependants per worker, intensifying demographic headwinds. Fertility paths are highly uncertain and the projected growth paths in the longer term differ under alternative fertility projections.

Chart 1.9 depicts a medium variant used as a baseline throughout the chapter, as well as a low-fertility variant from the UN WPP (where fertility is consistently lower by 0.5 children per woman relative to the baseline scenario) and a high-fertility variant (where fertility is higher by 0.5 children per woman).[37]

For most economies in the EBRD regions, an increase in the fertility rate of 0.5 births per woman relative to the baseline scenario is sufficient for the demographic contribution to growth to be neutral by 2050-2100. In the low-fertility scenario, the longer-term impact of demographic change on economic growth is greater than in the medium variant scenario. An increase of 0.5 births per woman is large relative to prevailing fertility levels in central Europe (currently around 1.3 to 1.6 births). Chapter 2 discusses policies aimed at boosting fertility and their limited effectiveness to date.

CHART 1.9. The impact of demographic change on economic growth in the second half of the century (2050-2100) depends on fertility trajectories

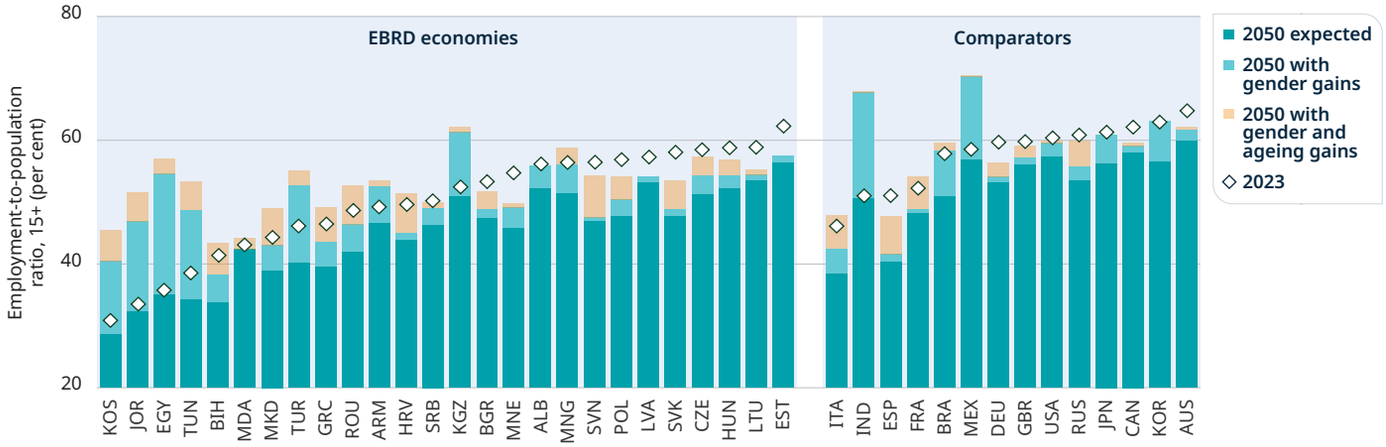


Source: UNDESA (2024), World Bank (n.d.a), Feenstra, Inklaar and Timmer (2015) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: Estimates under alternative UN WPP fertility scenarios are generated using a calibrated neoclassical growth model with endogenous capital accumulation, where declining working-age ratios affect growth through reduced labour input and lower incentives for capital accumulation (see Box 1.1).

[37] See UNDESA (2024).

CHART 1.10. A combination of reductions in gender employment gaps and increases in participation of older people could offset most of the expected decline in employment-to-population ratios between 2023 and 2050



INCREASED LABOUR-FORCE PARTICIPATION

Increases in employment rates among working-age adults can offset some of the decrease in the ratio of the working-age population to total population. With age-specific employment rates remaining at 2023 levels, employment-to-population ratios are projected to fall in many economies in the EBRD regions, including in parts of SEMED (see Chart 1.10). Indeed, even where populations aged 15-64 are projected to increase as a share of the total population over this period, employment ratios may still fall as individuals move into older age brackets with historically low employment rates.

Employment rates could be raised by increasing the labour-force participation of women and older workers – groups with significantly lower labour-force participation rates. The "gender gains" scenario depicted in Chart 1.10 assumes that gender employment gaps fall to the 25th percentile of the cross-country distribution of gender employment gaps currently observed in OECD economies within age groups (for instance, this corresponds to a gap of 6.9 percentage points in Belgium for the 30-34 age group). Under these assumptions, Egypt, Jordan and Tunisia, where female

Source: ILOSTAT data, UNDESA (2024) and authors' calculations.

Note: This chart shows employment-to-population ratios for the population aged 15+ across three scenarios for 2050 compared with historical levels in 2000 and 2023. The baseline scenario applies current 2023 age-specific employment rates by five-year age group to projected 2050 demographic structures using UN WPP medium variant projections. The "gender gains" scenario builds on the baseline by reducing gender employment gaps within each age group to the lower of the current gap and the 25th percentile of the age-specific cross-country distribution of gender employment gaps in OECD countries for 2023. The "gender and ageing gains" scenario combines the gender gap adjustment with rising employment rates for workers aged 60-64 and 65+, which increase to the higher of current rates and the 75th percentile of the age-specific cross-country distribution of employment rates in OECD countries for 2023. Employment-to-population ratios are standardised to the 19th International Conference of Labour Statisticians (ICLS) definition by applying country-specific scaling factors derived from the ratio of 19th to 13th ICLS employment rates for the 15+ age group in 2023. For countries where 19th ICLS data are unavailable, continental average scaling factors are applied (see ILO, 2013).

In the SEMED region, closing gender gaps could increase some national employment-to-population ratios by up to

19 percentage points

labour-force participation remains low relative to that of men, experience large increases in employment-to-population ratios of up to 19 percentage points. Some economies in Europe show more modest but meaningful increases. For instance, narrower gender gaps in Albania, Montenegro and North Macedonia may be sufficient to maintain present employment-to-population ratios. In other economies, such as Slovenia, Latvia or Lithuania, gender gaps are already relatively small.

The "gender and ageing gains" scenario assumes that, in addition, the participation of older workers increases to the 75th percentile currently observed across the OECD economies. For instance, for 60- to 64-year-olds, this corresponds to an employment rate of 65.8 per cent (as observed in Denmark), compared with the current average of 45.2 per cent across the EBRD regions. Continued gains in healthy ageing – improvements in cognitive and physical ability at older ages – can support increased participation for older workers. Historically, such gains have been associated with higher earnings, increased hours per worker and higher productivity.[38]

These increases in employment rates among older workers would enable Croatia or Romania to prevent their employment-to-population ratios from falling below current levels. In other economies, including Bulgaria, Czechia, Hungary and Poland, higher employment rates among women and older workers could mitigate the impact of demographic change on the labour supply. In contrast, in economies where labour-force participation rates are already high, such as Estonia and Latvia, the gains from increased employment among older workers would be marginal.

Labour-force participation among older workers could be boosted (i) by raising the age at which individuals are eligible for pensions, (ii) through schemes that offer phased or flexible retirement, where savings from later retirement are partially shared with the individuals in question, (iii) by expanding access to re-skilling programmes and (iv) by fostering age-friendly work environments.[39] Higher female labour-force participation could be facilitated by (i) policies that expand affordable childcare, (ii) parental leave schemes that nudge fathers as well as mothers to take time off, (iii) the removal of tax and benefit disincentives for second earners in households, (iv) the enforcement of pay-transparency rules that expose unjustified wage gaps, (v) better access to flexible schedules, (vi) the provision of lifelong learning opportunities over individual careers[40] and (vii) measures to address traditional gender norms and cultural expectations around women's and men's roles in the household and workplace.[41]

[38] See IMF (2025a).

[39] See Eurofound (2025).
[40] See OECD (2025).
[41] See Jayachandran (2021) and Matavelli et al. (2025).

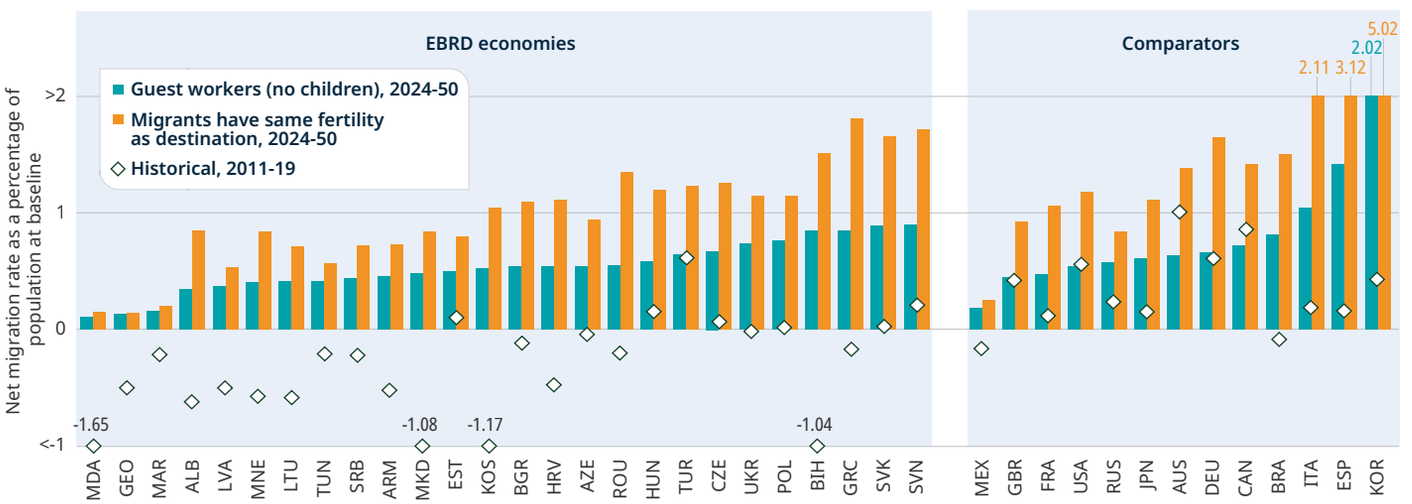
MIGRATION

Inward migration can offset population decline. Its economic effects are typically estimated to be broadly positive, but unevenly distributed. In countries of origin, emigration can foster "brain gain" by raising expected returns to schooling, provide channels for knowledge transfer through diaspora networks and return migration, and yield economic benefit in the form of increased remittance inflows.[42] These channels, however, may not always compensate for the loss of skilled workers; sustained emigration can reduce the domestic tax base and result in "brain drain", whereby the exit of higher-skilled workers depletes human capital and negatively affects productivity. These effects can be particularly large in smaller or poorer countries with very high emigration rates.[43]

In destination economies, inflows of migrants can alleviate labour shortages and help to close skills gaps, boosting innovation and productivity. They often make a positive contribution to fiscal balances, as migrants tend to be of working age. At the same time, migrant arrivals can be concentrated in certain areas, putting pressure on local infrastructure, housing and the provision of public services such as education and healthcare (see Chapter 3).[44]

The scale of migration needed to offset the ageing of locally born populations is large. To maintain their current working-age population ratios through 2050, many economies in the EBRD regions would require annual net immigration to exceed 1 per cent of their current total population (see Chart 1.11). Such levels are far higher than those historically observed in these economies (which have recently tended to experience net emigration). In fact, they surpass the net migration flows observed in Australia, Canada and Germany in

CHART 1.11. Offsetting population ageing through migration alone would require unprecedented migration inflows in EBRD economies



Source: UNDESA (2024) and authors' calculations.

Note: This chart shows the annualised net migration rates required to maintain constant ratios of working-age population (aged 15-64) to total population at 2023 levels, expressed as a percentage of mid-year 2023 population. Historical flows represent the average annual net migration flow between 2011 and 2019 as a percentage of mid-year 2010 population. The sample includes countries in which the working-age ratio is projected to decrease by more than 1 percentage point between 2023 and 2050 under the UN zero-migration variant.[45]

[42] See Batista et al. (2025).
[43] See Docquier and Rapoport (2012) and Atoyan et al. (2016).
[44] See IMF (2025b).
[45] See UNDESA (2024).

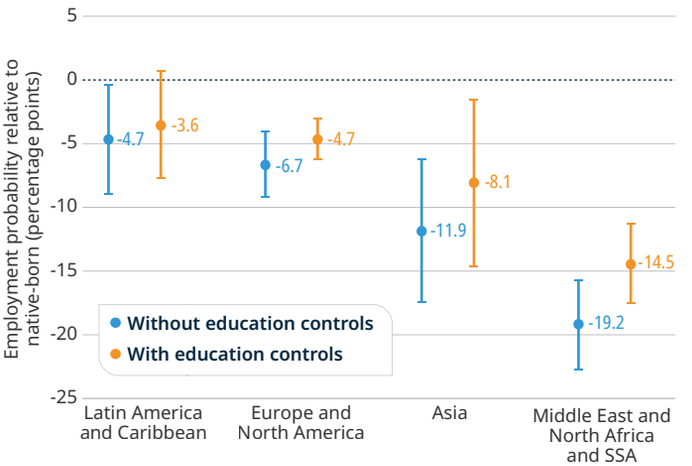
2011-19 (which averaged 1.0 per cent, 0.6 per cent and 0.86 per cent of their 2010 population annually, respectively) – some of the highest net migration inflows among OECD countries during that period.

The "guest workers" scenario in Chart 1.11 assumes a steady inflow of temporary foreign workers of working age who experience zero mortality, have no children and leave the country before retiring. These hypothetical migrants contribute labour without adding any dependants of their own. Even under these assumptions, many economies in the EBRD regions would need to maintain annual migrant inflows of between 0.5 and 0.9 per cent of their population.

The "same fertility" scenario treats migrants as permanent settlers who arrive at age 30, adopt the destination country's fertility patterns and are subject to local mortality rates. In this scenario, each additional migrant worker adds dependants, necessitating further immigration to offset these additional increases in the number of children. As a result, the required rates of net migration exceed 1 per cent in almost half of all EBRD economies where the working-age ratio is projected to decline. In the case of Slovenia, for instance, the annual estimate stands at 1.7 per cent of its population in 2023 – roughly 8.5 times the annual inflow recorded in the 2010s. In a handful of fast-ageing comparator economies such as Italy, Spain and South Korea, the required annual migration inflows exceed 2 per cent of the population.

The extent to which immigration can offset the adverse impact of demographics on economic growth also depends on how new arrivals are integrated into the labour market. The regression analysis that follows, based on individual-level EU Labour Force Survey (EU LFS) data for 31 European destinations, compares the probability of employment for immigrants with that of individuals with similar characteristics born in the country of residence (see Chart 1.12).[46] On average, foreign-born individuals are around 10 percentage points less likely to be employed than working-age adults born in the country. This gap narrows to 7.4 percentage points after taking into account differences in

CHART 1.12. Employment probabilities of migrants in destination countries are generally lower than those of native-born workers



Source: Eurostat (2024) and authors' calculations.

Note: The chart shows employment gaps relative to individuals born in the destination countries for different regions of birth based on a linear probability model in which a dummy for whether the respondent is employed is regressed on region of birth dummies, sex and age dummies, and country-year fixed effects. The sample includes respondents aged 15-64 in 31 European economies over the 2019-23 period. Ninety-five per cent confidence intervals are based on standard errors clustered at country level.

In Europe, foreign-born individuals are, on average, around

10 percentage points

less likely to be employed than native-born individuals

[46] See Eurostat (2024).

educational attainment. These employment differentials vary significantly by region of origin, with migrants from regions with the highest capacity for future working-age emigration (Asia, the Middle East and North Africa, and SSA) facing the largest employment gaps.

These different probabilities of being employed reflect differences in skills and their transferability (depending on the recognition of foreign credentials, for instance), language barriers and policies that govern labour-market access. Discrimination in the labour market may also play a role.[47] Migration, therefore, could yield lower contributions to the effective labour supply than is assumed in the scenarios considered above (see Chapter 3 for a discussion of policies that can strengthen the integration of immigrants into the labour market).

In addition, the supply of potential working-age migrants is constrained by global demographic trends, as every worker drawn into one labour market is removed from another. To maintain their ratios of working-age population to total population, countries experiencing demographic decline would collectively require an extra 655 million working-age adults by 2050, based on the "guest workers" scenario outlined above. This is around 20 per cent more than countries with growing working-age populations could provide without a decline in their own working-age population shares (in these calculations, it is assumed that recipient countries' working-age population shares remain constant or decline to two-thirds, whichever is lower; potential donor countries are assumed to hold their working-age share constant at 2023 levels).

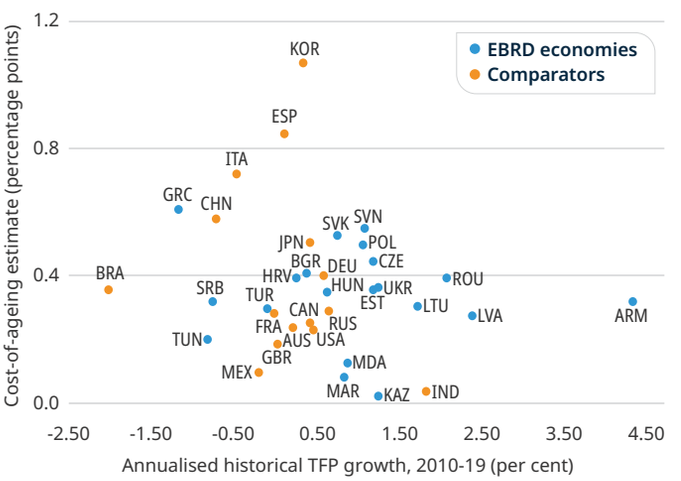
As a result, countries in the EBRD regions that may rely on migration to mitigate the economic impact of ageing will find themselves competing for immigrant talent (as well as their domestic talent) with other ageing economies where incomes may be substantially higher. While migration can partly mitigate the economic impact of demographic decline, policy responses will need to incorporate other measures that extend working lives and boost productivity if they are to be effective.

HIGHER PRODUCTIVITY

Another way to offset the economic impact of ageing is to boost the productivity of the increasingly scarce labour available by raising the efficiency with which labour and capital are combined, referred to as total factor productivity (TFP).

With the projected supply of labour unchanged, the acceleration of TFP growth that is required to offset the impact of labour scarcity on per capita income averages around 0.36 percentage point per year (see Chart 1.13, vertical axis). This compares with average TFP growth of 0.55 per cent per year in 2010-19 (horizontal axis). Both the required accelerations and recent experiences vary considerably across economies. Greece, Serbia, Tunisia and Türkiye recorded negative TFP growth between 2010 and 2019, so the required TFP increases are substantial.

CHART 1.13. The increases in productivity growth required to offset the impact of demographic change on per capita incomes are sizeable relative to historical performance

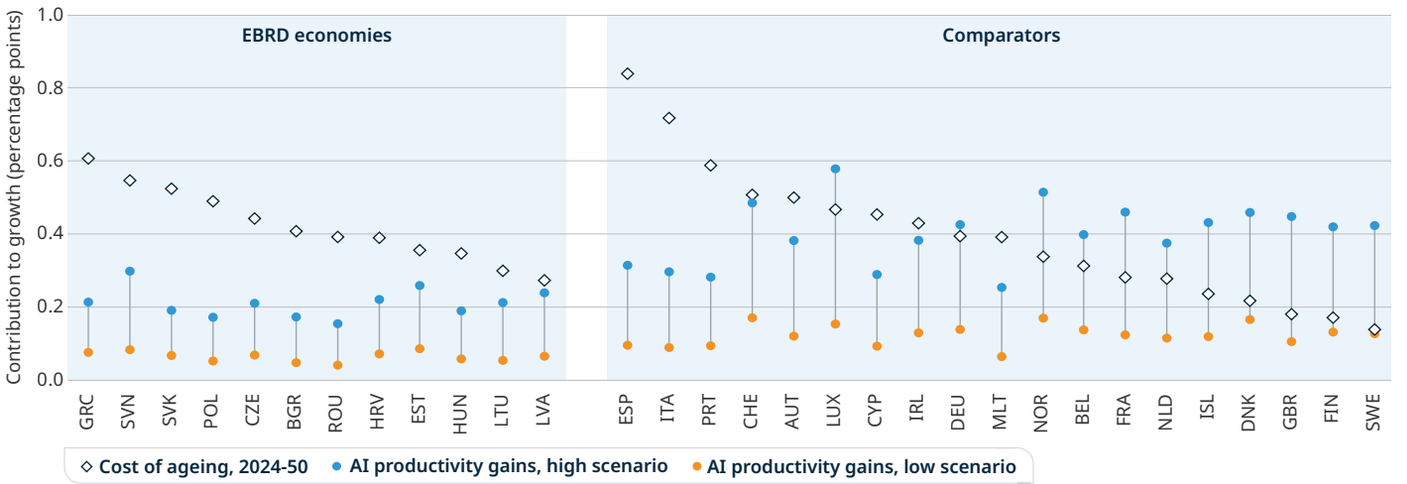


Source: UNDESA (2024), World Bank (n.d.a), Feenstra, Inklaar and Timmer (2015) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: Historical TFP growth is calculated as annualised growth in the total factor productivity index at constant national prices in the Penn World Tables between 2010 and 2019. Cost-of-ageing estimates represent the average negative contribution of shrinking working-age populations to GDP per capita growth in 2024-50 (see notes accompanying Chart 1.8).

[47] See OECD (2024a).

CHART 1.14. **Potential productivity gains from AI may partially offset the demographic burden**



Source: UNDESA (2024), World Bank (n.d.a), Feenstra, Inklaar and Timmer (2015), Misch et al. (2025) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: The estimated cost of ageing represents the average negative contribution of the relative decline in the working-age population to GDP per capita growth in 2024-50 (see notes accompanying Chart 1.8). AI productivity gains are extracted from Misch et al. (2025), where the high and low scenarios represent the 75th and 25th percentiles, respectively, of the estimated cumulative medium-term productivity gains across different combinations of AI exposure measures and adoption rates.

In Bulgaria and Croatia, TFP growth would need to more than double relative to historical performance. In Latvia and Romania, by contrast, the required increases in TFP growth are 11 and 19 per cent of their historical average TFP growth rates, respectively.

Recent advances in AI have sparked a growing debate about its potential to enhance productivity in ageing societies. While there is concern about labour displacement and short-term adjustment costs,[48] AI is increasingly characterised as an emerging general-purpose technology.[49]

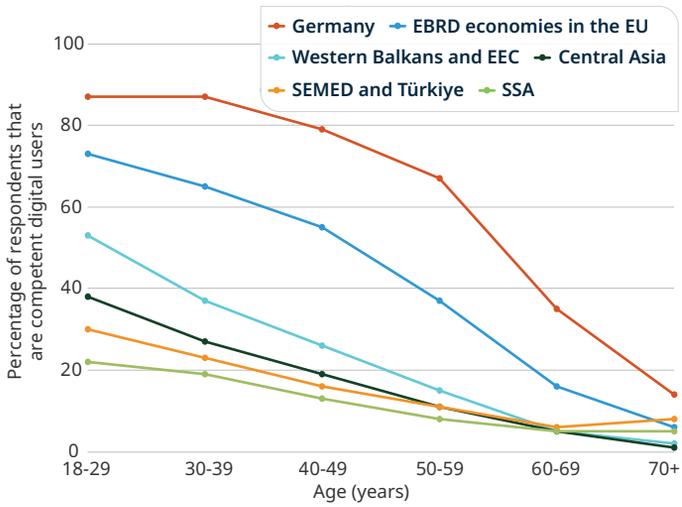
A growing body of literature provides estimates of AI's potential contribution to TFP growth.[50] While these potential AI productivity gains could be substantial, they are unlikely to fully offset the impact of demographic pressures on growth in the EBRD regions (see Chart 1.14). Under high-impact scenarios, AI could provide on average around half of the required productivity growth across the EBRD economies in the EU. Under lower-impact assumptions, AI's potential contribution becomes marginal relative to the projected demographic headwinds.

Realising productivity gains from AI also requires its broad adoption by firms. In 2024, an average of 9 per cent of firms across the EBRD regions reported using AI, compared with an average of 18 per cent in Germany, France and the Netherlands.[51] Within the EBRD regions, adoption rates vary considerably: in Slovenia, more than 20 per cent of firms reported using AI, compared with 3 per cent in Romania. Chapter 3 discusses AI adoption by firms in more depth.

In addition, digital skills – critical to the effective use of AI technologies – decline significantly with age and across nearly all age groups. Chart 1.15 illustrates this trend using data from the fourth round of the Life in Transition Survey (LiTS), a representative household survey conducted by the EBRD in partnership with the World Bank in 2022-24, covering at least 1,000 individuals in 44 economies in the EBRD regions and beyond, including Algeria and Germany.[52] As part of the survey, participants

[48] See Acemoglu and Restrepo (2019).
[49] See Eloundou et al. (2024) and Calvino, Haerle and Liu (2025).
[50] See, for instance, Acemoglu (2025), Gmyrek, Berg and Bescond (2023), Filippucci, Gal and Schief (2024), Aghion and Bunel (2024) and Misch et al. (2025).
[51] See Eurostat (2025).
[52] See EBRD (2024a).

CHART 1.15. Basic digital skills drop fast with age



Source: EBRD (2024a) and authors' calculations.

Note: A competent digital user is a respondent who is able to (i) send emails with attachments, (ii) copy or move files and (iii) install software. Unweighted averages across economies. The "EBRD economies in the EU" grouping comprises Bulgaria, Croatia, Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. "Western Balkans and EEC" comprises Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia and Serbia. "Central Asia" comprises Kazakhstan, the Kyrgyz Republic, Mongolia, Tajikistan and Uzbekistan. "SEMED" comprises Iraq, Jordan, Lebanon, Morocco, Tunisia and the West Bank and Gaza. "SSA" comprises Benin, Côte d'Ivoire, Ghana, Kenya and Senegal.

were asked whether they could send emails with attachments, copy or move files, install software or code.

Basic digital proficiency (ability to work with attachments and install software) is lower in the EBRD regions than in Germany. Moreover, significant skill gaps persist among young cohorts in EBRD economies outside the EU, with digital literacy rates below 40 per cent, suggesting that generational change alone may not be sufficient to deliver near-universal digital literacy. Efforts to strengthen digital capabilities, particularly among older and mid-career workers, could help unlock additional productivity gains and improve resilience in ageing economies, complemented by measures to facilitate widespread technology adoption.

In EBRD economies in the EU, productivity gains from AI could offset on average

half

of GDP per capita losses from shrinking workforces under high-impact scenarios

Digital literacy rates among young cohorts are below

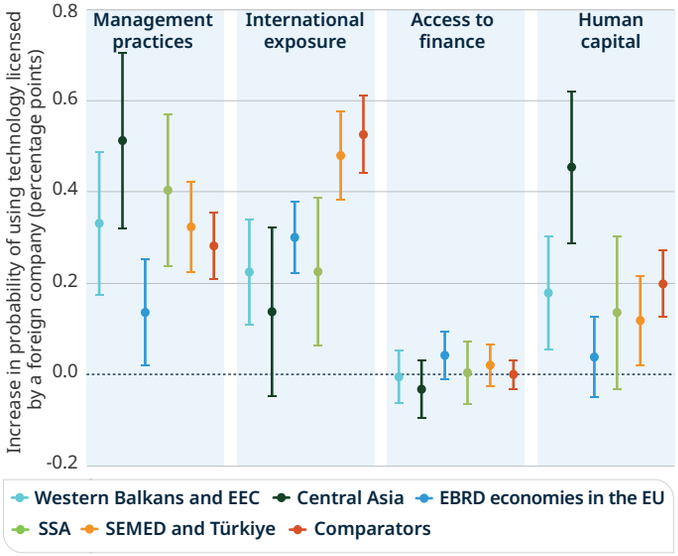
40%

in certain EBRD regions

Technology diffusion, particularly through the adoption of foreign innovations, is an important determinant of productivity growth in economies distant from the innovation frontier.[53] Data from the World Bank Enterprise Surveys, a representative global survey of firms with at least five employees, indicate that the use of technology licensed from foreign firms is more common in the EBRD regions than in other middle-income countries.[54] Adoption is highest in the Western Balkans and EEC (20 per cent), followed by Central Asia and the EBRD economies in the EU (both 17 per cent), while 12 per cent of firms in SSA report using licensed foreign technology, against 7 per cent in comparator countries. Although adoption rates are higher in the EBRD economies than in comparators, the ability to adopt foreign technology is associated with firm-level capabilities. Firms with better management practices, higher levels of human capital and greater international exposure through exports, imports or foreign ownership are more likely to report using licensed foreign technology (see Chart 1.16). Channels of technology adoption from international exposure include technology transfers from multinational corporations and imports of technology embodied in capital goods.[55]

Cross-border payments for the use of intellectual property – patents, trademarks and the licensing of technology – provide further insight into the extent to which economies access and utilise foreign technology. Intellectual property payments have increased steadily over time across economies in the EBRD regions, especially in the EU, Western Balkans and Türkiye, signalling greater access to global knowledge. In contrast, payment levels in SEMED, Central Asia and SSA have remained relatively low (see Chart 1.17). Enhancing firms' capacity to access and adopt foreign technology will be essential to achieving higher productivity growth in these regions. Other levers, such as investment in human capital and improving the business environment, can also contribute to higher productivity growth.

CHART 1.16. Firms with better management practices, higher levels of human capital and more international exposure are more likely to use foreign technology

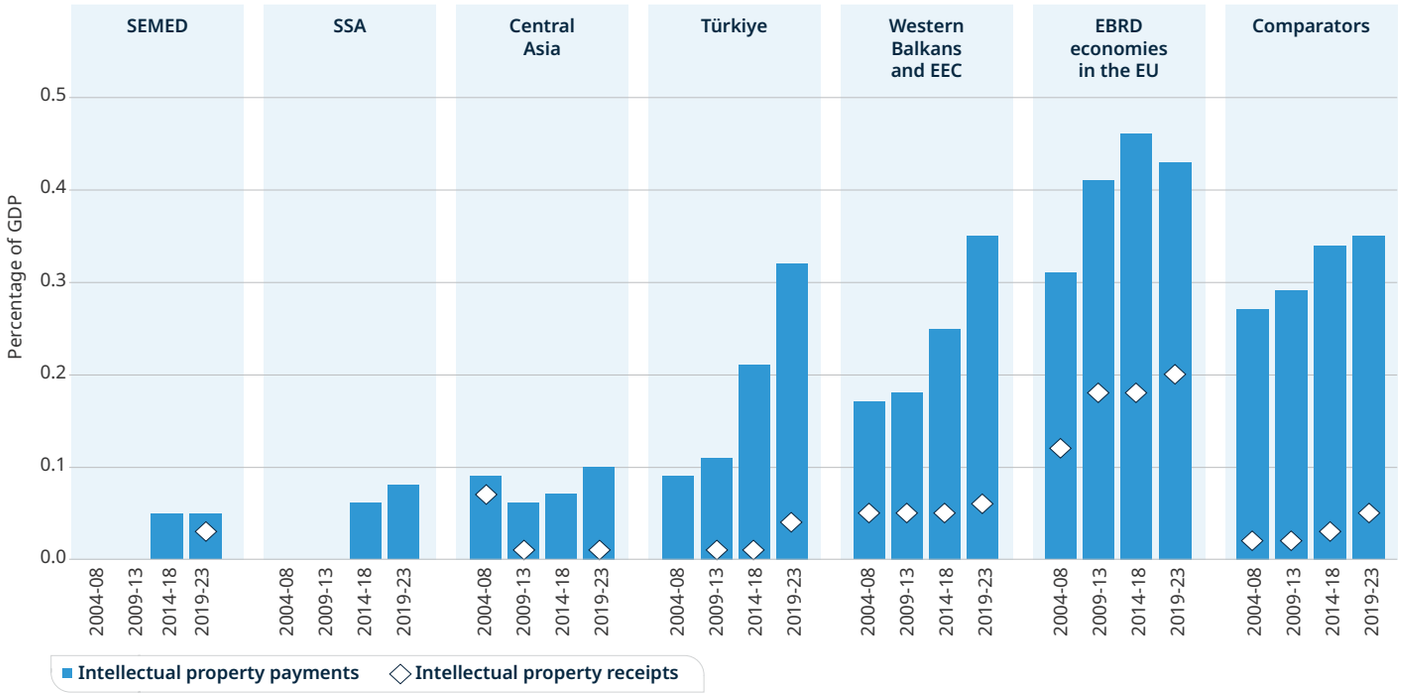


Source: World Bank (n.d.b) (latest year by economy) and authors' calculations.

Note: This chart shows the estimated percentage point increase in the probability of a firm using technology licensed by a foreign company that is associated with a 1 percentage point increase in the indicator shown. Regressions include economy and firm-size fixed effects and various firm characteristics. "Access to finance" indicates that a firm is not credit constrained. "Human capital" is an average of the firm offering formal training, the proportion of permanent workers that completed secondary school, the firm identifying an inadequately educated workforce as a major or very severe obstacle to doing business and the proportion of permanent workers that are skilled. "International exposure" is an average of the proportion of total sales that are exported, the proportion of total inputs that are of foreign origin and the proportion of private foreign ownership in the firm. "Management practices" is a World Bank composite indicator that combines information from eight management practice indicators. The "EBRD economies in the EU" are Bulgaria, Croatia, Czechia, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. "Western Balkans and EEC" comprises Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia and Ukraine. "Central Asia" comprises Kazakhstan, the Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan. "SEMED" comprises Egypt, Iraq, Jordan, Lebanon, Morocco, Tunisia and the West Bank and Gaza. "SSA" comprises Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal. "Comparators" comprises Bangladesh, Belarus, Brazil, China, India, Indonesia, Mexico, Russia, South Africa and Thailand.

[53] See Eaton and Kortum (1999), Keller (2004) and Choi and Shim (2022).
[54] See World Bank (n.d.b).
[55] See Javorcik (2004).

CHART 1.17. **Payments for intellectual property rights have increased steadily in EBRD economies in the EU, the Western Balkans and Türkiye**



Source: World Bank (n.d.a) and authors' calculations.

Note: Unweighted averages across economies using five-year average values in US dollars in constant prices. See the notes on Chart 1.16 for definitions of the various regions. Complete data are unavailable for intellectual property payments in SEMED and SSA in 2004-08 and 2009-13, and for intellectual property receipts in SSA in all periods, in SEMED in 2004-08, 2009-13 and 2014-18, in Central Asia in 2014-18, and in Türkiye in 2004-08.

Between

12%

and

20%

of firms in EBRD regions report using technology licensed by foreign companies

CONCLUSIONS AND POLICY IMPLICATIONS

Demographic change will reshape economies over the coming decades. In EBRD economies in the EU, the Western Balkans and the EEC region, ageing and shrinking workforces are projected to reduce annual GDP per capita growth by 0.36 percentage point in the next two decades. Younger economies in Central Asia and SEMED may see a modest, short-term demographic boost, but will face similar ageing-related drags by the second half of the century. SSA stands apart, with favourable age structures projected to raise growth by 0.37 percentage point annually over the next generation, provided that new entrants can be effectively integrated into national labour markets. A fertility rebound, should one occur, could reduce the projected burden from ageing over the second half of the century, but could also further reduce the ratio of workers to dependants in the near term. Alternatively, fertility could fall below the level projected under the current baseline scenario, a possibility that policymakers also need to consider.

The economic impact of ageing could be mitigated by a combination of greater labour-force participation by women and older workers, increased migration, and productivity growth, though no single policy is likely to be sufficient to counteract the economic impact of demographic change in most economies. The choice of policy responses will depend on local economic circumstances and policy preferences in ageing societies, as discussed in subsequent chapters of this report.

The effectiveness of migration depends crucially on how well migrants are matched to skill gaps in the economy and integrated into labour markets. Efforts to accelerate technology adoption need to focus on investment in skills upgrades, including digital skills, especially among elderly and young workers, as well as policies to foster technology adoption within firms. Targeted measures, such as promoting phased retirement, investing in re-skilling, fostering age-friendly workplaces or providing affordable childcare, can help to increase employment rates among women and older workers – groups with traditionally lower rates of labour-force participation.

Meanwhile, policymakers in economies with younger populations where demographic dividends are expected to arise should capitalise on this temporary window of opportunity by ensuring that labour markets can productively absorb a rapidly growing labour force.

BOX 1.1.

A NEOCLASSICAL GROWTH MODEL WITH DEMOGRAPHICS

The estimates of the economic cost of ageing are based on a model[56] where output Y in an economy with population N is produced according to the equation below in any time period t. In this production function, K_t is the stock of physical capital, A_t is the level of labour-augmenting technology, which grows at the exogenous rate g, and L_t is the population aged 15-64:

$$Y_t = K_t^{\theta}(A_t L_t)^{1-\theta}$$

In this economy, the growth of per capita income is given by the following equation and represents the weighted sum of the speed of technological change, capital deepening (where $\tilde{k}$ represents capital normalised by the product of technology and total population) and growth in the working-age share:

$$g_{Y/N} = g_A + \theta g_{\tilde{k}} + (1-\theta) g_{L/N}$$

Capital deepening is, in turn, governed by the resource constraint (whereby the output in any period is the sum of consumption and investment) and the depreciation of the existing capital stock at a constant rate. A representative household with logarithmic utility chooses investment in each period to optimise the discounted value of the present and future consumption path. The marginal product of capital declines if labour input is lower, and this reduces households' incentives to accumulate capital as societies age.

The model is calibrated on an annual frequency. The discount factor, the capital share of income (the parameter θ in the production function) and the speed of depreciation are set to match the annual rate of return on capital observed in the United States of America between 2000 and 2019 based on data from Penn World Table 10.01.[57] Country-specific values of g are chosen so that, conditional on these structural parameters, they match GDP growth per working-age adult between 2000 and 2023. Real GDP growth is taken from the World Bank World Development Indicators,[58] while population numbers come from the UN World Population Prospects 2024 revision.[59]

To quantify the impact of demographics on GDP per capita growth, a counterfactual path is generated in which the working-age ratio is held fixed at its baseline level. The annual "cost of ageing" is defined as the difference in growth rates of output per capita between the baseline and the counterfactual scenario, which combines the direct demographic effects of a falling working-age ratio with the endogenous slowdown in capital deepening. For instance, in the EBRD regions, approximately two-thirds of the estimated contribution of demographics to growth over the 2024-50 period comes from direct effects, with the remaining one-third stemming from indirect effects.

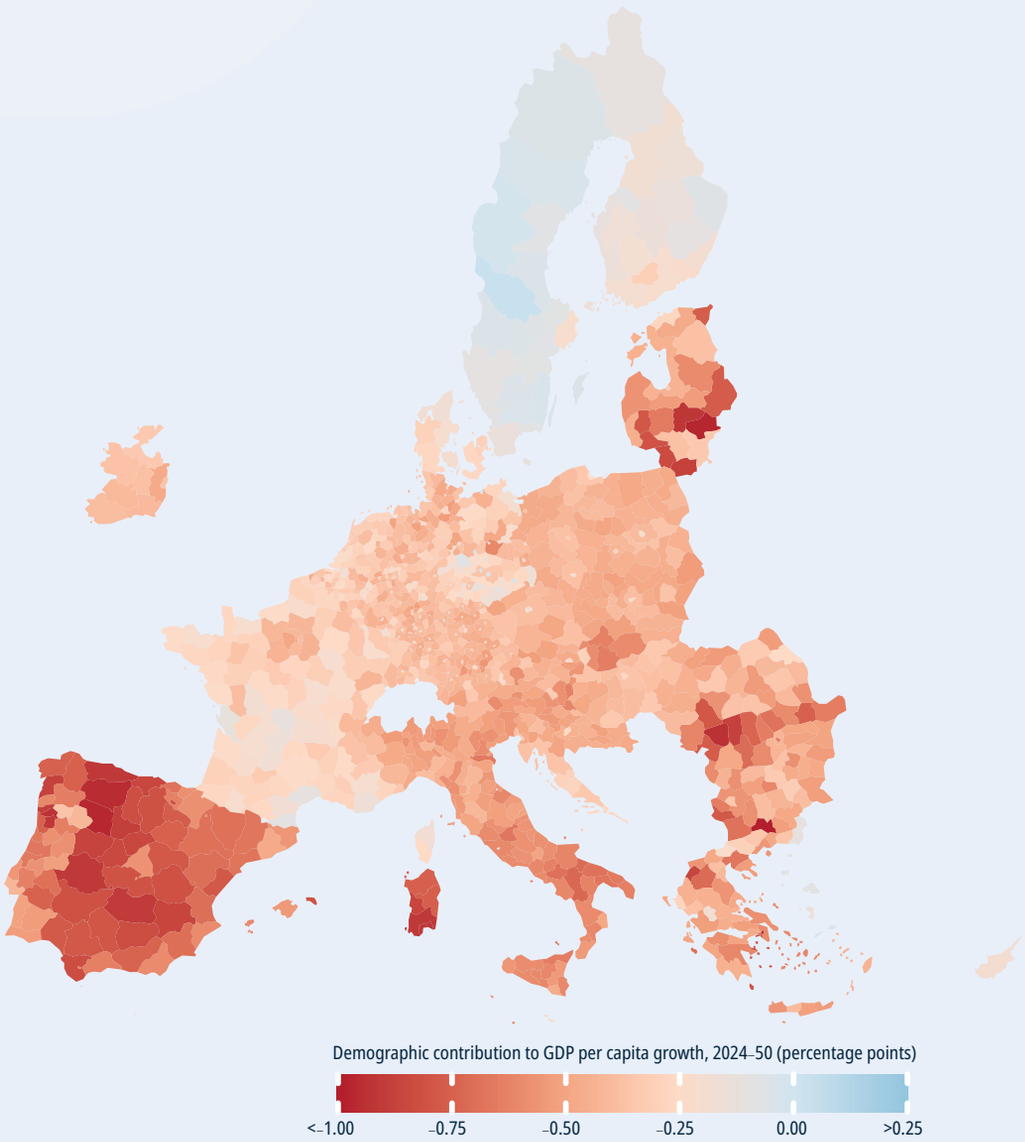
[56] See Fernández-Villaverde, Ventura and Yao (2025).

[57] See Feenstra, Inklaar and Timmer (2015).
[58] See World Bank (n.d.a).
[59] See UNDESA (2024).

BOX 1.2.

THE WEALTH OF WORKING REGIONS

CHART 1.2.1. The geography of demographic change varies within European economies



Source: European Commission (2025), Eurostat (2021) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: This map shows the contribution of demographic change to average annual real GDP per capita growth in 2024-50 at the NUTS-3 level. Estimates are generated using a calibrated neoclassical growth model with endogenous capital accumulation (see Box 1.1).

Public discussion of population ageing typically highlights differences between countries, but some of the most striking contrasts in demographic trends are to be found within national boundaries. Consider the population structure of the EU at the NUTS-3 level in 2023 (a granular level typically corresponding to counties, districts or provinces, such as *Kreise* in Germany or *oblasti* in Bulgaria).[60] Only 29 per cent of the cross-sectional variation in the working-age population ratio is explained by differences between country averages, with the remaining 71 per cent of variation arising from differences within countries.

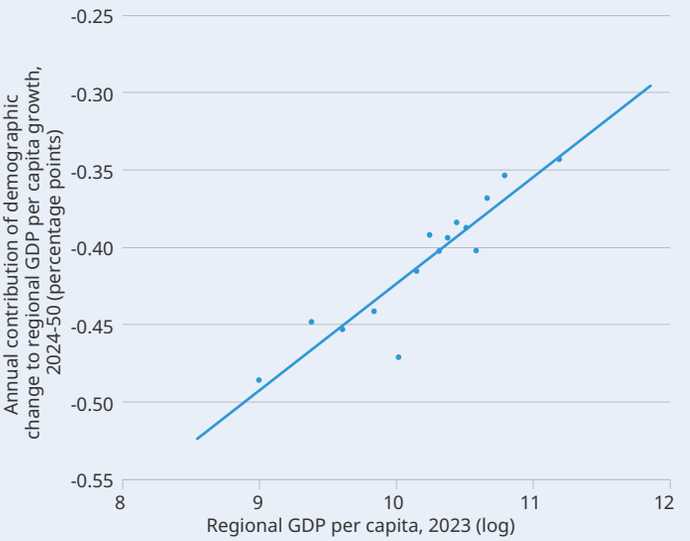
To quantify what this heterogeneity means for future growth, we extend the neoclassical growth model described in Box 1.1 to the regional level. This analysis incorporates data from the Annual Regional Database of the European Commission (ARDECO) on population structure[61] and real GDP for more than 1,100 NUTS-3 entities across the EU's 27 member states from 2000 to 2023. Region-specific labour-augmenting technology growth rates are calibrated to replicate the observed growth trajectories of real GDP per working-age adult in each region over this period. Common structural parameters (discount factor, capital share and depreciation rate) remain those identified at national level in Box 1.1. Lastly, working-age ratios for the 2024-50 period are derived from Eurostat's EUROPOP2019 regional population projections.[62]

The estimated impact of changing working-age ratios on GDP per capita growth ranges from negligible in most of the Nordic region to negative effects approaching 1 percentage point per year in parts of southern Europe, Latvia, Lithuania and Romania.

These demographic differentials may further amplify regional disparities within economies, although this effect is relatively modest (see Chart 1.2.2). The regression analysis underpinning this chart links the projected demographic contribution to GDP per capita growth over 2024-50 to initial GDP per capita levels, while controlling for country fixed effects. It reveals that poorer regions within economies will face a higher economic cost of ageing over the next two decades. Comparing regions at the 10th percentile of the intra-country income distribution with those at the 90th percentile in 2023 (for example, Badajoz and Barcelona, respectively, in Spain), the poorest regions will experience an additional demographic headwind of around 0.05 percentage point per year through 2050, adding up to a cumulative 1.26 percentage points.

The estimated demographic effects on regional convergence, while statistically significant, are economically small. They could be offset by policies aimed at addressing rising regional inequalities, including targeted upgrades of transport and digital infrastructure, sustained investment in skills, and reforms that improve the quality of governance in lower-income municipalities and regions.[63]

CHART 1.2.2. Poorer regions within countries will experience somewhat stronger demographic headwinds



Source: European Commission (2025), Eurostat (2021) and authors' calculations based on Fernández-Villaverde, Ventura and Yao (2025).

Note: This chart shows a binned scatter plot based on an OLS regression of demographic contributions to regional GDP per capita growth (2024-50) on the logarithm of regional GDP per capita in 2023, controlling for country fixed effects. Demographic contributions are estimated using a calibrated neoclassical growth model with endogenous capital accumulation (see Box 1.1). Sample comprises the 27 member states of the EU.

[60] NUTS = Nomenclature of Territorial Units for Statistics.
[61] See European Commission (2025).
[62] See Eurostat (2021).
[63] See EBRD (2024b).

BOX 1.3.

DEMOGRAPHIC CHANGE AND PUBLIC PENSIONS

Public pensions are an essential element of the social contract in many countries and a vital source of income security for older adults. Policymakers, therefore, must balance the fiscal pressures arising from ageing populations with the need to provide adequate income in retirement. In some OECD countries, accumulated pension assets are substantial, reaching 180 per cent of GDP in Iceland and 160 per cent in Switzerland, for instance.[64] In EBRD economies in central Europe, EEC and Central Asia where funded pension schemes have been introduced, pension assets are accumulating steadily, albeit at varying paces, ranging from 5 per cent of GDP in Hungary to 30 per cent of GDP in Croatia. However, in many countries, pension systems continue to be financed by tax revenues and social security contributions.

Public pension systems have three main objectives: to reduce old-age poverty, smooth consumption over citizens' lifetimes and provide longevity insurance (namely, a steady income regardless of an individual's lifespan). A rapidly ageing workforce calls for an additional objective: ensuring sustainable pension debt. In emerging Europe and Central Asia, pension systems largely provide protection against poverty. Most countries offer a basic or defined-benefit pension, ensuring lifelong income and benefits for surviving spouses, where applicable. In a few cases, these schemes are complemented by mandatory defined-contribution pillars, where individuals' contributions are invested by pension funds and retirement benefits are determined by the accumulated return on investment, providing a strong link between contributions and benefits.[65] Nevertheless, concerns remain around the pension liabilities owed to future generations and the adequacy of pensions, due to the changing nature of work and rising life expectancy.

At present, in most EBRD economies in emerging Europe and Central Asia, more than 90 per cent of adults above retirement age receive a pension,[66] with poverty rates among the elderly lower than among working-age adults.[67] However, increasing self-employment and informal work are reducing contributor coverage, with future pension eligibility at risk for these groups. In general, the sustainability of pension liabilities is a growing concern in countries with increasing old-age dependency ratios and stable or rising benefit levels. So far, growth in pension spending in economies in the EBRD regions with older populations has slowed owing to a decline in average benefits, increases in retirement age and fewer adults meeting eligibility requirements based on their contribution history.[68] Unless the low coverage of the current population is addressed, pension spending on universal or basic pensions, and consequently public debt, may rise in the future.

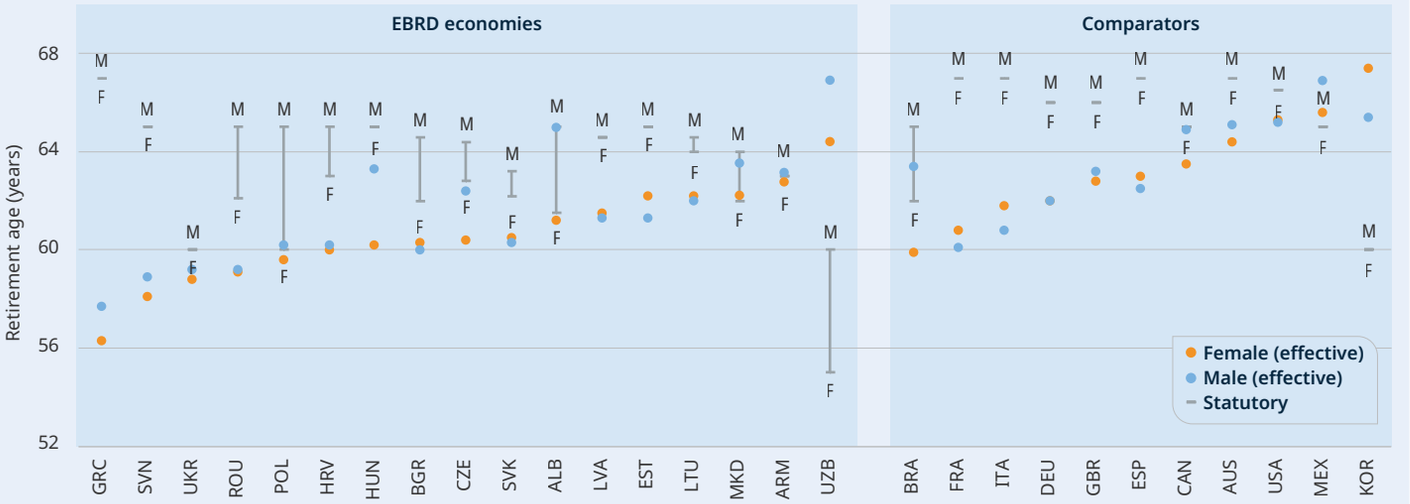
RETIREMENT AGES, REPLACEMENT RATIOS AND SPENDING

Statutory retirement ages across the EBRD economies have been increasing in recent years and range from 55 to 67, with most countries moving towards equal ages for men and women (see Chart 1.3.1). However, the average effective retirement age remains lower, indicating that higher statutory ages do not always result in longer working lives, unless early retirement is restricted, as in North Macedonia. This gap may reflect various provisions for early retirement in certain occupations or retirement schemes, individual preferences or labour-market barriers for older adults.

Public pension expenditure in the EBRD regions ranges from 3 per cent to 11 per cent of GDP, based on World Bank Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE) data.[69] Payroll social security contributions often fall short, creating pension-system deficits financed from government general expenditure. In some countries, such as Armenia, Georgia and Kazakhstan, pay-as-you-go pensions are financed directly from the state budget.

[64] See OECD (2024b).
[65] See Kaskarelis et al. (2025).
[66] Based on ILOSTAT data.
[67] Based on World Bank Poverty and Inequality Platform data.
[68] See European Commission (2024).
[69] See World Bank (n.d.c).

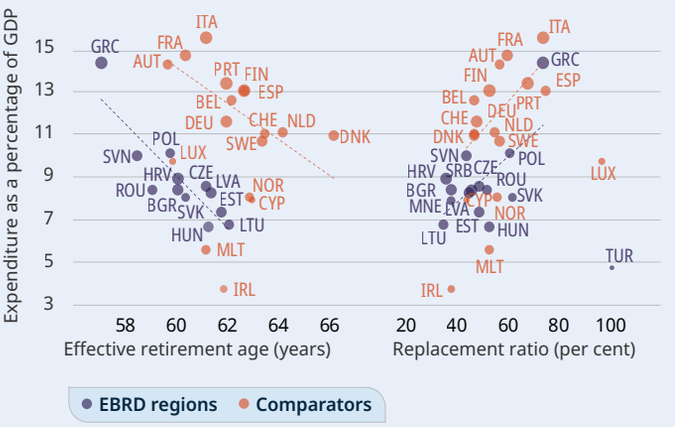
CHART 1.3.1. **Effective retirement ages are generally below statutory retirement ages, while gender gaps are narrowing**



Source: Eurostat data, OECD data, World Bank data and authors' calculations.

Note: Data are for 2023 or the latest year available. The statutory retirement age is the age at which an individual can receive an old-age pension with full benefits. Effective retirement age is based on Eurostat data for all economies except for Australia, Canada, Mexico, South Korea, the United Kingdom and the United States, where OECD data on the average age of exit from the labour force for workers aged 40 and over are used, and Albania, Armenia, North Macedonia, Ukraine and Uzbekistan, where World Bank data on the average age of retirement for new pensioners are used.

CHART 1.3.2. **Pension expenditure falls as the effective retirement age rises, and it increases as the replacement ratio rises**



Source: Eurostat data, World Bank data and authors' own calculations.

Note: Data are for 2022. Trend lines are linear fits estimated separately for EBRD and other European countries, excluding Ireland, Luxembourg, Malta and Türkiye. Circle size reflects the proportion of individuals aged 65 and over relative to the population aged 15-64. Pension expenditure is defined according to the European System of Integrated Social Protection Statistics (ESSPROS) framework and includes both private and public pensions. Effective retirement age refers to the average age at which individuals begin to receive an old-age pension. The replacement ratio is calculated as the median gross individual pension income of people aged 65-74 relative to the median gross individual earnings of those aged 50-59, excluding other social benefits.

Replacement ratios in EBRD economies covered by Eurostat ranged between 35 per cent and 101 per cent of pre-retirement salary in 2022 (see Chart 1.3.2), similar to or lower than those in advanced European economies. Effective retirement ages were also comparable. However, total pension expenditure as a percentage of GDP was generally lower in the EBRD economies, with their pension systems typically having less generous benefits. For pension systems to remain sustainable and provide adequate benefits, incentives for workforce participation among older adults need to be strengthened, including through further increases in the statutory retirement age.

Continued on page 40

BOX 1.3.

DEMOGRAPHIC CHANGE AND PUBLIC PENSIONS

Continued from page 39

REFORM PRIORITIES

Experience of pension reforms points to several common reform priorities going forward:

- To acknowledge explicitly that public pension systems financed through general revenues must focus on the prevention of old-age poverty,[70] while schemes financed through payroll must be actuarially fair with a strong link between pension contributions and pension payouts.
- To manage expectations around pension adequacy, with a focus on issues related to inter- and intra-generational fairness.
- To improve incentives to make social-security contributions and encourage sufficient private savings and investments by the new generation in order to cover informal-sector workers.
- To engage the public, including children and young people, with transparent communication about how pension benefits are determined, underscoring the need for reforms due to ageing pressures and measures to be put in place to support longer, healthier lives. Public engagement should also aim to strengthen financial literacy on savings and investment.

Country-specific reform strategies will also be dictated by the pace of ageing and national fiscal capacity. Countries with young populations and high fertility rates, such as those in Central Asia, should focus on expanding the coverage of public pension systems and improving incentives to contribute while increasing women's labour-force participation, including through the provision of affordable childcare and the establishment of systems for private savings and investment.

Economies with relatively young populations that are expected to age significantly in the coming decades, including Türkiye and those in the Caucasus, should begin to undertake gradual reforms, strengthen compliance by linking social-security contributions and tax systems, and raise public awareness of the fiscal challenges associated with ageing.

In emerging Europe, rapidly ageing economies with high dependency ratios need to stay the course on measures that have been adopted but have yet to be implemented, consider additional measures to raise labour-force participation rates for older adults, and channel the accumulated capital pools of funded pensions towards productive investments.

[70] See Packard et al. (2019).

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02

Fertility in transition

This chapter examines fertility trends in the EBRD economies and the social, economic and policy factors that shape them. Fertility rates have fallen across all of the EBRD regions, with many countries now well below the replacement rate, though the pace of those declines and the underlying drivers vary. The analysis highlights how delayed childbearing, shifting marriage patterns and economic constraints interact to influence fertility outcomes, often resulting in families having fewer children than they would want. Policy responses – from cash transfers to childcare provision – have had a limited effect.

AT A GLANCE

Many EBRD economies now have total fertility rates well below the

2.1

replacement rate, with some close to **1.3**

In EBRD economies in the EU, the mean age at childbirth has risen from about **26** in **1970** to just under

30

in **2023**

Starting parenthood at the age of **32** rather than **24** reduces the likelihood of having two children from **99%** to

64%

INTRODUCTION

Fertility trends have undergone a profound transformation around the world over the past five decades. Globally, the average number of children born per woman has more than halved since the 1960s, falling from around 5 to 2.25 today.[1] Once characterised by relatively high birth rates, many economies in the EBRD regions now have fertility levels at or below the replacement rate of 2.1 children per woman (the number of births needed to maintain a stable population over time in a low-mortality setting in the absence of migration).[2]

The decline in fertility partly reflects a shift in social norms and cultural attitudes when it comes to family formation. A growing share of young adults are delaying starting families, so marriage and childbearing are happening later in life. In the post-communist economies of the EBRD regions, the share of people aged 31-35 who are married has fallen to around 65 per cent for Millennials, down from about 80 per cent for Baby Boomers. Among 18- to 25-year-olds, roughly 18 per cent of the latest cohort are married (in advanced economies, this figure is as low as 6 per cent). Higher educational attainment, changing gender roles and greater career aspirations have all underpinned this cultural shift.[3] Many still say they would like two children, but as people start families later, it is increasingly common for couples to end up with fewer children than they consider ideal.[4]

Fertility decisions can also be a consequence of economic constraints (such as high cost of living and lack of affordable housing), as well as the fact that women tend to experience a sizeable "motherhood penalty" in the form of a reduction in career earnings after having a baby. By 2023, only 22 per cent of 25- to 34-year-olds in EBRD economies in the EU had achieved all five traditional markers of adulthood (finishing education, joining the labour force, moving out of the parental home, getting married and having children), down from 31 per cent in 2005.

[1] See UNDESA (2024).
[2] This reflects the sex ratio at birth and women's survival to the end of their childbearing years. In economies where mortality is higher or the sex ratio at birth is more male-biased, the replacement rate is higher.
[3] See Kearney, Levine and Pardue (2022) and Bloom, Kuhn and Prettner (2024).
[4] See Kearney and Levine (2025).

By 2019, the majority of governments in the EBRD regions had adopted policies aimed specifically at encouraging childbearing, up from 5 per cent in 1980. These measures range from direct allowances, bonuses and extended parental leave provisions to subsidised childcare and assisted reproductive technology (ART). Their impact on fertility has been limited. While some generous benefit packages have produced short-lived upticks in births, sustaining higher fertility has proved difficult once incentives have ended. Meanwhile, as more couples have children later in life, the share of births using ART (such as in vitro fertilisation) has been increasing, though it remains modest in the EBRD regions compared with advanced European economies.

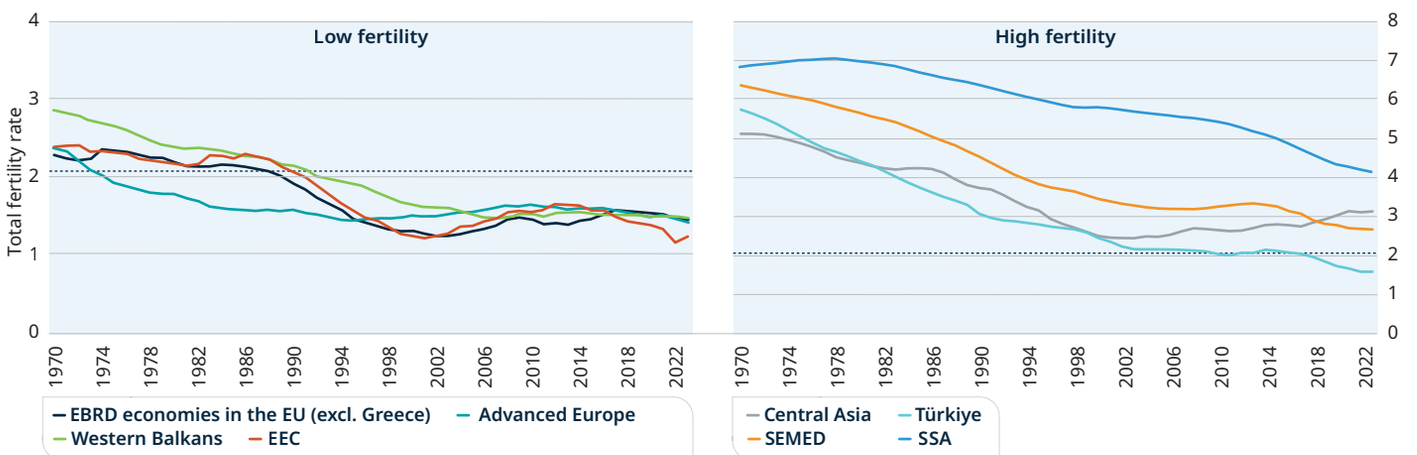
This chapter begins by documenting recent fertility trends across the EBRD regions, highlighting the scale of decline in birth rates. It then examines the key drivers of lower fertility rates, as well as the contribution of changes in fertility to overall population dynamics. Lastly, the chapter reviews policies aimed at raising fertility rates.

FERTILITY TRENDS ACROSS THE EBRD REGIONS

There has been a marked decline in the total fertility rate across the EBRD regions (see Chart 2.1), with many economies now boasting fertility rates well below the replacement rate of 2.1 children per woman. "Total fertility rate" refers to the average number of children a woman would have over her lifetime if prevailing age-specific fertility rates across all age groups remained the same. In some cases, fertility rates have dropped close to 1.3 – a level at which a population shrinks by half over a 45-year period.[5]

High-fertility areas such as sub-Saharan Africa (SSA), the southern and eastern Mediterranean (SEMED) region and Türkiye have seen the steepest falls in fertility rates, although birth rates in SSA and SEMED remain relatively high. In the Western Balkans, fertility declined steadily from the 1970s before levelling out in the late 2000s.

CHART 2.1. Total fertility rates have declined across the EBRD regions



Source: UNDESA (2024) and authors' calculations.

Note: "EBRD economies in the EU (excl. Greece)" comprises Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. "EEC" comprises Armenia, Azerbaijan, Georgia, Moldova and Ukraine. "Central Asia" comprises Kazakhstan, the Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan. "SEMED" comprises Egypt, Iraq, Jordan, Lebanon, Morocco, Tunisia, and the West Bank and Gaza. "SSA" comprises Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal. "Western Balkans" comprises Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia. "Advanced Europe" refers to the EU-15 (excluding Greece) plus Norway and Switzerland. Lines represent regional averages weighted by the female population aged 15-49. The dotted lines denote the replacement fertility rate of 2.1 children per woman.

[5] See Billari (2008) and Goldstein et al. (2009).

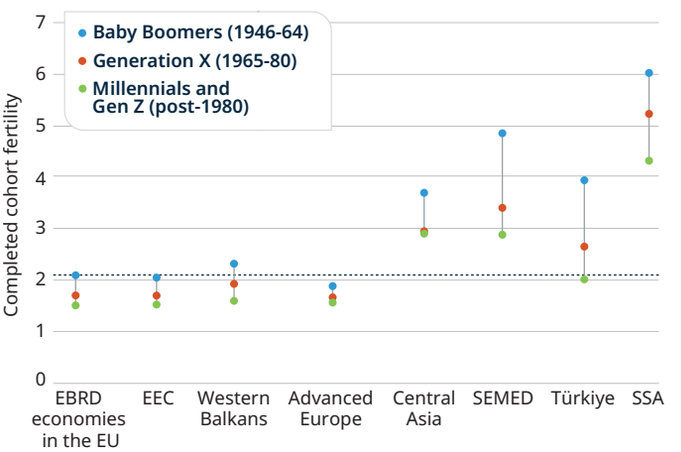
In the EBRD economies in the EU (excluding Greece) and eastern Europe and the Caucasus (EEC), fertility rates were strikingly stable at 2.2-2.4 throughout the 1970s and 1980s, reflecting the prevalence of early marriage, early childbearing and strong two-child social norms.[6] In the 1990s, fertility rates fell sharply across these regions, reflecting the scale of economic and social upheaval during transition. By the early 2000s, several economies in the regions were among the lowest-fertility economies in the world, with birth rates below 1.3 children per woman. A modest rebound followed in the 2000s, as many young adults had delayed starting families until economic conditions improved. At the same time, changes in social norms, including more cohabitation and a stronger focus on individual career aspirations, continued to put downward pressure on fertility, mirroring trends seen in advanced European economies.[7] Central Asia also saw a decline in fertility during the transition years. Unlike other regions, this has been followed by a sustained rise in birth rates over the past two decades, with average rates now well in excess of the replacement rate (see Box 2.1 for more details).

The pace, direction and drivers of changes in fertility vary considerably from economy to economy. Tunisia, for instance, is notable for the speed of the decline in its fertility rate, which dropped from 6.4 births per woman in 1970 to 1.8 (below the replacement rate) in 2023, while real GDP per capita (in constant 2015 US$) remained less than US$ 4,000 (€3,600).[8] By contrast, advanced European economies Germany and Sweden saw similar below-replacement fertility levels when their real GDP per capita levels (in constant 2015 US$) were about US$ 19,300 (€17,400) (1972) and US$ 27,100 (€24,400) (1977), respectively.

At the other end of the spectrum, Kazakhstan has seen a sustained rise in fertility from a post-transition low of 1.9 in 2000 to 3.0 in 2023, around 10 per cent above its 1990 level. Czechia, like Kazakhstan, has seen its fertility rate rise from a post-transition low of 1.14 in 1999 to 1.82 in 2021, the highest in the EU at the time. Suggested reasons for the latter's overperformance include a large decrease in abortions relative to births since 1990 and the use of ART, with the share of children born to assisted reproduction doubling in the past 15 years.[9] Recent data paint a less positive picture, however, with the fertility rate in Czechia falling to 1.45 in 2023, reflecting a general post-Covid drop in fertility rates across the EBRD regions.

Jordan and Kenya are the two EBRD economies that have seen the steepest drop in fertility since 1970, with 5.5 and 4.7 fewer children born per woman, respectively. In both countries, the majority of the decline has occurred since 1990. In Kenya, this has coincided with an increase in the use of modern contraception from 18 per cent in 1989 to 57 per cent in 2022.[10]

CHART 2.2. Completed cohort fertility has declined across the EBRD regions



Source: UNDESA (2024) and authors' calculations.

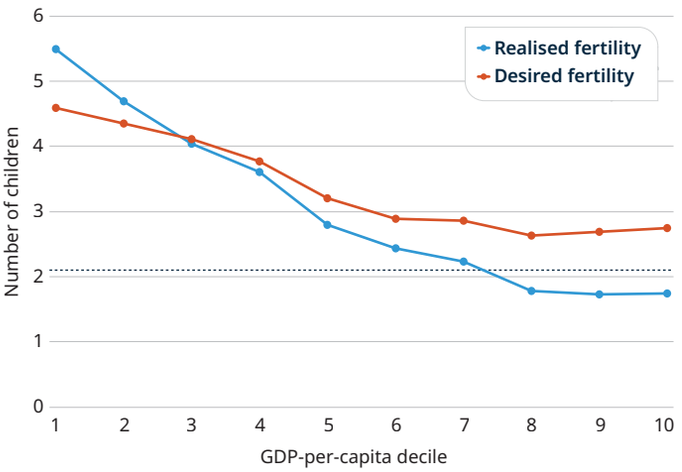
Note: Baby Boomers are defined as those born between 1946 and 1964, Generation X as those born between 1965 and 1980, and Millennials and Generation Z as those born between 1981 and 2000. Generation Z members who are born after 2000 are not included because of the lack of observable data for these cohorts. Baby Boomers and Generation X are based on observed data on age-specific fertility rates for each age and cohort. Millennials and Generation Z are partly based on observed age-specific fertility rates up to the last age observed in 2023. Age-specific fertility rates in 2023 are used to impute missing age-specific fertility rates for the remaining ages up to 40. Regional averages are weighted by the cohort populations at the beginning of childbearing age. The dotted line denotes the replacement fertility rate of 2.1 children per woman.

[6] See Sobotka (2011).
[7] Ibid.
[8] Currency equivalents in this paragraph are in constant 2015 euros.
[9] See Dębiec (2025).
[10] See KNBS and ICF (2023).

Another way to track fertility trends is by examining completed cohort fertility – the average number of children actually borne by women from a given birth cohort by the end of their reproductive years. Unlike the total fertility rate for a given period, which can be distorted by shifts in the timing of births, cohort fertility reflects realised lifetime childbearing. The following analysis approximates near-complete cohort fertility using age 40 as a cut-off, as this provides completed fertility data for those born in 1983 and earlier.

Across all regions, younger generations are having, and are expected to have, fewer children than their predecessors (see Chart 2.2). In EBRD economies in the EU and in advanced Europe, fertility has remained at or below replacement for every cohort, with Millennials and Generation Z projected to average around 1.5 children based on current trends. Fertility in the EEC region and the Western Balkans has declined from just above replacement among Baby Boomers to 1.6 for Millennials and Generation Z. Türkiye has recorded one of the steepest generational drops, from 3.9 among Baby Boomers to just below the replacement rate for Millennials and Generation Z. In Central Asia, fertility has declined from 3.7 for Baby Boomers to less than 3.0 for Generation X, and this rate has remained constant for Millennials and Generation Z. In SSA, while fertility has remained high, it has declined from 6.0 to 4.3 through the generations.

CHART 2.3. **Fertility gaps open up in richer countries**



Source: UNDESA (2024), Demographic and Health Surveys (n.d.), WVS (2024), EVS (2022), Eurobarometer (2002, 2006 and 2011), Gallup (2023), World Bank (n.d.) and authors' calculations.

Note: This chart shows, for each country-year where data are available, the average stated ideal number of children among women of childbearing age (15-49). Question wording varies by survey and falls into two groups: (i) questions on personal ideals that ask the respondent how many children she would like to have and (ii) questions on general ideals that ask about ideal family size. Where both are available, the analysis uses personal ideals; results are similar when restricted to personal ideals only. Country-year estimates are averaged within sample deciles of GDP per capita (in 2015 US$). Realised fertility is measured by the total fertility rate. The dotted line indicates the replacement rate of 2.1 children per woman.

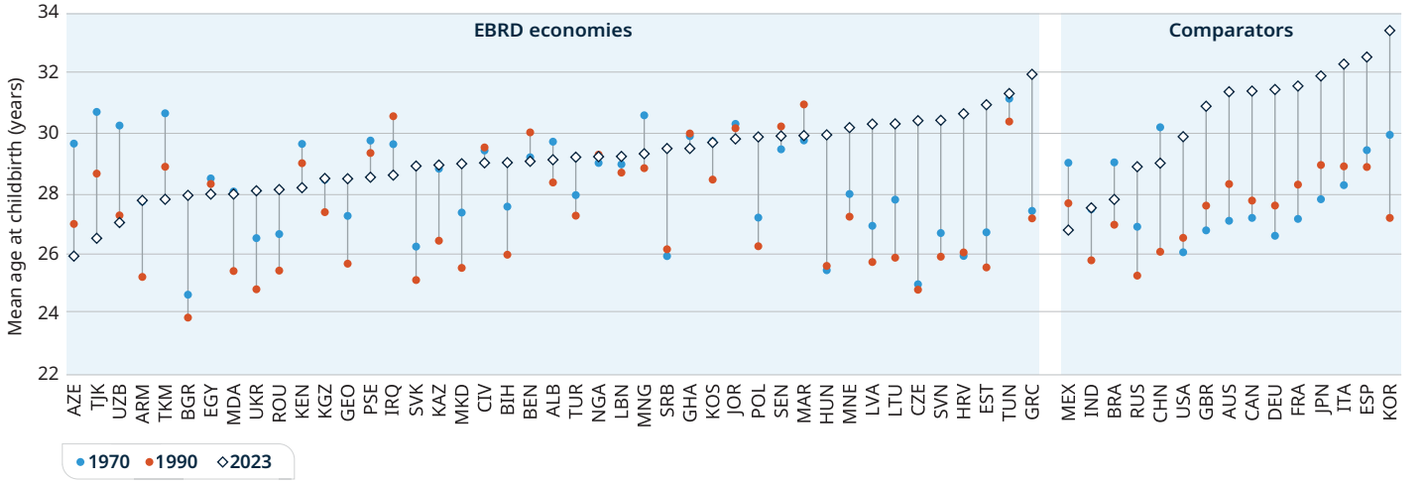
THE GAP BETWEEN FAMILY SIZE ASPIRATIONS AND ACTUAL FERTILITY

Preferences as to the ideal number of children are often formed early in life. Whether they are realised may depend on job security, housing costs, access to childcare, gender inequalities in the labour market and various other factors.[11] The difference between desired and actual fertility provides a measure of unmet fertility, indicating where targeted policies could help individuals achieve their reproductive aspirations.

Actual fertility tends to exceed stated desired fertility in economies with the lowest GDP per capita (see Chart 2.3), reflecting limited access to contraception, high child mortality or prevailing social norms. In higher-income economies, in contrast, a fertility gap emerges: while stated desired fertility remains above two children per woman, actual fertility is about 1.7-1.8, reflecting delayed marriage and the high perceived opportunity cost of childbearing arising from labour-market penalties. This chapter discusses these factors in turn.

[11] See Adserà (2006) and Luci-Greulich and Thévenon (2013).

CHART 2.4. Fertility is shifting to later years



Source: UNDESA (2024) and authors' calculations.

Note: The mean age at childbirth is the mean age of mothers for all live births in a given year, regardless of birth order.

In the EEC region and Türkiye, the mean age at childbirth has increased by

more than two years

over the last three decades

CHILDBEARING LATER IN LIFE

The timing of births affects completed family size, labour-market participation and the balance between generations in the population.[12] Chart 2.4 shows that the average age at childbirth (that is, the mean age of mothers for all live births in a given year, regardless of birth order) has increased since 1970. Historically, the high mean ages in countries such as Azerbaijan and Tajikistan in the 1970s reflect the prevalence of large families (with higher-order births in a woman's 30s and 40s raising the average), while in more recent decades, later marriages, prolonged education, extended career building and the availability of ART have pushed up the mean age at childbirth.[13] In EBRD economies in the EU, the mean age at childbirth has risen, too, from around 26 years in 1970 to just under 30 years in 2023, a similar change to that in advanced Europe, where it has increased from about 28 to 32 years. Even in the EEC region and Türkiye, where mothers have traditionally been younger, the age at childbirth has increased by more than two years over the last three decades. Part of this increase reflects a marked decline in teenage births, which has been associated with gains in maternal and child health, and educational attainment.

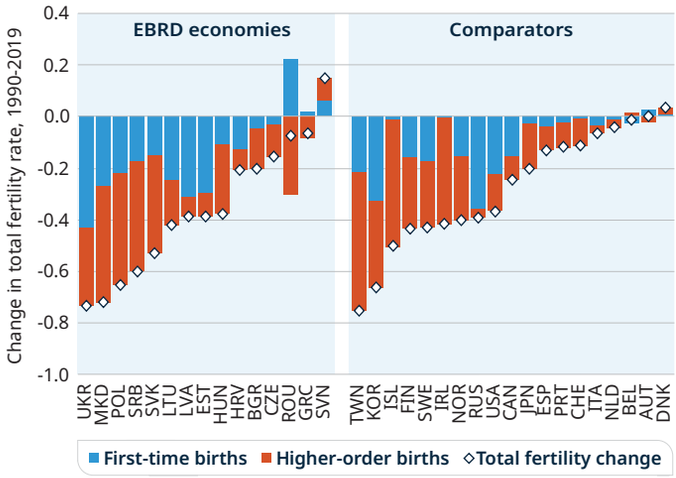
[12] See Kohler, Billari and Ortega (2002) and Mills et al. (2011).
[13] See Billari and Kohler (2004), Sobotka (2016) and Bratti (2023).

BREAKING DOWN FERTILITY DECLINES: FIRST-TIME BIRTHS VERSUS HIGHER-ORDER BIRTHS

The decline in fertility reflects both smaller family sizes and a growing share of women who have no children. Chart 2.5 breaks down the change in the total fertility rate between 1990 and 2019 into two key components: first-time births and higher-order births. The blue bar indicates the impact of changes in the share of women who become mothers. A more negative blue bar, therefore, signals a rising share of women remaining childless and delaying family formation, which has become a significant driver of falling total fertility rates in some economies. The red bar, in contrast, captures changes among women who already have at least one child, showing how family sizes are shifting.

First-time births tend to be particularly sensitive to individuals' long-term expectations about income, labour-market stability and the opportunity costs of parenthood.[14] As women's ability to conceive declines sharply with age, especially after their mid-20s, the likelihood of having a second or third child declines rapidly for couples who start families later, increasing the risk of having fewer children than desired.[15] There has also been a documented decline in male fertility due to environmental, health and lifestyle factors,[16] which also plays a role, but this is beyond the scope of this report.

CHART 2.5. The decline in fertility reflects both smaller family sizes and a growing share of women postponing family formation

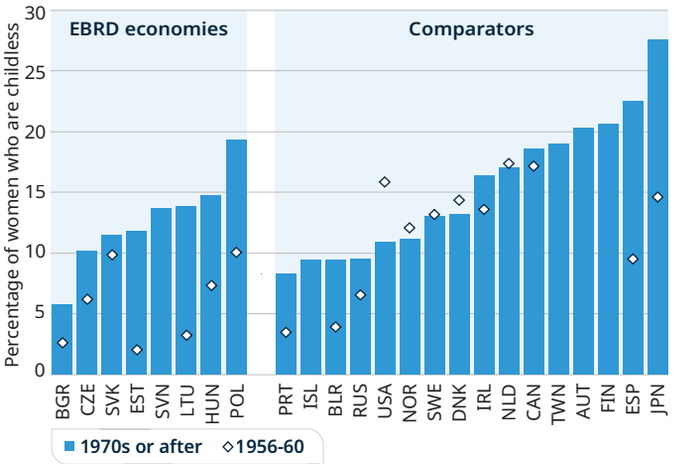


Source: Human Fertility Database (n.d.a and n.d.b), Eurostat data and authors' calculations.

Note: The change in total fertility rate between 1990 and 2019 is calculated by subtracting the earlier total fertility rate from the later one. This difference is then broken down into first-time births and higher-order births. For each birth order, the calculation sums the age-specific fertility rates using the total number of women in each age group as the denominator. This provides a straightforward way of seeing whether changes in the total fertility rate over time are mainly due to (i) more women remaining childless or delaying family formation or (ii) mothers having fewer children on average.

[14] See Heckman and Walker (1990) and Hotz, Klerman and Willis (1997).
[15] See Leridon (2008) and Schmidt et al. (2012).
[16] See, for example, Huang et al. (2023).

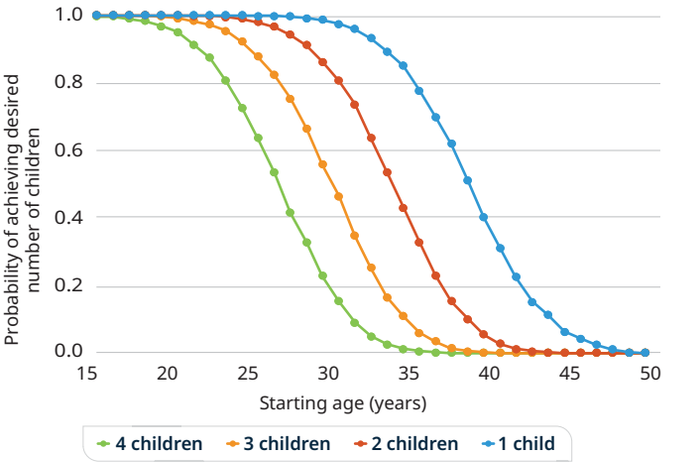
CHART 2.6. The share of childless women has increased through the generations



Source: Human Fertility Database (n.d.a).

Note: This chart shows the average share of women that are childless by birth cohort. Bars represent women born from 1970 onwards. Diamonds represent women born between 1956 and 1960. Data on the 1956-60 cohort are missing for Austria, Finland, Iceland, Slovenia and Taipei China. Averages are calculated from all available data within the specified cohort ranges.

CHART 2.7. Probability of achieving a given number of children declines with age



Source: Demographic and Health Surveys (n.d.) based on the methodology of Geruso, LoPalo and Spears (2023) and authors' calculations.

Note: Effective fecundability (the probability of starting a pregnancy in a given month that ends in a birth) by age in months is estimated using pooled contraceptive calendar data in the Demographic and Health Surveys, using a sample of woman-months, where the woman is married, not currently pregnant, not using contraception, has not had a terminated pregnancy in the past three months and has not been pregnant in the past 12 months. These probabilities are used to simulate the chances of achieving a specified number of children before the end of the reproductive period, depending on the age at which exposure to conception risk begins (see Box 2.2).

Chart 2.6 shows the share of women who have had no births by the end of their childbearing years (completed cohort childlessness). In almost all economies, childlessness is higher for cohorts born from 1970 onwards (bars) than for women born in 1956-60 (diamonds), indicating a clear generational increase. In the EBRD regions, childlessness in recent cohorts ranges from about 5 per cent in Bulgaria to nearly 19 per cent in Poland, with central European economies in the 10-15 per cent range. Among comparators, levels are higher, on average, reaching 20 per cent or more in several economies (such as Finland and Spain) and close to 30 per cent in Japan, while a few (such as Portugal and Iceland) remain below 10 per cent. Overall, the chart documents a broad rise in completed cohort childlessness, with significant variation from economy to economy.[17]

Assuming unchanged fertility intentions, later starts substantially reduce the probability of achieving desired family size (see Chart 2.7, which simulates the probability of having the desired number of children based on the average likelihood of conceiving at each age; see Box 2.2 for more details). For example, the likelihood of having two children falls from 99 per cent when starting at age 24 to 64 per cent when starting at age 32. The probability of having three or more children falls substantially once childbearing starts after the late 20s, with a near-zero probability of four births if starting after age 35. These figures reflect average (unconditional) probabilities and do not take into account behavioural responses such as the use of ART, which can increase the likelihood of conception. The postponement of births can, therefore, accelerate the fertility decline beyond what can be explained by changing preferences with regard to the total number of children.[18]

[17] See Bauernschuster, Hener and Rainer (2016).

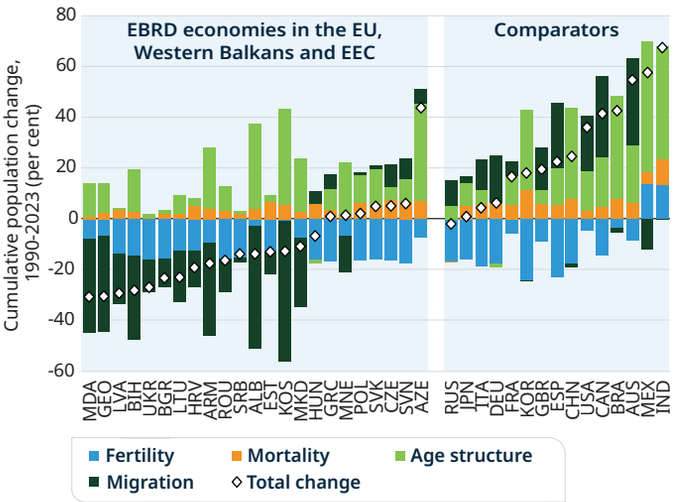
[18] See Kohler, Billari and Ortega (2002) and Balbo, Billari and Mills (2013).

CHANGES IN FERTILITY AS A MAJOR DRIVER OF POPULATION CHANGE

To isolate the contribution of lower fertility to population change between 1990 and 2023, the analysis distinguishes between changes in (i) fertility, (ii) mortality, (iii) net migration and (iv) initial age structure, as discussed in Box 2.3. (More broadly, see Chapter 1 for a discussion of the demographic forces shaping population trends and their implications for population growth or decline across different regions.) The breakdown is based on the analysis of counterfactual scenarios, where one factor at a time is held constant (assuming replacement-level fertility rates, baseline mortality, zero net migration or an unchanged age structure). Initial age structure captures the mechanical exposure effect of who is in the population at the start: even with identical age-specific fertility and mortality rates, a country that begins with a larger share of women of childbearing age will record more births, while a country that begins with a larger elderly cohort will record more deaths. In other words, it measures the impact of cohort size (not changes in rates).

In most post-communist economies in the EBRD regions, low fertility and high net emigration have been the dominant causes of population decline, often outweighing any gains from favourable initial age structures (see Chart 2.8 and Chapter 1). Mortality has made only a small difference. Despite periods of high death rates, especially in the 1990s, lower death rates over time have increased the population slightly. In almost all cases, this contribution is much smaller than the impact of fertility and net migration. For example, Moldova, Georgia and Latvia have experienced the largest cumulative population losses since 1990, with total declines of around 30 per cent of their 1990 populations. In all three of these countries, persistently low fertility and large net emigration flows have been the major contributors, while favourable initial age structures have done little to offset those developments. At the other end of the scale, Albania and Kosovo stand out, in that despite sizeable emigration, their relatively young initial age structures have mitigated much of the loss. Box 2.4 discusses changes in the fertility of international migrants over time, exploring another dimension of the demographic impact of migration.

CHART 2.8. **Low fertility and high emigration have driven population change in post-communist economies**



Source: UNDESA (2024), Tóth (2025) and authors' calculations.

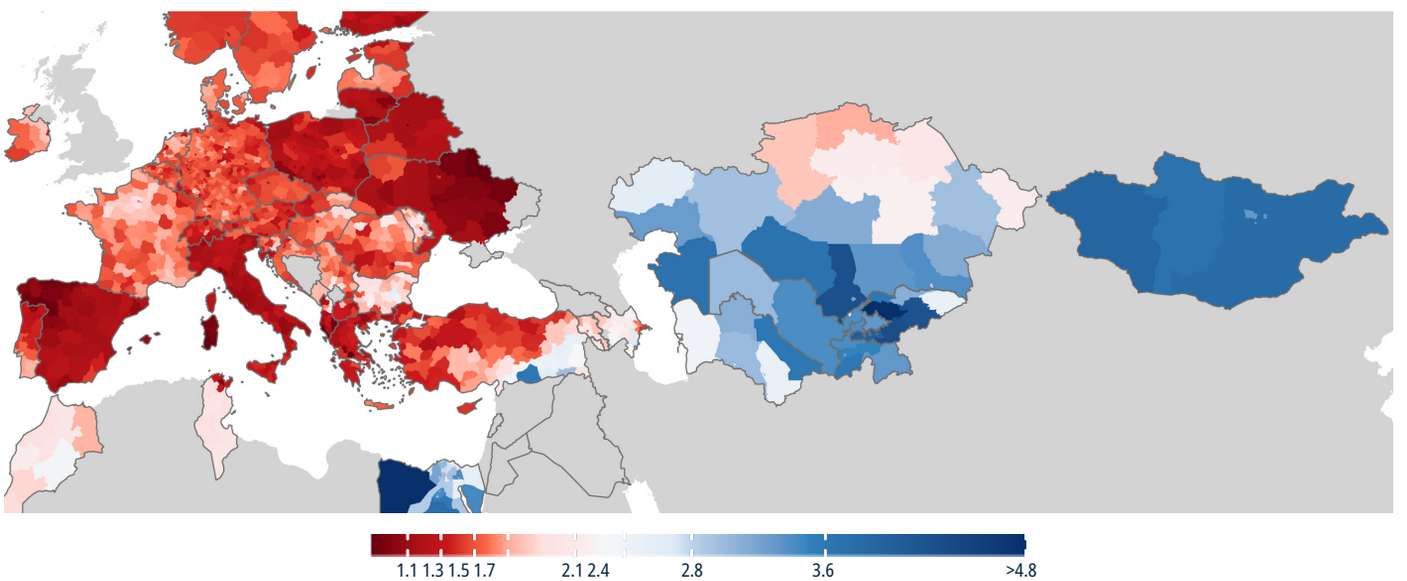
Note: Bar components correspond to the estimated contributions that fertility, migration, mortality and initial age structure make to total population change. See Box 2.3 for methodological details.

SUBNATIONAL FERTILITY PATTERNS

Economy-level fertility patterns mask substantial variation within countries (see Chart 2.9). High-fertility areas often cluster in regions with younger age structures, lower urbanisation rates and distinct cultural norms around family size, while lower-fertility areas are more prevalent in economically developed and urbanised regions. In Poland, Hungary and Romania, for example, metropolitan and economically developed regions consistently exhibit lower fertility rates than surrounding rural or less-developed areas. Intra-country fertility differences of more than one child per woman are evident in Türkiye and Kazakhstan, reflecting diverse demographic, economic and cultural contexts.

In sum, regional differences in birth rates are closely linked to regional economic structures, labour-market opportunities, housing affordability and cultural norms. These can, in turn, result in spatial imbalances in terms of population ageing and availability of labour.[19] Persistently low fertility in economically dynamic metropolitan areas can exacerbate labour shortages and increase dependence on migration, while higher fertility in less-developed regions may not translate into economic growth if job creation lags.[20]

CHART 2.9. **Fertility rates also vary widely within countries**

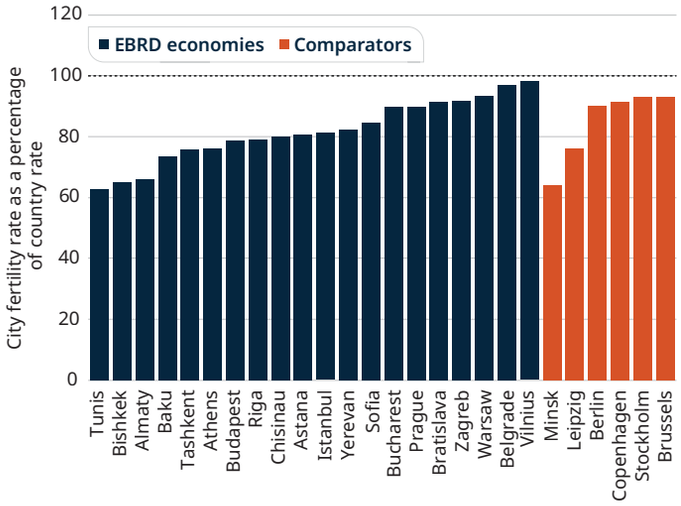


Source: Demographic and Health Surveys (n.d.), Eurostat (2025a), Sayed (2020), UNICEF MICS (n.d.) for 2018, 2019, 2021 and 2023, national statistical offices and authors' calculations.

Note: Data are for 2024 for Belarus, Kazakhstan, Moldova and Morocco; 2023 for Austria, Azerbaijan, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, the Kyrgyz Republic, Liechtenstein, Lithuania, Luxembourg, Montenegro, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Tajikistan and Tunisia; 2022 for Albania, Armenia, Latvia, the Netherlands and Türkiye; 2021 for Ukraine and Uzbekistan; 2019 for Turkmenistan; and 2018 for Egypt and Mongolia. Data are not available for all areas coloured grey, including Bosnia and Herzegovina, Georgia, Jordan, Lebanon and Kosovo; they are also unavailable for Crimea, Sevastopol and the Donetsk and Luhansk *oblasts* in Ukraine.

[19] See Reher (2004), Lutz, Skirbekk and Testa (2006) and Kulu (2013).
[20] See Bhattacharjee et al. (2024).

CHART 2.10. Fertility rates in major cities are consistently lower



Source: Eurostat (2025a), UNICEF MICS (n.d.) for 2018, 2019, 2021 and 2023, national statistical offices and authors' calculations.

Note: Data refer to the most recent year available, matching the subnational data in Chart 2.9, except for Riga, Vilnius, Stockholm and Istanbul, where figures are for 2024.

Large cities, such as Budapest, Istanbul and Prague, have fertility rates about

10-20%

below national averages

Indeed, city-level fertility tends to be below the national fertility rate, often by a substantial margin (see Chart 2.10). Large metropolitan areas, such as Budapest, Istanbul and Prague, have fertility levels that are 10-20 per cent lower than the respective national averages. In Tunis and Bishkek, for instance, the fertility rate is around two-thirds of the national average. This pattern is likely to matter more in the future, as urbanisation and agglomeration trends continue. With more people expected to live in large cities, the growing concentration of the population in low-fertility urban areas may exert further downward pressure on national birth rates, even if fertility rates within cities and rural areas remain stable. Addressing barriers to family formation in urban settings (such as housing costs, access to childcare and work-life balance) may, therefore, be key to stabilising fertility over time.

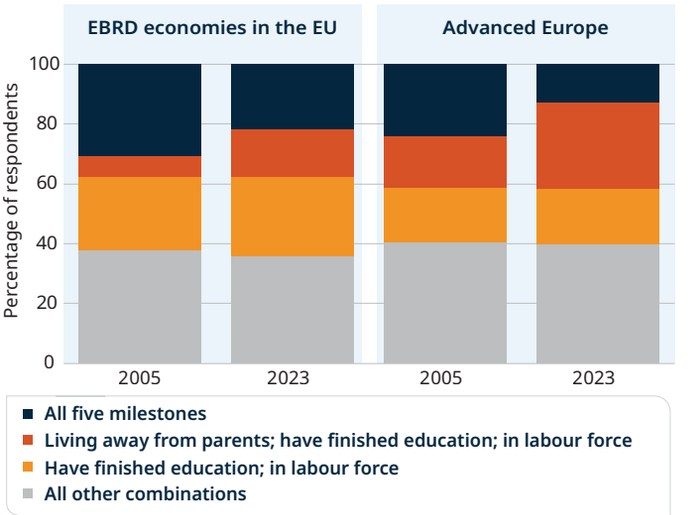
ECONOMIC DRIVERS OF FERTILITY

Family formation usually follows a sequence of key "adult milestones" in the EBRD regions. Finishing education, joining the labour force, moving out of the parental home and getting married all tend to shape readiness to have children.[21] Spending more years in education often delays entry into the labour market, reducing the overlap between peak earning years and peak fertility years.[22] Secure, stable employment and separate housing enable individuals to live independently and form partnerships. In societies where births outside marriage are less common, postponing marriage also tends to delay having children.

In EBRD economies in the EU, the share of the population completing all five milestones by age 35 declined from 31 per cent in 2005 to 22 per cent in 2023 (see Chart 2.11). In contrast, the share achieving economic independence (living away from parents, completing education and being in the labour force) without family formation rose from 7 per cent to 16 per cent. A similar shift is observable in advanced Europe, though the changes are more pronounced. There, the share of 25- to 34-year-olds completing all five milestones fell from 24 per cent in 2005 to 13 per cent in 2023, alongside a larger rise in economic independence without family formation from 17 per cent to 29 per cent. This also mirrors the trend observed in the United States of America.[23]

Chart 2.12 shows wide cross-country variation in how much women's employment falls after the first child – the "motherhood penalty".[24] In Scandinavia (Norway, Sweden and Denmark), penalties are among the lowest (below 15 per cent), reflecting extensive childcare provision and more equal parental leave.[25] Yet even there, fertility remains modest. Post-communist EBRD economies, meanwhile, display a much wider range. In Poland, Hungary and the Slovak Republic, motherhood penalties exceed 30 per cent, coinciding with some of the lowest fertility rates in Europe, reflecting limited childcare access and more traditional labour-market structures.[26]

CHART 2.11. Declining share of young adults in EBRD economies in the EU and advanced Europe completing all traditional milestones of adulthood by age 35



Source: Eurostat (2025b) and authors' calculations. Based on the methodology of Hemez and Vespa (2025).

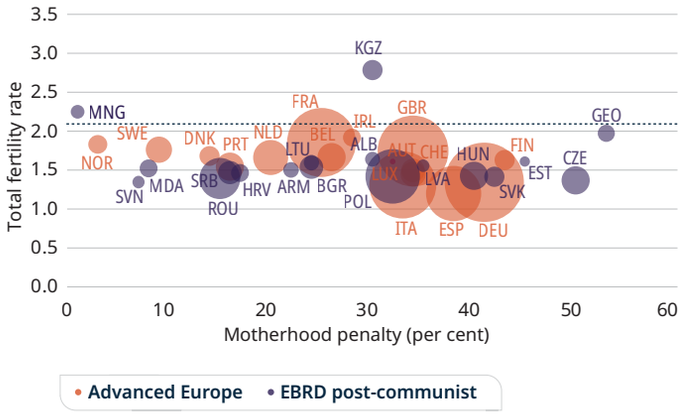
Note: This chart shows the shares of 25- to 34-year-olds in EBRD economies in the EU and advanced Europe that have achieved some or all of the following five traditional markers of adulthood: completing education, joining the labour force, moving out of the parental home, getting married and having children. The three most common milestone combinations are shown separately.

By contrast, several EBRD economies (such as Slovenia, Moldova, Romania and Serbia) have relatively low motherhood penalties (below 20 per cent), although here, too, fertility remains below the replacement rate. This diversity highlights the mixed nature of fertility outcomes in advanced Europe and post-communist countries (with some close to replacement and others very low). Reducing time costs through childcare and more equal parental leave is crucial, as generous cash transfers alone cannot fully offset the long-term career costs of motherhood.[27]

The chart, therefore, does not imply a strict one-to-one link between high penalties and low fertility. Rather, it shows that large penalties make it harder to sustain both high fertility and high female employment. Where penalties are reduced (through affordable childcare, flexible work and equal promotion opportunities), women face fewer trade-offs and fertility policies are more likely to succeed.[28]

[21] See Hemez and Vespa (2025).
[22] See Bongaarts (2003) and Lutz, Cuaresma and Sanderson (2008).
[23] See Hemez and Vespa (2025).
[24] See Kleven et al. (2019).
[25] See Kleven, Landais and Søgaard (2021).
[26] See Budig, Misra and Boeckmann (2016).
[27] See Frejka et al. (2016).
[28] See Mörk, Sjögren and Svaleryd (2013), Healy and Heissel (2024) and Kearney and Levine (2025).

CHART 2.12. Motherhood penalties at work weigh on family planning decisions



Source: UNDESA (2024), Kleven et al. (2025) and authors' calculations.

Note: This chart plots the estimated motherhood penalty for each country against its total fertility rate. The motherhood penalty measures the percentage decline in women's employment relative to men's following the birth of a first child. For example, a motherhood penalty of 20 per cent means that women's employment falls 20 per cent further behind men's after having children. Bubble sizes reflect the size of the female population. The total fertility rate and the female population are averaged over the same sample periods as the motherhood penalty. The replacement rate (2.1) is shown as a dotted black line.

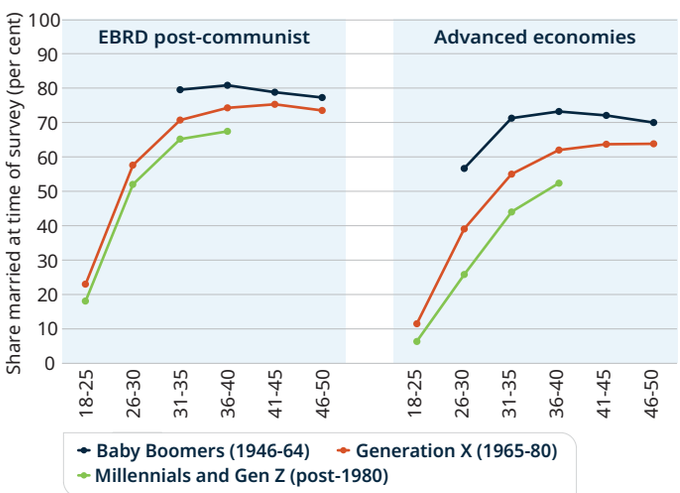
DECLINING PREVALENCE OF MARRIAGE

In most societies across the EBRD regions, marriage remains the dominant context for childbearing, and delays in getting married often translate into lower completed fertility.[29] The rising age of first formal marriage and the increasing prevalence of non-marriage (see Chart 2.13) are closely tied to broader societal shifts (such as higher educational attainment, changing gender roles and evolving life aspirations) that are shaping both the timing of childbirth and the total number of children born. Empirical evidence shows that later marriage reduces the likelihood of higher-order births, contributing to fertility decline.[30]

In the post-communist EBRD economies, the share of individuals aged 31-35 who are formally married has fallen over the generations, from 80 per cent among Baby Boomers to 65 per cent for Millennials. Advanced economies display a similar pattern, with a steeper cohort gradient at prime ages: at 31-35, marriage shares have declined from 71 per cent (Baby Boomers) to 44 per cent (Millennials).

The link between declining marriage rates and fertility differs across EBRD economies in the EU. In some countries, births outside marriage have become a common pathway to family formation. Bulgaria and Slovenia, for example, boast non-marital birth shares of 58.4 per cent and 57.7 per cent, respectively – even higher than the levels observed in Nordic countries. By contrast, in more traditional settings, such as Poland, Croatia and Greece, the share of births outside marriage remains much lower, at 25.4 per cent, 21.5 per cent and 12.4 per cent, respectively.[31] These differences suggest that the weakening of marriage as an institution does not influence fertility in the same way everywhere; in some societies, non-marital childbearing partly offsets lower marriage rates, while in others, there is more of a direct link between fewer marriages and fewer children.

CHART 2.13. Marriage rates are declining across cohorts, especially among the young



Source: WVS (2024), EVS (2022), Gallup (2023) and authors' calculations.

Note: This chart shows the share of each age group that is married at the time of the survey. "Advanced economies" comprise advanced Europe, Australia, Canada, Japan, New Zealand, South Korea and the United States. For the "Millennials and Gen Z" grouping, the 31-35 and 36-40 age groups consist solely of Millennials.

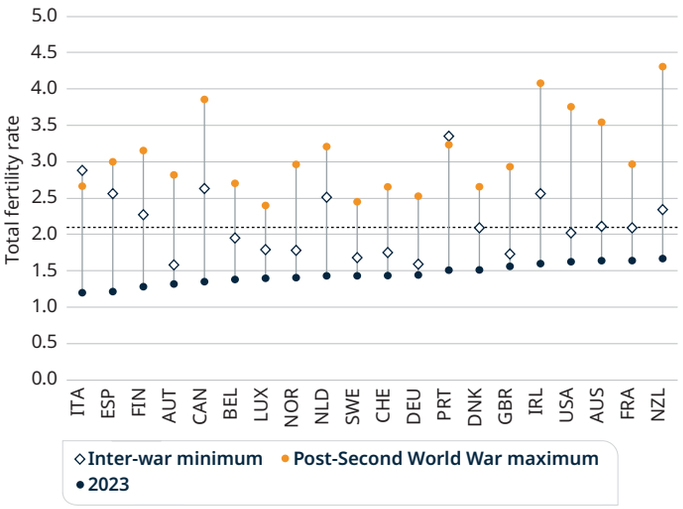
[29] See Billari and Kohler (2004) and Sobotka and Toulemon (2008).
[30] See Ní Bhrolcháin and Beaujouan (2012).
[31] See Our World in Data (2025b).

TODAY'S FERTILITY DECLINE MIRRORS THAT OF THE YEARS BETWEEN THE FIRST AND SECOND WORLD WARS

Today's period of persistently low fertility is not without precedent. Many advanced economies experienced sub-replacement fertility rates between the First and Second World Wars. By the 1920s and 1930s, birth rates in much of Europe had fallen sharply, with more than half the population living in countries where fertility was less than 2.1.[32] This decline reflected the rise of small-family ideals, secularisation and greater individual autonomy in reproductive choices, while economic hardship may also have played a role.[33] The subsequent post-Second World War baby boom showed how fertility can rebound quickly, underpinned by robust economic growth, the rise of the welfare state and broad-based optimism about the future (see Chart 2.14, which shows both the lowest total fertility rate recorded between 1921 and 1938 and the post-Second World War maximum reached from 1950 onwards, alongside the level of fertility recorded in 2023).[34] During the post-Second World War baby boom, total fertility exceeded 3.0 in economies such as Canada, New Zealand and the United States.

Historically, rebounds in fertility have been predominantly linked to profound shifts in economic prosperity, family policy and gender norms.[35] In this respect, the current context, characterised by slower economic growth, changing partnership dynamics and high housing costs, differs sharply from the conditions that fuelled the fertility rebound in the mid-20th century.

CHART 2.14. Today's fertility decline in advanced economies echoes the inter-war baby bust



Source: UNDESA (2024), Gapminder (2024) and authors' calculations.

Note: The replacement rate (2.1) is shown as a dotted black line. The inter-war minimum refers to the lowest total fertility rate achieved by a country between 1921 and 1938, whereas the post-Second World War maximum refers to data from 1950 onwards where UN World Population Prospects data are available.

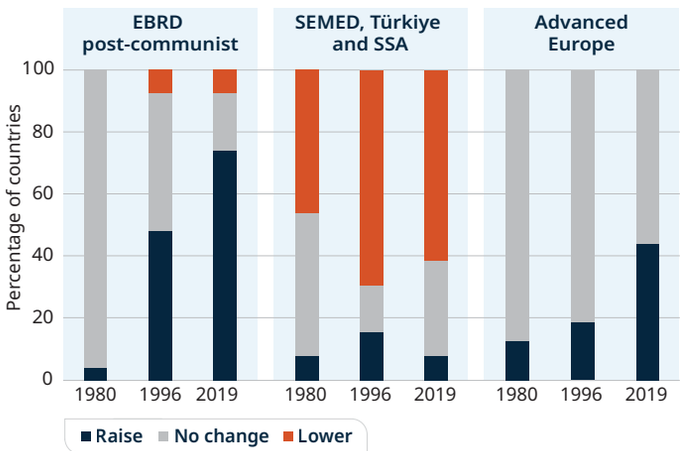
[32] See Chesnais (1992).
[33] See Lesthaeghe (2010) and Guinnane (2011).
[34] See Van Bavel and Reher (2013).
[35] See Van Bavel and Reher (2013) and Sobotka (2017).

PRO-NATALIST POLICIES

Many governments have responded to sustained declines in fertility to below replacement rates by implementing policy measures aimed specifically at raising birth rates (see Chart 2.15). For instance, barely any post-communist EBRD economies had such policies in 1980, whereas the vast majority did in 2019. By contrast, in higher-fertility regions, such as SSA and parts of the SEMED region, governments have sought to *lower* fertility, reflecting the pressures of rapid population growth. In post-communist countries in the EBRD regions, measures to encourage higher fertility have included unconditional cash transfers (such as Poland's "Family 500+" programme introduced in 2016), income-tax exemptions for mothers of multiple children (as seen in Hungary), extended paid parental leave (as observed in Bulgaria and Estonia) and subsidised access to childcare and housing. These interventions aim to reduce the financial burden of childrearing and make it easier for parents to combine work and family life. By contrast, in previous decades, some countries in Central Asia, such as Tajikistan, promoted fertility-reducing policies, including family planning programmes and the widespread use of birth-control methods, particularly during and shortly after the Soviet era.[36]

Chart 2.16 distinguishes between four types of pro-natalist support. "Childcare services" captures public spending on early childhood education and care, including subsidised nurseries, kindergartens and other formal childcare arrangements. "Cash benefits" includes one-off payments, usually made at the time of birth (or

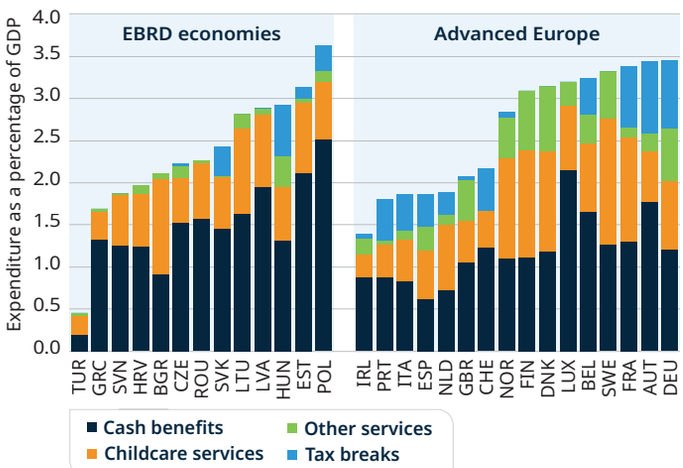
CHART 2.15. As fertility has fallen, more countries have introduced policies to raise birth rates



Source: UNDESA (n.d. and 2021), United Nations Department of International Economic and Social Affairs (1982) and authors' calculations.

Note: Data for 1980 are taken from Table 41 in United Nations Department of International Economic and Social Affairs (1982). Figures for 1980 for Central Asia, Moldova, the Caucasus, the Western Balkans, Czechia and the Slovak Republic have been imputed using values for their respective predecessor states; figures for Ukraine use the value for the Ukrainian Soviet Socialist Republic. Data for 1996 are taken from the UN Population Policies Database,[37] while data for 2019 are from UNDESA (2021). Values for 2019 refer to stated policies in the 2015-19 period. "Raise" and "lower" refer to government policies aimed at increasing and decreasing birth rates, respectively. "No change" indicates either policies that actively seek to keep birth rates constant or an absence of policy intervention.

CHART 2.16. Significant expenditure on a broad range of pro-natalist measures



Source: OECD SOCX, OECD (n.d.) and authors' calculations.

Note: This chart shows pro-natalist expenditure as a percentage of GDP in 2021. Data on tax breaks are not available for Bulgaria, Croatia or Romania.

[36] See Henry and Juraqulova (2020).
[37] See UNDESA (n.d.).

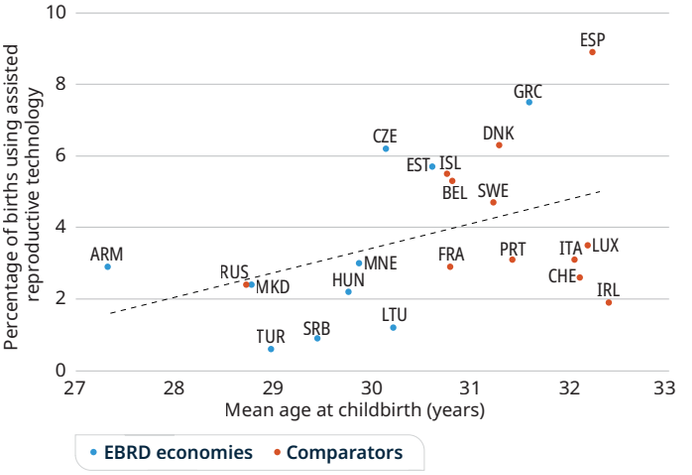
adoption), to help families cover initial expenses, as well as regular transfers to families with children (such as family allowances and parental leave benefits), which are typically paid monthly or quarterly. "Tax breaks" reduce the income-tax burden of families depending on the number of dependent children or other eligibility criteria. And lastly, "other services" includes additional in-kind or mixed forms of support for children and families, such as home help and subsidised school meals, transport and other entitlements.

Spending on these measures, expressed as a percentage of GDP in 2021, varies widely across countries. For example, Estonia and Poland spend between 3 and 4 per cent of GDP, largely on periodic cash benefits including family allowances and parental leave benefits. In contrast, Türkiye spends around 0.5 per cent of GDP, relying more heavily on smaller cash transfers and limited in-kind services, such as childcare. Differences in spending levels reflect not only fiscal capacity, but also variations in demographic pressures and the political prioritisation of family support.[38]

Well-designed family policy packages (combining income support with measures to help parents reconcile work and family life) can slow the decline in fertility, although the effects tend to be modest and take time to materialise. Country-specific institutional contexts and social norms shape the response to incentives offered by governments.[39]

Advanced European economies tend to spend more on fertility-supporting measures (in excess of 3 per cent of GDP for half of them), with policy packages offering a mix of cash benefits (family allowances and parental leave payments), tax breaks and services (particularly subsidised childcare). Affordable childcare and flexible leave schemes tend to be more effective in supporting female labour-force participation and reducing the career costs associated with childbearing.[40] Two concrete examples show how design matters. Sweden's childcare fee-cap reform set low, fixed caps on daycare fees (about

CHART 2.17. Higher use of assisted reproductive technology is associated with increases in age at childbirth



Source: European Society of Human Reproduction and Embryology data in Our World in Data (2025a), UNDESA (2024) and authors' calculations.

Note: All values are for 2019.

3 per cent of income for the first child, 2 per cent for the second and 1 per cent for the third, up to a monthly ceiling), cutting parents' out-of-pocket costs and nudging up first-birth transitions. Meanwhile, Germany's 2007 introduction of *Elterngeld* (a parental allowance) made leave shorter but better paid, replacing the previous low, flat benefit with an earnings-related payment of about two-thirds of prior net pay (typically capped at €1,800 per month) for 12 months, extended to 14 months if the second parent took at least two months. This kept parents attached to their jobs, increased fathers' take-up of leave and was followed by higher maternal employment and earnings a few years after birth, with the strongest effects among higher earners.[41] In the EBRD regions, in contrast, the policy mix has been tilted towards cash transfers.

[38] See Griesinger, Diedrich and Altgassen (2007).
[39] See OECD (2003) and Dahl and Løken (2024).
[40] See Thévenon and Gauthier (2011) and Luci-Greulich and Thévenon (2013).
[41] See Mörk, Sjögren and Svaleryd (2013) and Kluve and Schmitz (2018).

ART, such as in vitro fertilisation, frozen embryo transfer and egg donation, has also been on the rise. This has become increasingly relevant in situations where childbearing has been postponed, as it can help counteract the biological decline in fertility with age. Indeed, as the average maternal age rises, the share of births involving ART also increases (see Chart 2.17).

The use of ART remains considerably lower in many of the EBRD economies than in advanced European economies. ART accounts for roughly 6.3 per cent of births in Denmark, compared with about 5.7 per cent in Estonia, while it remains below 2 per cent in countries such as Serbia and Türkiye. These differences probably reflect variations not just in maternal age profile, but also in affordability and funding arrangements. In many advanced European countries, ART is partially or fully covered by public health systems, though often subject to age limits or cycle caps. In the EBRD regions, in contrast, ART tends to be privately funded. Research confirms that when Germany tightened public funding for such treatments in 2004, the number of ART cycles plummeted from more than 102,000 to fewer than 57,000 the following year, demonstrating that funding directly influences uptake.[42] Broadening public coverage of ART treatments could, therefore, help to mitigate fertility delays.

ART accounts for roughly

6.3%

of births in Denmark and 5.7% in Estonia, but fewer than 2% in Serbia and Türkiye

CASH BENEFITS HAVE TRANSITORY EFFECTS ON FERTILITY

As discussed, family policies that reduce the cost of childrearing (such as cash transfers, child allowances or birth grants) are frequently used to counteract declines in fertility. While most evaluations point to modest, short-run increases in fertility, these effects are often concentrated in specific demographic or income groups. For instance, Québec's child grant programme, which was launched in 1988 and offered up to CAD 8,000 per child (around €11,000 in 2024 prices), led to a 12 per cent average increase in fertility across all eligible families, with an increase of 25 per cent for those receiving the maximum amount. In Germany, reforms to the child benefit system in the mid-1990s also had differential effects across income groups. A 1996 reform raised benefit levels substantially for higher-income couples, resulting in a 4-6 percentage point increase in the likelihood of having a second child within three years (equivalent to a 10-15 per cent increase relative to pre-reform second birth rates in this group). However, fertility responses among lower-income and less-educated households were negligible, implying that cash transfers only influence fertility behaviour when the perceived financial gain outweighs the opportunity cost of childbearing.[43]

A number of economies in the EBRD regions expanded their pro-natalist packages in the 2010s and 2020s.[44] In Poland, the universal "Family 500+" programme introduced in 2016 is estimated to have raised the annual probability of childbirth by about 1.5 percentage points in the short term. However, this average effect hides significant differences across groups. Women aged 31-40 experienced the largest boost in fertility, with an increase of 0.7-1.8 percentage points, whereas women aged 21-30 saw a decline of 2.2-2.6 percentage points, and higher-income households showed a modest drop

[42] See Griesinger, Diedrich and Altgassen (2007).

[43] See Milligan (2005) and Riphahn and Wiynck (2017).
[44] See Cook, Iarskaia-Smirnova and Kozlov (2023) and Inglot (2020).

of around 1.0 percentage point. These findings show that the short-run fertility gains attributable to Family 500+ were moderate overall and concentrated among older mothers, with no positive effect on younger and wealthier women.[45]

In Georgia, the Orthodox Church launched a widely publicised initiative in 2007, whereby the Patriarch pledged to baptise personally all third or higher-order children born into Georgian Orthodox families. This gesture, aimed at reinforcing traditional values and encouraging larger families, was associated with a 17 per cent rise in the country's total fertility rate (equivalent to 0.3 additional children per woman), a 42 per cent increase in birth rates among married Georgian Orthodox women, and a doubling of third and higher-order births within marriage. These fertility responses were accompanied by higher marriage rates and a decline in reported abortions.[46]

In Hungary, two flagship measures – a flat-rate childrearing support allowance (1993) and an expansion of child tax relief (from 1999) – both led to increases in the likelihood of parents having a third child, but for different groups: cash worked best for less-educated parents, while the tax relief primarily shifted behaviour among tertiary-educated couples. Relative to the 1980s, the likelihood of a third child was about 35 per cent higher in 1993-98, 60 per cent higher in 1999-2005 and 65 per cent higher in 2006-09.[47]

Across the literature, cash transfers on their own tend to yield small, short-lived fertility gains, often reflecting changes in timing rather than sustained increases in family size. By contrast, greater availability of affordable childcare is associated with higher fertility across countries. The effects of maternity/parental leave are mixed and depend on duration, benefit level and financing, with clear trade-offs for women's employment and wages; longer leave periods can also carry career costs, making net fertility effects uncertain. Across policy bundles and countries, broader work-family reconciliation packages (combining childcare, leave and flexible work) show a positive, albeit moderate association with fertility.[48]

[45] See Bokun (2024).
[46] See Chung et al. (2025).
[47] See Spéder, Murinkó and Oláh (2020).
[48] See OECD (2024).

CONCLUSIONS AND POLICY IMPLICATIONS

Fertility has been in persistent decline across the EBRD regions, falling to historically low levels in many economies. As in advanced economies, these declines reflect later marriage and childbearing, and sustained increases in women's education, as well as greater career aspirations and the high perceived opportunity cost of motherhood. Consequently, many people end up having fewer children than they consider ideal, mirroring fertility gaps seen in advanced economies. The experience of past fertility rebounds, notably after the Second World War, implies that such shifts are not irreversible. However, today's demographic, economic and institutional context differs considerably from that of the mid-20th century.

The economic and social implications of sub-replacement fertility are mixed. The relationship between fertility, population stability and living standards depends on factors such as (i) productivity growth through automation and better education, (ii) dependency ratios, (iii) migration flows and (iv) the age structure of the labour force, as discussed in Chapter 1. The conventional benchmark of 2.1 births per woman does not need to be a one-size-fits-all policy target, as economies' circumstances and cultural norms vary.[49] Moderate departures from replacement fertility may be sustainable, or even beneficial, in some settings.

Packages of policy measures can facilitate an increase in the birth rate, provided policies are stable and seen as credible. As decisions on childbearing are made over long time horizons, measures that are fragmented or short lived tend to have only temporary effects.

The provision of well-designed parental leave, childcare and high-quality early childhood education reduce perceived work-family trade-offs and help parents realise their desired family size. Expanding affordable childcare has a particularly strong effect on fertility among employed and highly educated women.[50] Generous, predictable parental leave schemes can accelerate transitions to the next birth, but effects on completed lifetime fertility tend to be small, while some paternity-leave expansions show limited effects on higher-order births.[51]

Easing economic barriers, such as those related to high housing costs and early-career job insecurity, supports earlier childbearing.[52] High house prices, in contrast, are associated with delayed first births and fewer births overall, and these effects can be sizeable.[53] Unemployment, temporary contracts and perceived uncertainty surrounding career starts are also linked to postponed or forgone births, with stronger effects where labour-market risks tend to be higher for the young.

Targeted cash allowances and tax credits tend to raise births in the short term, but those effects tend to be relatively modest, fizzling out without complementary enhancements to childcare and parental leave.[54] While large child allowances also yield meaningful poverty reduction, they also reduce the labour supply among mothers.

[49] See Weil (2024) and Gietel-Basten and Scherbov (2020).

[50] See Cascio (2009), Bauernschuster, Hener and Rainer (2016) and Duvander et al. (2019).
[51] See Thomas et al. (2022).
[52] See Adserà (2011) and Comolli (2017).
[53] See Lovenheim and Mumford (2013), Fazio et al. (2024) and Li (2024).
[54] See Milligan (2005), Laroque and Salanié (2014), Gromadzki (2024) and OECD (2024).

BOX 2.1.

CENTRAL ASIA'S FERTILITY REBOUND

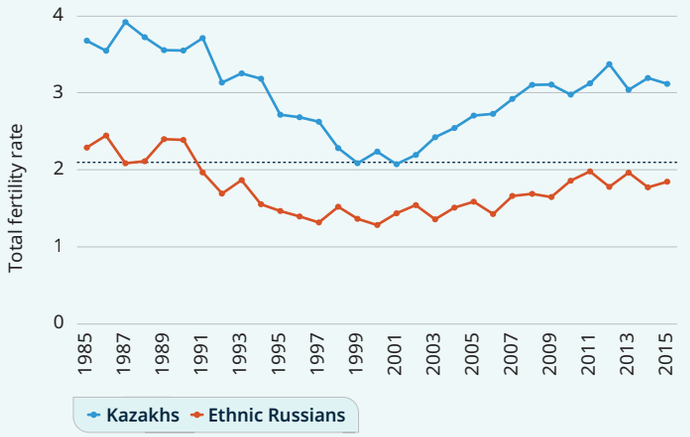
After a broad decline in the 1990s, Central Asia has seen a sustained rise in fertility, with total fertility rates now ranging between 2.5 and 3.5 across the region, a pattern distinct from that observed in most other economies. This convergence is also striking in light of the countries' diverse starting points in the early 1980s (with three births per woman in Kazakhstan and six in Tajikistan).

These trends in Central Asia may, in part, reflect changes in the composition of countries' populations, as ethnic groups in the region tend to differ in terms of typical family size, with differences shaped by cultural and religious norms.[55] In Kazakhstan, for instance, fertility has been consistently higher for ethnic Kazakh women than for ethnic Russian women, although the fertility rates of the two groups have experienced similar trajectories over time, with a decline in the 1990s followed by a rebound (see Chart 2.1.1).[56]

After the dissolution of the Soviet Union, the ethnic mix in Central Asia shifted, with a reduction in the share of people identifying as Russian due to emigration and an increase in the share of each country's main ethnic group (for instance, Tajiks in Tajikistan or Kazakhs in Kazakhstan; see Chart 2.1.2). The change was particularly pronounced in Kazakhstan, where, from the 1980s to the 2020s, the share of people identifying as Kazakh increased from about one-third to around 70 per cent and the share of people identifying as Russian declined from around 40 per cent of the population to around 15 per cent. Such compositional shifts can change national fertility averages.[57]

Taken together, the evidence shows that the interplay between cultural norms and changes in the composition of populations (for instance, on account of migration) can produce sizeable shifts in average fertility.[58]

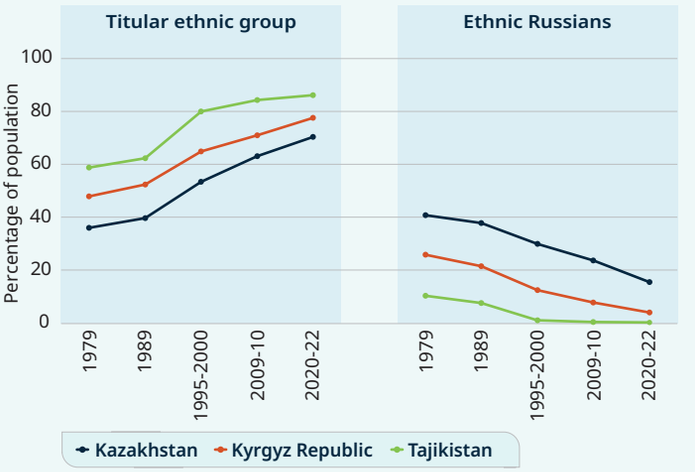
CHART 2.1.1. In Kazakhstan, estimated fertility rates are higher for ethnic Kazakh women than for ethnic Russian women



Source: Demographic and Health Surveys (n.d.), UNICEF MICS (n.d.) and authors' calculations.

Note: Group-specific fertility is estimated using full birth histories in Demographic and Health Surveys and by applying the Own-Children Method to UNICEF MICS household survey data. Each child's age is used to infer the year of birth and the mother's age at that time. Summing these inferred births across households and accounting for the child and mother's survival yields retrospective births by mother's age and ethnicity, from which age-specific and total fertility rates are calculated. Estimates for years with multiple survey waves are averaged together.

CHART 2.1.2. The ethnic composition of Central Asian countries has shifted markedly since the late 1980s



Source: Demoscope data, national statistical office data and authors' calculations.

Note: This chart shows, for Kazakhstan, the Kyrgyz Republic and Tajikistan, changes in the population shares of the respective titular ethnic groups (left-hand side) and ethnic Russians (right-hand side) from 1979 to the 2020s. For each country, "titular ethnic group" denotes the self-identified population after which the state is named (for instance, Tajiks in Tajikistan or Kazakhs in Kazakhstan) and is a descriptive statistical label that does not imply legal status, preference or hierarchy.

[55] See Spoorenberg (2015).

[56] See Kan (2023).
[57] See Fernández and Fogli (2009).
[58] See Spoorenberg (2015).

BOX 2.2.

HOW DELAYED CHILDBIRTH REDUCES COMPLETED FERTILITY

Biologically, women's ability to conceive declines with age, especially after their mid-20s. Consequently, starting a family later reduces the time available for childbearing, increasing the risk of having fewer children than planned.

Following the methodology of Geruso, LoPalo and Spears (2023) and using a large sample of married women who are not using contraception, identifying months when they are at risk of conceiving (not pregnant, more than 12 months post-partum and without a terminated pregnancy in the past three months), the actual effective fecundability in months for each age between 15 and 49 can be estimated. These probabilities are then used to simulate the likelihood of having one, two, three or four children before the end of the reproductive period, depending on the age at which exposure to conception risk starts.[59] Starting from a given age, the simulation proceeds month by month until a successful conception occurs, at which point the probability of another conception is set to zero for the following nine months (pregnancy), with a post-partum interval of 12 months. This process is then repeated 10,000 times for each starting age and each number of desired children (one, two, three and four). Hence, the probability of achieving a given number of children depends on two elements. The first is the number of years remaining in the reproductive period. For instance, starting at age 24 leaves roughly two decades of fertility potential, whereas beginning at age 32 leaves only about 12 years. The second is the probability of conception at each age. The chances of conceiving in a given month are relatively high in the early to mid-20s, decline steadily through the late 20s and 30s, and fall sharply after the early 40s.

BOX 2.3.

QUANTIFYING THE DRIVERS OF POPULATION CHANGE

Population size evolves over time as a result of births, deaths, migration flows and changes in the age structure of the population (affecting the number of people of reproductive age). The relative importance of these factors can vary substantially from country to country and over time. For example, in some economies, migration may be the dominant source of growth, while in others, falling fertility or population ageing may be the primary driver of decline. Understanding the relative contribution of each component helps to identify the demographic pressures facing a country and the types of policy response that may be most effective.

The following analysis breaks down population change between 1990 and 2023 into the separate contributions of fertility rates, mortality rates, net international migration rates and age structure. Building on earlier research, the analysis compares the actual population outcome with a series of counterfactual projections in which one factor is kept constant while the others follow observed trends.[60] Using age-specific fertility, migration and mortality rates separates the effect of the associated changes from the impact of the initial age and sex structure of the population.

The calculation begins with the baseline population in 1990 and its observed age-sex structure. Applying the observed age-specific fertility, mortality and migration rates over 33 years yields the "observed" projection. The fertility scenario holds fertility constant at the replacement rate. The mortality scenario holds mortality rates at initial levels. The migration scenario sets net international migration to zero. The age-structure scenario fixes the initial age composition of the population.

The difference between the observed projection and each counterfactual isolates the contribution that the relevant factor makes to population change, holding the other factors as observed. Interactions between different factors (such as constant mortality and replacement fertility together) are allocated to each individual factor using a Shapley decomposition.

[59] See Geruso, LoPalo and Spears (2023).
[60] See Tóth (2025).

BOX 2.4.

FERTILITY CONVERGENCE AMONG IMMIGRANTS

Immigration can mitigate the economic impact of population ageing by boosting the working-age population today and births in the future. Yet, evidence across high-income destinations shows that migrants' fertility tends to fall towards host-country norms over time, limiting the scope for increases in country-wide birth rates through migration.[61] The analysis in this box traces immigrants' fertility patterns using harmonised individual-level EU Labour Force Survey data for 19 European destination countries over the period 2008-23. Specifically, the analysis compares the number of children aged between 0 and 2 born to foreign-born women over time following their arrival, comparing women from the same region of origin who arrive at different points in time but are of the same age in the same destination country and year. The analysis separately traces immigrants from Asia, Europe, Latin America and the Caribbean, and the Middle East and North Africa, plus SSA. To avoid counting births that occurred before migration, the analysis focuses on foreign-born women aged 15-39 who have lived in the destination country for at least three years.

The analysis reveals that recent arrivals have consistently higher childbearing intensity than women of similar age who were born locally (see Chart 2.4.1). The differences are particularly large for women from higher-fertility countries of origin. For example, women born in the Middle East and North Africa and SSA have, on average, around 0.2 more children aged 0-2 than locals of the same age in the first five years after arrival.

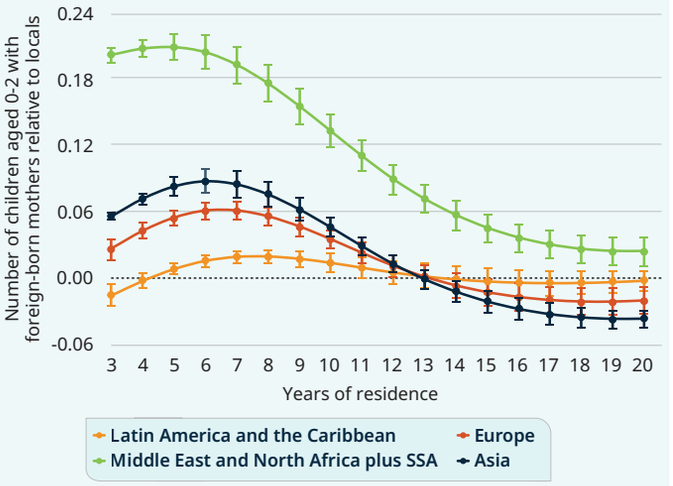
Over time, fertility patterns converge, as childbearing intensity falls on account of progressively greater cultural and economic exposure to the destination country. Women from Asia, Europe and Latin America and the Caribbean who have lived in the destination country for at least 12 years show convergence with local childbearing intensity, while for women from the Middle East, North Africa and SSA, childbearing intensity approaches that of locals once they have lived in the destination country for at least 20 years. The childbearing intensity of a woman from the Middle East, North Africa or SSA who has lived in the destination country for two decades is around 45 per cent lower than that of a woman with the same region of birth and age who has lived in the destination country for only five years.

There is also evidence of convergence in childbearing intensity across generations. While first-generation immigrant women from the Middle East, North Africa and SSA have 76 per cent more children aged 0-2 in the household than native-born women of the same age, second-generation immigrant women (defined here as those born locally to foreign-born mothers) of the same age only have 8 per cent more children relative to the same baseline.

These findings indicate that immigration might provide a temporary boost to births in the years surrounding arrival, particularly for women from higher-fertility regions, but that childbearing intensity subsequently converges towards destination-country norms within one to two decades and more rapidly across generations. The contribution that migration makes to country-wide birth rates is, therefore, frontloaded and diminishes over time. Consequently, while migration remains valuable for addressing labour-force pressures and supporting demographic renewal, it cannot offset persistently low fertility rates on its own. Sustained increases in births will ultimately depend on improvements in the broader conditions for family formation within destination countries themselves.

[61] See Mayer and Riphahn (2000) and Pailhé (2017).

CHART 2.4.1. Childbearing intensity of foreign-born women converges on levels observed for women born in the destination country



Source: Eurostat (2024) and authors' calculations.

Note: This chart plots the predicted childbearing intensity of immigrant women over time following their arrival in 19 destination countries. Childbearing intensity is defined as the number of children aged 0-2 in the household, expressed as the difference relative to the native-born average for the same age group, destination country and year. The sample comprises women aged 15-39. Predicted values are derived from OLS regressions that use separate restricted cubic splines for years since arrival (with four knots placed at equally spaced quantiles of the years of residence distribution) for each region of birth, controlling for country-year-age group fixed effects. The chart shows 95 per cent confidence intervals based on standard errors clustered at the country level.

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03

Demographic change and the quest for talent

Demographic change is reshaping labour markets across the EBRD regions. In countries with ageing populations, work is gradually shifting towards more “age-friendly” jobs that put less physical strain on the body, help older workers to stay active for longer and are especially attractive to women. As AI technology has advanced, younger, talent-rich companies have tended to be at the forefront of its adoption and expanded their workforce accordingly. While workers in some occupations are set to benefit from higher productivity as a result of AI, others face increased pressure to reskill. In ageing economies, migration can help to mitigate labour shortages, while in younger regions, supporting high-growth entrepreneurship is vital to creating enough good jobs for labour-market entrants.

AT A GLANCE

In 2023, only

19%

of workers aged 55-64 in EBRD economies in the EU were in the top quartile of age-friendly occupations, compared with 30% in advanced Europe

Only

23%

of workers in EBRD economies in the EU have jobs that are poised to see productivity gains from AI, compared with 29% in advanced Europe

In sub-Saharan Africa, more than

70%

of startups' financial capital comes from abroad

INTRODUCTION

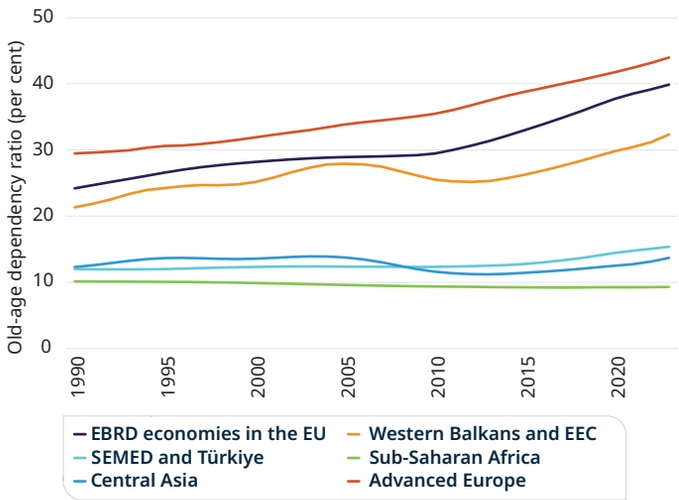
As discussed in earlier chapters, demography is a primary driver of labour supply and productivity growth. Firms actively respond to demographic change.

As the workforces of both advanced economies and many economies in the EBRD regions have grown older, employment has shifted towards age-friendlier jobs that have more flexible schedules and involve less physical effort. In EBRD economies in the EU, older workers, as well as highly educated women, have benefited most from the availability of age-friendly jobs. Consequently, countries with more age-friendly job structures boast higher employment rates among older workers. At the same time, the shift towards age-friendly jobs has been less pronounced in EBRD economies in the EU than in advanced European economies.

The advancement of AI technology is likely to raise workers' productivity in some occupations, but displace workers in others. Workers in EBRD economies in the EU are less likely than their counterparts in advanced European economies to have the kinds of job that can benefit most from AI-driven productivity gains. Younger people, women and rural workers are more likely to hold jobs that could be displaced by AI. Evidence from a new EBRD six-country survey conducted for this report shows that younger firms with younger managers, better access to talent and complementary software investments are more likely to be early adopters of AI. These firms report that employment expands following the adoption of AI, particularly where AI complements roles requiring strong STEM skills.

Targeted migration policies can help alleviate bottlenecks in occupations where skilled labour is scarce – for example, by streamlining the recognition of foreign qualifications in healthcare and construction, matching migrants more effectively to labour shortages and ensuring sufficient support for the integration of migrants, including adequate language training and access to childcare. Younger economies face the

CHART 3.1. **The old-age dependency ratio is increasing, particularly in EBRD economies in the EU**



Source: UNDESA (2024).

Note: This chart shows the ratio of people aged 65 and over to people aged 15-64. "Sub-Saharan Africa" comprises Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal. "Advanced Europe" comprises Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain and Sweden.

opposite challenge of creating a sufficient number of high-quality jobs for the many new entrants to the labour market. Here, policies that improve entrepreneurs' access to finance, skills and product markets can help young economies to reap the demographic dividend associated with young labour forces, which tend to have higher levels of education than in the past.

This chapter starts by examining age-friendly jobs before discussing the likely implications of AI technology for the labour markets. It then looks at the potential for migration policies to alleviate labour-market shortages in rapidly ageing economies. Lastly, it considers the challenges that entrepreneurs face in young economies with fast-growing labour forces.

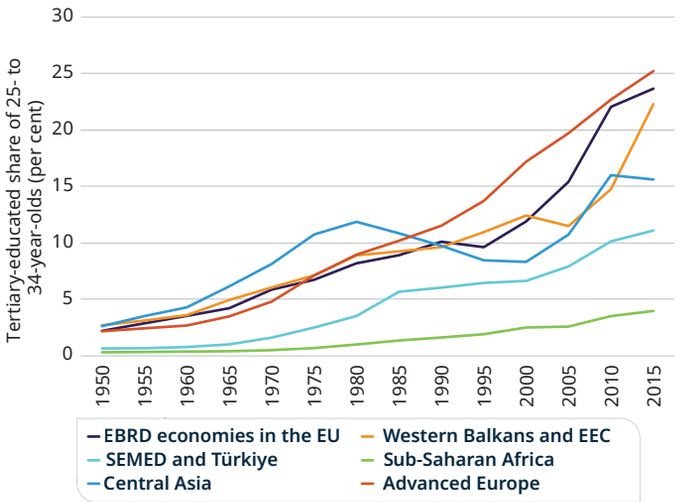
A MORE EDUCATED WORKFORCE

While demographic trends differ from economy to economy, younger cohorts everywhere have entered labour markets with more years of schooling and higher levels of tertiary education than previous generations (based on data from the Barro-Lee Educational Attainment dataset).[1] As stronger human capital and greater digital fluency support technology absorption,[2] the challenge is to deploy this talent in a way that helps to alleviate demographic pressures by boosting productivity and/or creating a sufficient number of high-quality jobs.

Since 2000, the share of 25- to 34-year-olds in the workforce of the EBRD economies in the EU has fallen from around 21 per cent to 18.6 per cent – a decline of more than 10 per cent. As a result, the old-age dependency ratio (the ratio of people aged 65 and over to people aged 15-64) has risen from 24 per cent to 39 per cent (see Chart 3.1). Similar shifts can be observed in advanced Europe, with more modest increases in the Western Balkans and in eastern Europe and the Caucasus (EEC). In the southern and eastern Mediterranean (SEMED) region, Türkiye and sub-Saharan Africa, in contrast, young workers still account for a quarter or more of the labour force, while older workers remain a small minority – less than 10 per cent in sub-Saharan Africa and roughly 12 per cent in SEMED and Türkiye – keeping old-age dependency ratios largely unchanged.

[1] See Barro and Lee (2013).
[2] See Lucas (1988), Barro (1991) and Mankiw, Romer and Weil (1992).

CHART 3.2. As levels of tertiary education have surged among young adults, regional gaps have widened



Source: Barro and Lee (2013).

Note: See notes accompanying Chart 3.1 for definitions of "sub-Saharan Africa" and "advanced Europe".

At the same time, educational attainment has risen sharply. By 2015, the share of people aged 25 to 34 with a tertiary education had reached 24 per cent in EBRD economies in the EU and 22 per cent in the Western Balkans and EEC (see Chart 3.2). In contrast, the corresponding figure stood at 12 per cent in SEMED and Türkiye and 5 per cent in sub-Saharan Africa.

AGE-FRIENDLY JOBS AND THE EMPLOYMENT OF OLDER WORKERS

As workers age, they value more flexible schedules, less physical strain, and greater autonomy and discretion. They are often willing to forgo a sizeable share of their pay to secure a job with such characteristics.[3]

Consequently, jobs in ageing economies have become increasingly age friendly. To measure the age friendliness of jobs, a natural language model maps occupational descriptions to features associated with age-friendly work, such as low physical demands, reduced exposure to stress (for instance, fewer tight deadlines and performance assessments), scope to use interpersonal and soft skills, flexible working arrangements, greater autonomy in task execution, and inclusive and supportive workplaces that protect older workers from abuse and discrimination).[4] This mapping is translated from an index originally developed for the United States of America to a version for European economies (see Box 3.1 for details). It assigns high values to secretarial jobs, legal professions, managers, cashiers and clerks, and sales agents, while jobs in cleaning and construction tend to score lowest in terms of age friendliness, reflecting their physical intensity and limited scope for flexible hours.

Since the late 1990s, the age friendliness of jobs has risen in all European countries (see Chart 3.3), although EBRD economies in the EU have seen more modest increases than advanced European economies, consistent with their lower average effective retirement ages, as discussed in Chapter 1. Several factors have probably contributed to this increase in the age friendliness of jobs: technological change has lowered demand for physical labour;[5] employment has shifted from agriculture and manufacturing towards services;[6] technology has further facilitated ergonomic improvements in the workplace and flexible scheduling, including as part of hybrid/remote work;[7] and anti-discrimination rules have become more common.[8]

Economies where jobs are more age friendly have higher employment rates among workers aged 55 and over (see Chart 3.4). The relationship is likely to go both ways: age-friendly jobs support longer working lives, while rapidly ageing societies have stronger incentives to make jobs more age friendly.

In 2023, only 19 per cent of workers aged 55-64 in EBRD economies in the EU were in the top quartile of age-friendly occupations, compared with 30 per cent in advanced Europe. In advanced Europe, women are more likely than men to have the age-friendliest jobs, regardless of their age or education level. This may be because these jobs offer features that women

[3] Older workers assign a value to age-friendly job attributes that is equivalent to a 75 per cent wage increase (see Maestas, Mullen and Powell, 2023).

[4] This analysis follows that of Acemoglu, Mühlbach and Scott (2022).

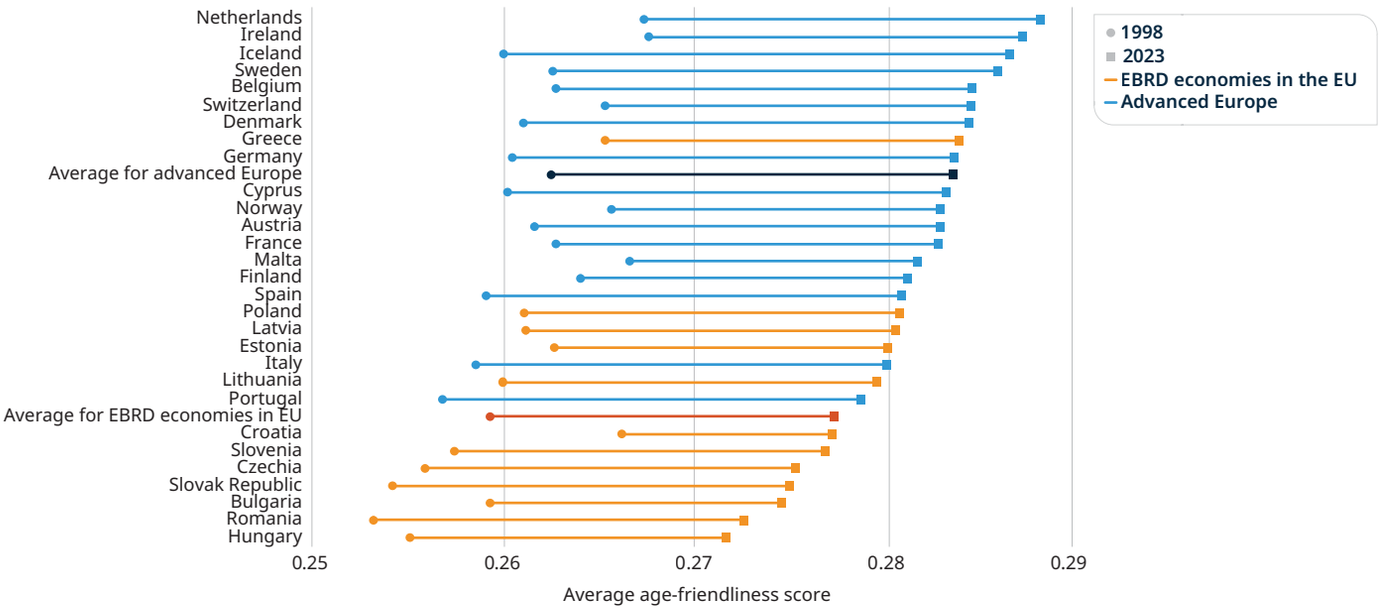
[5] See Acemoglu and Restrepo (2019) for a discussion on automation and task reallocation.

[6] See OECD (2025).

[7] See Bloom, Han and Liang (2024).

[8] See Harris (2020).

CHART 3.3. Jobs have become more age friendly



Source: Acemoglu, Mühlbach and Scott (2022), Eurostat (n.d.a) and authors' calculations.

Note: Average scores are calculated for all workers aged 18-64 employed in occupations covered by the age-friendliness index, weighted by employment shares. See Box 3.1 for more details.

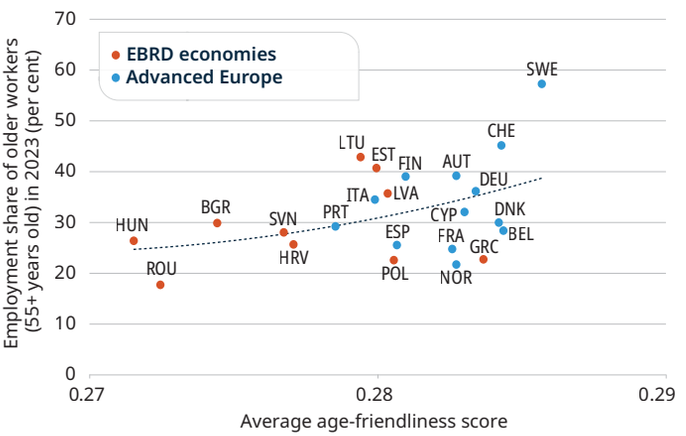
The value that older workers assign to age-friendly job attributes is equivalent to a

75%

wage increase

tend to value more, such as flexible hours and less physical strain.[9] In addition, men have traditionally worked in more physically demanding jobs, such as manufacturing and mining, which are less age friendly. Social norms also play a role: the literature highlights the role of "masculinity contest cultures", which promote competition according to masculinity norms, for instance, valuing work over anything else and undermining any work-life balance.[10]

CHART 3.4. In countries with more age-friendly jobs, workers tend to stay in the labour force longer

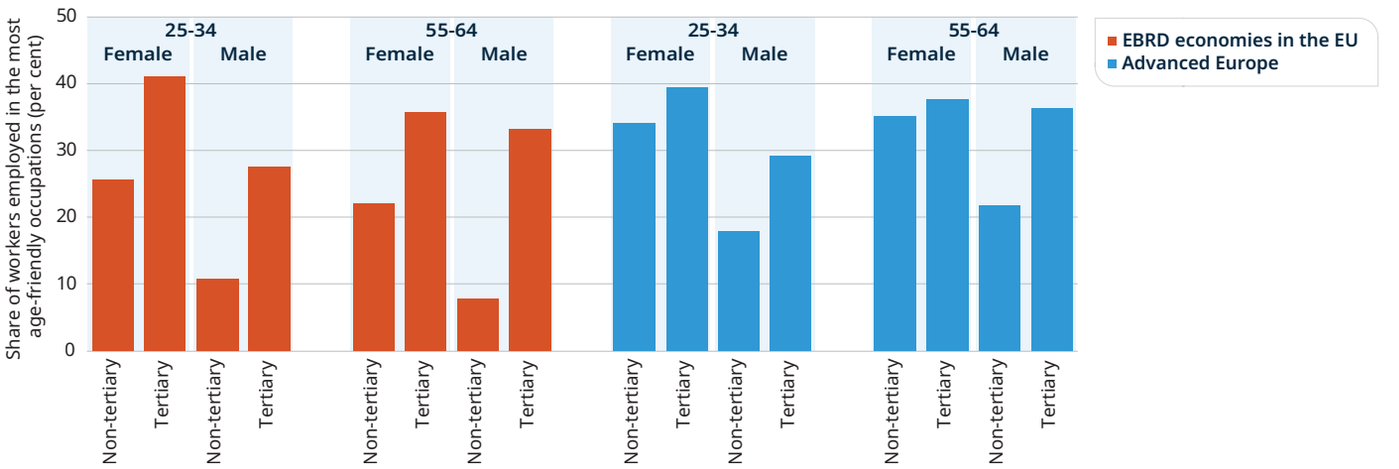


Source: Acemoglu, Mühlbach and Scott (2022), Eurostat (n.d.a) (2023 survey) and authors' calculations.

Note: "Advanced Europe" comprises Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Malta, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland.

[9] Women have proved more willing to pay for a more flexible job than men (see Mas and Pallais, 2017).
[10] See Matavelli et al. (2025).

CHART 3.5. **In EBRD economies in the EU, the most age-friendly jobs are more likely to be held by highly educated women**



Source: Acemoglu, Mühlbach and Scott (2022), Eurostat (n.d.a) (1998 and 2023 surveys) and authors' calculations.

Note: The "most age-friendly occupations" are those in the top quartile of the distribution of the age-friendliness index as at 2023.

In EBRD economies in the EU, the shift towards age-friendly jobs has primarily benefited tertiary-educated women (see Chart 3.5). This may, in part, reflect the fact that more women have pursued higher education since the early 1990s, boosting their supply. In addition, age-friendly occupations are found in public services – health, education and administration – which require tertiary credentials and employ many women. Furthermore, the prevalence of basic digital skills required in many age-friendly occupations may be somewhat lower in the EBRD regions than in advanced European economies and, as a result, may be more closely correlated with educational levels.[11] While women have benefited most from the rise in age-friendly jobs, many firms and occupations continue to reward long working hours, particularly in finance and corporate management.[12]

Beyond job design, policy can play a key role in supporting longer working lives. For instance, in Croatia, pensioners are entitled to work part time without losing benefits, while Estonia offers tailored training and entrepreneurship support to people past retirement age, facilitating their continued engagement in the labour market. Similarly, Hungary's "Road to the labour market" programme provides training and counselling for jobseekers over the age of 50.[13] Poland's "A good employee has no age" campaign, meanwhile, seeks to challenge ageist stereotypes among employers.

Demographic change also reshapes the ways in which firms manage leadership transitions. Family-owned and -run businesses of all sizes are a cornerstone of the private sector in the EBRD regions, unlike in most advanced economies, where ownership tends to be more dispersed and professional managers are more common. The prominence of family-run businesses in the EBRD regions in part reflects shallower capital markets and more limited penetration of private equity. Many of these firms were founded in the early 1990s, at the start of the transition from central planning, by relatively young managers. These owners are now approaching retirement age, making succession a pressing and relatively new challenge for the region (see Box 3.2 for a discussion).

[11] See EBRD (2024).
[12] See Goldin (2014).
[13] See Eurofound (2025).

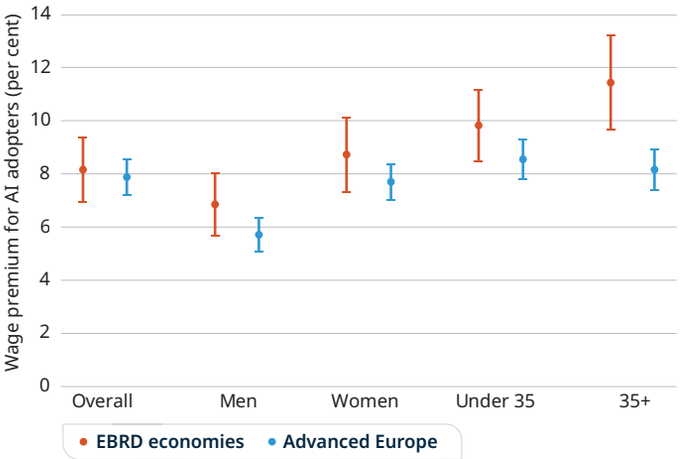
SKILLS AND THE ADOPTION OF ARTIFICIAL INTELLIGENCE

As Chapter 1 discusses, AI-supported productivity growth can be another effective way of mitigating the economic impact of ageing.[14] The following analysis looks at some of the AI skills employers are seeking, the question of whether AI is likely to augment workers' productivity or force them to reskill, and the profile of firms that are earliest to embrace AI.

WORKERS WITH AI SKILLS EARN MORE

Workers who list AI-related skills or hold roles that require them (referred to as "AI talent") earn about 8 per cent more than otherwise similar workers of the same age, gender, education level, country and industry. This can be seen in Chart 3.6, which is based on LinkedIn data from Revelio Labs, including information about actual or imputed (predicted) pay.[15] The estimated premium associated with AI skills is higher for women, reflecting the scarcity of female AI talent, both in EBRD economies and advanced European economies. Similarly, the premium is larger for workers over 35, as younger cohorts increasingly enter the labour market with AI skills. Among workers over 35, the premium is larger in EBRD economies than in advanced European economies, indicating fewer workers with the managerial skills and experience needed to fully complement AI.

CHART 3.6. **AI talent enjoys an 8 per cent wage premium over similar workers without AI skills**



Source: Revelio Labs (2025) and authors' calculations.

Note: Data are as at May 2025. This chart shows the coefficients derived from regressing Revelio's predicted wage on AI talent binary variables for each demographic stratum listed on the horizontal axis, for each economy in the EBRD regions and advanced Europe (Austria, Belgium, Cyprus, Denmark, France, Germany, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom). A person is flagged as AI talent when any of 55 AI-related keywords (such as "machine-learning" or "GPT-4") appears in their profile title. All regressions include country and two-digit industry fixed effects and use weights to adjust for roles and locations that are under-represented in the sample. The 95 per cent confidence intervals shown are based on standard errors clustered at the country-industry level.

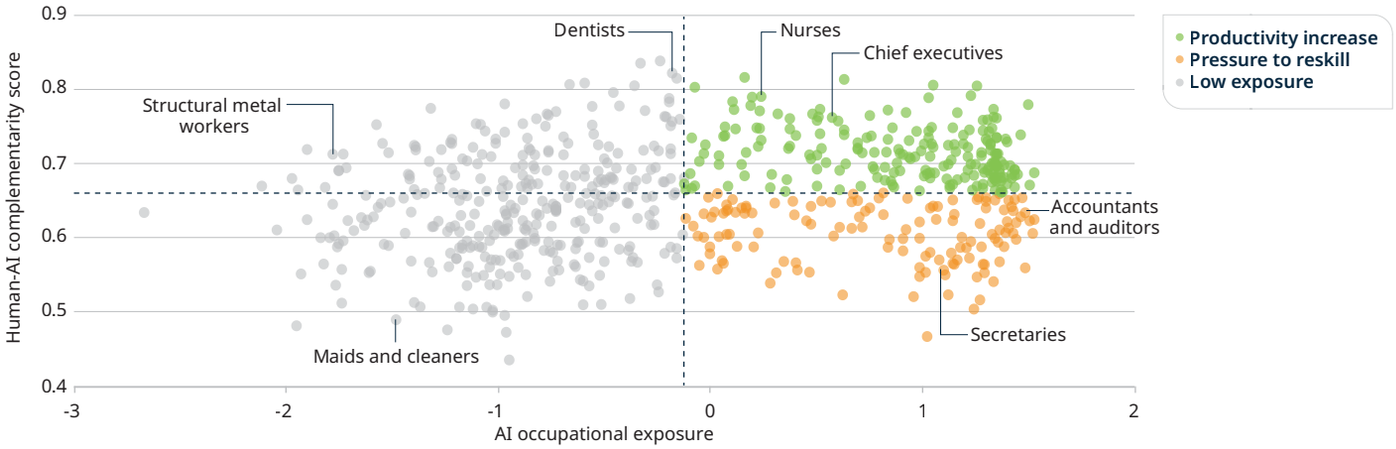
Workers with AI skills earn around

8%

more than comparable workers without them

[14] See Babina et al. (2025), Brynjolfsson, Li and Raymond (2023) and Chen and Wang (2024).
[15] See Revelio Labs (2025).

CHART 3.7. **Occupational tasks determine whether jobs can expect productivity gains or pressure to reallocate labour**



Source: Felten, Raj and Seamans (2021), O*NET Database rev. 27 (see O*NET, n.d.) and authors' calculations.

Note: Dashed lines show the median scores across all occupations (depicted with dots). See Box 3.1 for details of the methodology.

IS AI BOOSTING PRODUCTIVITY OR ADDING PRESSURE TO RESKILL?

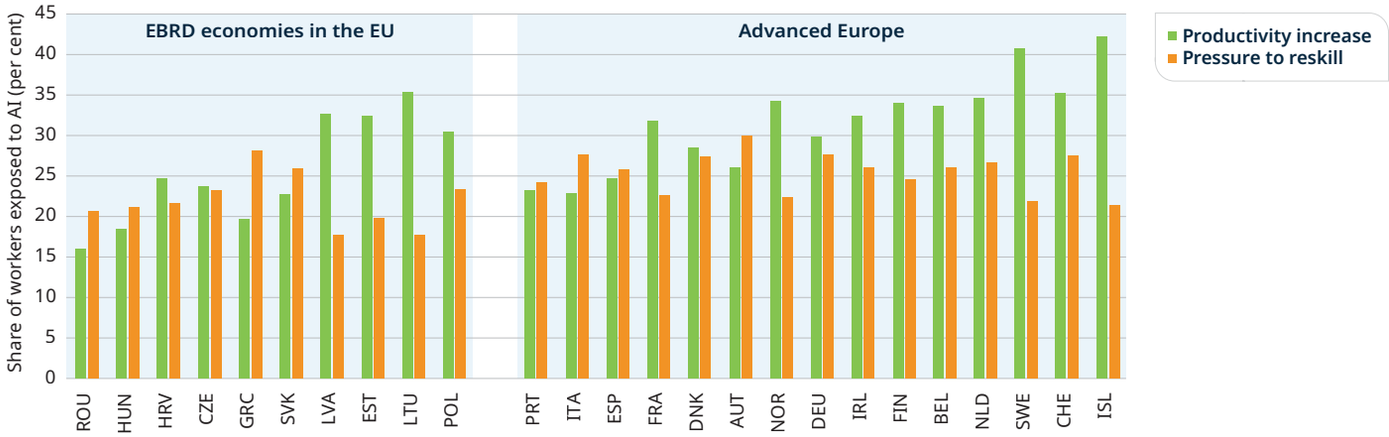
In some cases, new AI tools can help to increase worker productivity, such as that of information technology (IT) managers; in other cases, they may replace workers – in accounting, for instance. To assess the predominant impact in a given occupation, it is useful to combine two measures: (i) an index of the exposure of tasks involved in a certain occupation to advances in AI and (ii) a human-AI complementarity index tracing the scope for productivity gains through human-AI collaboration. These scores are derived from the analysis of typical tasks that each occupation involves. Based on these scores, occupations can be split into three groups (see Chart 3.7).

Occupations with high exposure to AI, but also high complementarity between AI and humans – such as managerial or medical roles – are best placed to experience productivity gains. By contrast, in high-exposure occupations with low expected complementarity – as in the case of secretarial or some accounting roles – workers are more vulnerable to displacement and will likely require significant reskilling as they look for alternative roles. Recent evidence suggests that generative AI is already reducing opportunities in some entry-level roles, particularly where tasks are easily automated.[16] Meanwhile, low-AI-exposure occupations may see only modest benefits or remain largely unaffected in the near term.

In the EBRD economies in the EU, 23 per cent of workers are employed in high-exposure, high-complementarity occupations, compared with 29 per cent in advanced Europe (see Chart 3.8). This gap reflects differences in occupational structure, with EBRD economies having proportionally fewer managerial and professional roles that can capitalise on AI. Among EBRD economies in the EU, the share of employment exposed to AI is highest in the Baltic states and lowest in Romania and Hungary.

[16] See Brynjolfsson, Chandar and Chen (2025).

CHART 3.8. The proportion of workers exposed to AI-driven productivity increases is smaller in EBRD economies in the EU than in advanced Europe

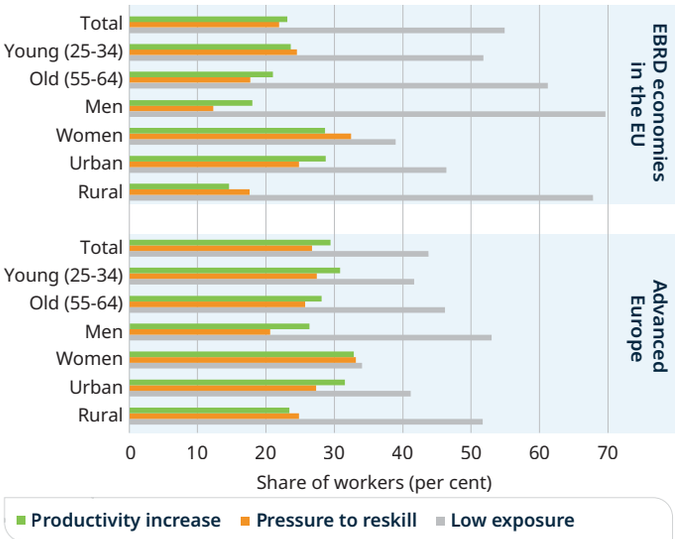


Source: Eurostat (n.d.a) (2023 survey), Felten, Raj and Seamans (2021), O*NET Database rev. 27 (see O*NET, n.d.) and authors' calculations.

Note: Shares are based on employment across three-digit occupations and the exposure scores of those occupations (see Box 3.1 for details). "Pressure to reskill" corresponds to high exposure to AI but low complementarity between AI and human labour. Economies are ranked by the sum of the two values shown.

Young workers (aged 25-34) and women are over-represented in high-exposure, low-complementarity positions, where reskilling needs are greatest (see Chart 3.9). By contrast, young workers in advanced European economies are more likely to work in AI-complementary roles. Across both regions, workers in rural areas are both under-represented in roles where AI promises productivity increases and over-represented in occupations at risk of displacement by AI.

CHART 3.9. Young workers, women and rural populations face greater reskilling needs in response to advances in AI



Source: Eurostat (n.d.a) (2023 survey), Felten, Raj and Seamans (2021), O*NET Database rev 27 (see O*NET, n.d.) and authors' calculations.

Note: This chart shows the average share of the employed workforce that is in occupations falling into the "productivity increase", "pressure to reskill" and "low exposure" categories.

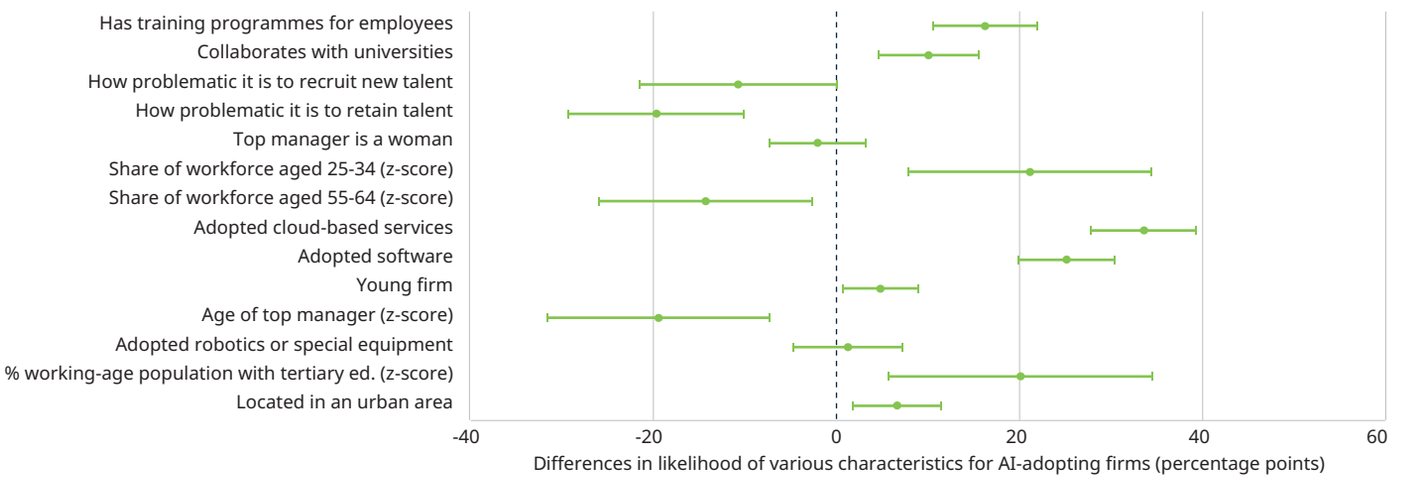
UNEVEN AI ADOPTION AT FIRM LEVEL

Companies' use of AI is spreading rapidly around the world, though its adoption remains uneven. In the United States, rates of AI use are markedly higher than in Europe, while firms in EBRD economies in Europe have been slower to adopt AI than those in advanced European economies. These differentials matter. Faster adoption of AI can yield productivity gains, but can also displace workers at a faster pace, exacerbating mismatches between demand and supply in the labour market.

Among European firms with 10 or more employees, the share of firms adopting at least one AI technology rose from 8.0 per cent in 2023 to 13.5 per cent in 2024, according to Eurostat.[17] To understand the characteristics of early adopters in the EBRD regions, the Bank conducted a phone survey of 1,520 family-owned businesses across Bulgaria, Czechia, Hungary, Poland, Romania and the Slovak Republic. As part of the survey, firms were asked whether, between 2022 and 2024, they had adopted AI, cloud-based computing systems, applications or robotics, and whether they had purchased specialised software or specialised equipment. Firms were also asked whether their workers had increased or decreased in number during that period, and whether workers' skills levels, particularly their STEM skills, had increased or decreased.

The survey suggested that early adopters of AI tended to be younger, led by younger managers and staffed by a younger workforce. They benefit from better access to talent, as evidenced by their being headquartered in regions with a larger share of university-educated, working-age people, and report fewer challenges with employee retention. While early adopters invest significantly more in complementary software, they do not necessarily spend more on costly robotics or other capital equipment. Geographically, these firms cluster in urban areas (see Chart 3.10).

CHART 3.10. AI-adopting firms: younger, tech savvy and talent rich



Source: EBRD 2025 family-owned business survey and authors' calculations.

Note: The phone survey covered 1,520 firms in Bulgaria, Czechia, Hungary, Poland, Romania and the Slovak Republic. This chart shows the estimated coefficients from a regression of each individual characteristic on a binary variable equal to 1 if the firm adopted AI between 2022 and 2024, controlling for country, sector, size and region fixed effects. The 95 per cent confidence intervals shown are based on heteroskedasticity-robust standard errors.

[17] See Eurostat (n.d.b).

Although concerns about job losses following wider AI adoption loom large in policy debates, the survey data suggest the opposite trend within firms, at least to date. Conditional on other investments in software, firms that had adopted AI were roughly 20 percentage points more likely to report an increase in workforce skills, 15 percentage points more likely to report growth in STEM skills and 10 percentage points more likely to report an increase in headcount between 2022 and 2024 (see Chart 3.11).

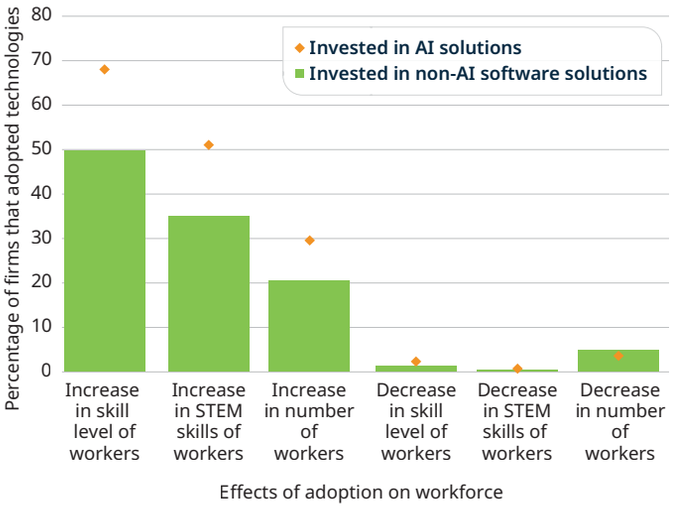
Medium-sized and large firms tend to use AI for workflow automation and decision support, while smaller firms focus on simpler tools, such as customer service chatbots. Advanced applications – for instance, using AI for the physical movement of machines – are virtually absent among small firms (see Chart 3.12). As a result, differences in adoption of AI may further exacerbate productivity gaps between smaller and larger firms.

Barriers faced by small and medium-sized enterprises (SMEs) include limited access to external finance, skills gaps, inadequate data infrastructure and weak management capabilities. To address this, the EBRD has developed targeted programmes. In Ukraine, for instance, the "AI for Entrepreneurs" initiative, created in partnership with the Kyiv School of Economics, offers video tutorials and practical tools to help SMEs leverage AI for decision-making, automation and innovation. Morocco's "Generation AI" pilot, meanwhile, provides 1,000 SMEs with LinkedIn Learning licences, building AI capabilities while advancing digital inclusion and environmental, social and governance (ESG) objectives.

30%

of firms adopting AI report an increase in headcount

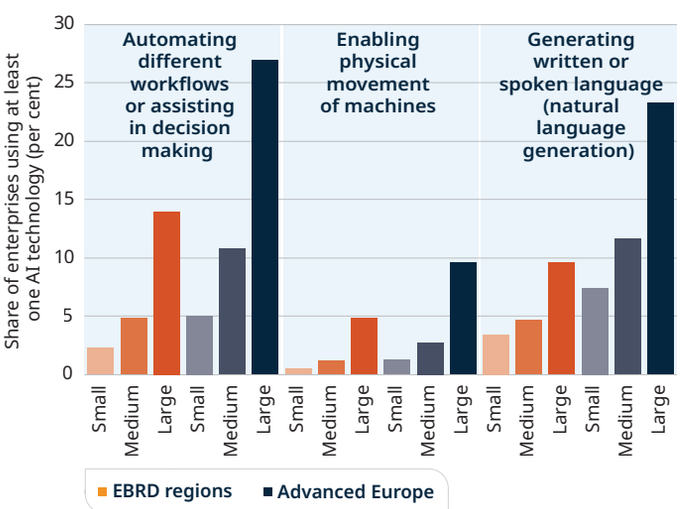
CHART 3.11. Two-thirds of firms adopting AI report an increase in worker skills, while 30 per cent report an increase in number of workers



Source: EBRD 2025 family-owned business survey and authors' calculations.

Note: This chart is based on the responses given by 312 firms that adopted AI between 2022 and 2024. Respondents were asked a series of yes-or-no questions.

CHART 3.12. Larger firms are more likely to adopt advanced AI technology



Source: Eurostat (n.d.c and 2024).

Note: "EBRD regions" comprises Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Romania, Serbia, the Slovak Republic and Slovenia. "Advanced Europe" comprises Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain and Sweden. "Small", "medium" and "large" firms are defined as firms with 10-49, 50-249 and 250+ employees, respectively.

THE QUEST FOR FOREIGN TALENT

Despite advances in the age friendliness of jobs and the advent of AI technologies, many roles in hospitality, tourism, construction, healthcare and manufacturing remain difficult to automate or make age friendly. In these and other sectors, well-designed migration policies can help alleviate the economic impact of ageing. In migrants' countries of origin, while emigration can lead to a brain drain, it can also lower under-employment and unemployment, bring in remittances and provide crucial skills when migrants return.

SKILLED MIGRATION IN THE EBRD REGIONS

Emigration rates in the EBRD economies have consistently exceeded the global average. In 2020, 16.2 per cent of people born in or holding citizenship of a country in the EBRD regions lived abroad, up from 12.2 per cent in 2000. These figures exclude return migrants. In Albania, for instance, 30 per cent of survey respondents have lived abroad and almost half intend to emigrate again (see Box 3.3).[18]

Immigration, in contrast, has remained modest: 6.4 per cent of residents of the EBRD regions were foreign born in 2020, with a smaller share of labour immigrants relative to other regions. Advanced economies, meanwhile, have experienced large net immigration: in 2020, around one-fifth of residents were foreign born, while 7.3 per cent of their citizens lived abroad (see Chart 3.13).

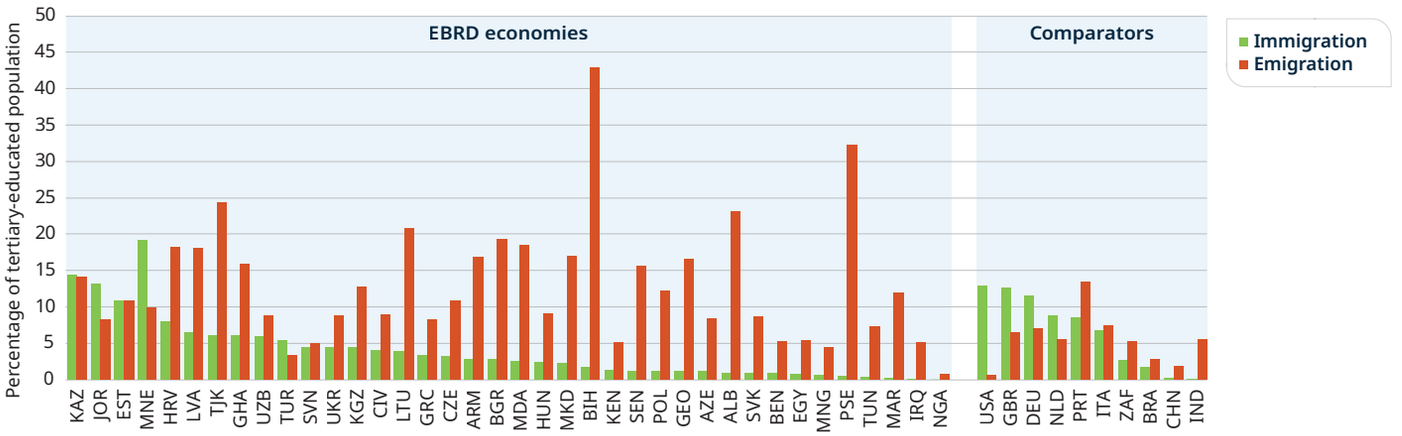
Net emigration from the EBRD regions has been even more pronounced among individuals with tertiary education. Outside central Europe, skilled individuals in the EBRD regions have been more likely to seek to emigrate in pursuit of educational and career goals than their less educated peers.[19] Immigrants, in contrast, often arrive from poorer countries with lower tertiary education rates. In the case of Bosnia and Herzegovina, for instance, 43 per cent of all graduates from the country's universities lived abroad in 2020, while foreign-born individuals made up less than 2 per cent of the country's pool of university-educated residents. Similar patterns can be seen in Iraq, Morocco, and the West Bank and Gaza (see Chart 3.13).

More generally, migrants tend to be more skilled than the average worker in their home country, but less skilled than the average worker in their destination country. A few EBRD economies have benefited from net skilled immigration, however: Jordan and Türkiye are regional hubs for skilled professionals, host international organisations and attract international students, while Montenegro draws expatriates skilled in tourism, real estate and cross-border investment from both the EU and Russia. High-income advanced economies such as the United States, the United Kingdom, Germany and the Netherlands have been attracting immigrants for much longer and have accumulated far more skilled immigrants than they have lost.

The brain drain that accompanies skilled emigration can weigh on innovation, strain healthcare systems when medical professionals leave and reduce political accountability when prominent civil-society figures move abroad.[20] The prospect of moving to higher-income economies can spur investment in skills training. Bulgaria illustrates this dynamic: in the early 2010s, emigration among medical doctors nearly matched the number of graduating medical students. Since then, however, the number of medical doctors graduating in Bulgaria has tripled due to an influx of students coming to the country to study. In 2023, more than half of those students came from abroad and paid substantially higher fees for English-language training programmes than for programmes taught in Bulgarian. This has helped to offset the higher cost of providing tuition in English.[21] In net terms, the number of practising physicians per resident in Bulgaria rose by 6.4 per cent between 2015 and 2023, according to Eurostat.[22] However, shortages persist in some specialisations and in rural areas.[23]

[18] See Oesterreichische Nationalbank (n.d.).
[19] See EBRD (2018).
[20] See Batista et al. (2025) for an overview.
[21] See Novinite.com (2023).
[22] See Eurostat (n.d.d).
[23] See OECD and European Observatory on Health Systems and Policies (2023).

CHART 3.13. **Tertiary-educated emigration far exceeds immigration in most EBRD economies**



Source: World Bank (2023 and 2024), UNDESA (2024), national statistical offices (Azerbaijan and Nigeria) and authors' calculations.

Note: Tertiary-educated emigrant and immigrant stocks are calculated using the World Bank Global Bilateral Migration Matrix. Rates are calculated as tertiary-educated immigration (emigration) stock over total tertiary-educated population (including immigrants and emigrants). The tertiary-educated population in an economy is calculated using World Bank, Our World in Data and UN data. For Azerbaijan and Nigeria, 2020 tertiary education rates were obtained from the national statistical offices.

Remittances sent back by emigrants can be large, averaging 7.1 per cent of GDP in the EBRD regions in 2023 – nearly nine times the global average of 0.8 per cent. In Lebanon and Tajikistan, these flows exceed one-third of GDP and are a crucial source of external funding.

Beyond financial transfers, skilled diasporas and returning migrants serve as catalysts for innovation and entrepreneurship. They establish business connections, and transfer knowledge and management practices from their host countries to their economies of origin. For example, Wise, a global fintech company founded in London by Estonian immigrants, now has its largest office in Tallinn. Similarly, many technology startups across sub-Saharan Africa have been launched by entrepreneurs who studied abroad before returning home (see section on entrepreneurship).

In 2020,

16.2%

of people born in or holding citizenship of an EBRD economy lived abroad, up from 12.2% in 2000

Ultimately, whether skilled migration delivers net benefits for the country of origin depends on the speed with which training institutions can adapt to meet international demand for skilled workers and the extent to which the domestic investment climate encourages returnees to apply their skills at home.

LABOUR MIGRATION POLICY

Outside regional blocs such as the EU, the Eurasian Economic Union or the Southern Common Market (MERCOSUR), would-be labour immigrants typically require a work permit. Approaches to issuing such permits can be broadly categorised as demand driven, supply driven or neutral (as in the case of family reunification; see Table 3.1).

Employer sponsorship is the main way workers migrate to EBRD economies. Typically, in a demand-driven process, companies identify foreign workers who meet government requirements, such as minimum education levels or salary thresholds. These job offers may be subject to quotas, labour-market tests to show that no local talent is suitable, or administrative fees. Once hired, the immigrant's legal right to remain in the country is usually tied to that specific employer. This approach ensures a close match between what businesses need and which workers are admitted, as firms only sponsor workers for positions they need to fill.

Recruitment can be further limited to certain countries of origin. Bilateral recruitment has expanded in EBRD economies in the EU, particularly in the construction, hospitality, tourism and manufacturing sectors. It usually starts with private recruitment agencies. While this route is flexible and less bureaucratic, it can result in weaker worker protection and limited oversight. Some countries sign formal bilateral labour agreements to manage migration and protect migrant workers. In 2024, Croatia signed a bilateral agreement with the Philippines, for instance, while in 2025, Romania signed a bilateral agreement with Nepal following an increase in labour immigration from south and south-east Asia.

Some EBRD countries also use supply-driven immigration policies, where the government directly controls who can immigrate without requiring employer involvement. Under these systems, governments set admission criteria based on factors such as education, age, work experience, income or investment capacity, and determine how many people can enter (see Table 3.1). Supply-driven programmes offer clearer rules and a path to longer-term residence. At the same time, immigrants admitted through these channels may struggle to find employment and may be less likely to have positive economic spillover effects on the broader economy.

In designing migration policy, governments face a delicate balancing act: addressing labour-market needs while managing public concerns (see Chapter 4). As populations have aged, migration policies have generally become less restrictive, both in the EBRD regions and in advanced Europe, particularly in the case of highly skilled migrants.[24] Some EBRD economies in the EU have recently liberalised their policies faster than their advanced European counterparts.[25] For instance, Estonia has lowered salary thresholds for migrants employed by high-growth firms, while Lithuania's 2023-28 fintech plan targets non-EU IT specialists. In 2023, Greece reached an agreement with Egypt on the migration of seasonal agricultural workers, while Germany has made permanent its visa scheme allowing up to 50,000 workers per year to be recruited from the Western Balkans.[26]

[24] See Helbling et al. (2024).
[25] See Schreier, Skrabal and Czaika (2023).
[26] See OECD (2024).

TABLE 3.1. Evidence on the effectiveness of labour migration policies is mixed

Policy tool	Causal evidence	Pros and cons	EBRD policy example*
Demand driven			
Employer sponsorship[a]	Matches skills to company needs	Pros: Meets company needs; ensures economic integration	All EBRD economies
		Cons: Can be admin heavy; workers can be vulnerable; not effective in meeting longer-term needs	
Supply driven			
Points-based systems[a]	Improve average skills and productivity; channel talent to innovation hubs	Pros: Transparent, freedom of movement between employers	Türkiye's Turquoise Card (2017-present)
		Cons: Might not be able to find work at their skill level	
Startup visas[b]	Attract high-growth founders; raise venture funding, patenting and job creation; minimal crowd-out when selection hinges on innovation potential	Pros: Long-term job and innovation growth; economic diversification	Estonia, Latvia and Lithuania (2017-present)
		Cons: High startup failure risk; limited short-term gains	
Student stay-on visas[c]	Tighter stay-on limits discourage top applicants; predictable caps retain top students	Pros: Skilled labour; soft power	Estonia, Lithuania and Czechia allow students to stay 9-12 months after graduation
		Cons: Possible skills mismatch	
Tax incentives[d]	Large migration response among top earners	Pros: Attracts high-income talent; short-term revenue	Greece (2021-present, 50 per cent Greek income tax break for seven years)
		Cons: Equity; limited broader economic benefits; tax abuse	
Visa lotteries[e]	Increase diversity, innovation, income and welfare	Pros: Equal access; transparency	None
		Cons: Not needs-based or strategic; lack of integration support	
Investment visas[f]	Mostly property/bonds; limited spillovers (comparative quantitative evaluation)	Pros: Short-term fiscal gain	Bulgaria (2009-present), Greece (2013-present), Hungary (2014-17, 2024-present)
		Cons: Real-estate inflation; reputational risk	
Neutral			
Family reunification[g]	Supports integration, resilience; does not trigger uncontrolled "chain migration"	Pros: Good for migrants' wellbeing and attracting skilled migrants	Common
		Cons: Labour-market concerns; potential strain on public services	

Source: Based on Glennon (2024),[a] Kerr and Kerr (2022),[b] Kato and Sparber (2013),[c] Timm, Giuliodori and Muller (2025),[d] Gibson et al. (2018),[e] Surak and Tsuzuki (2021),[f] Cascio and Lewis (2025)[g] and authors' analysis.

Note: * denotes a lack of published rigorous analysis.

CAN STARTUP VISAS ATTRACT TALENT FROM ABROAD?

Since 2010, startup-specific visa programmes have emerged as an increasingly popular way of "importing" entrepreneurial human capital. The early movers on such startup and scale-up visa programmes have included Australia, Canada, Chile, Denmark, Singapore, South Korea and Sweden. A recent study of Canada's programme found that the policy boosted the immigration of entrepreneurs substantially, although broader evidence on the impact of such programmes remains scarce.[27]

In the EBRD regions, Estonia, Latvia and Lithuania all launched startup residence permits in 2017 with committee-based screening of applications in lieu of capital thresholds. Estonia immediately extended eligibility to startup employees in addition to founders. To assess the effectiveness of these programmes, the EBRD's analysis constructs annual flows of first-time founders between origin and destination economies

[27] See Glennon and Lee (2023).

using information on individuals' education histories, job positions and locations from Revelio Labs' global online curriculum vitae (CV) data (see Box 3.1).[28] Using a difference-in-differences approach, the analysis compares first-time entrepreneurial moves from outside the EU to Estonia, Latvia and Lithuania with similar moves to Hungary, Poland, the Slovak Republic and Slovenia, which also joined the EU in 2004, but did not introduce startup visa programmes (Czechia, which introduced such a programme in 2019, is excluded from the analysis).

The results reveal that Estonia experienced a sustained increase in non-EU founder arrivals, bringing in 219 additional founders annually, a 121 per cent increase on pre-programme levels (see Chart 3.14). The programme also diversified Estonia's entrepreneurial pool, attracting founders from beyond the traditional regions of origin in Europe and Central Asia.

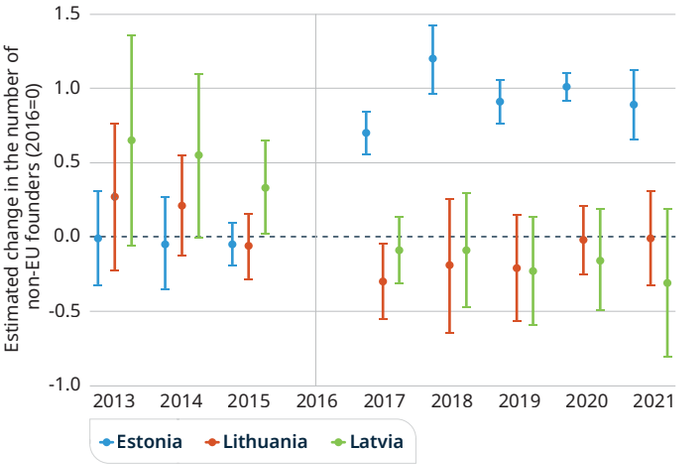
In contrast, Lithuania and Latvia saw no clear impact following the introduction of their programmes. Rather than attracting new entrepreneurs, their startup visas appear to have merely formalised existing migration flows.

Estonia's programme benefited from an established startup ecosystem with visible success stories (Skype, Bolt and Veriff), streamlined administrative processes, strong immigrant integration policies, a well-designed application system and targeted marketing campaigns in key source countries. In contrast, Lithuania and Latvia's more limited approaches failed to produce similar results. These differences in the outcomes of seemingly similar programmes underscore the importance of policy design and local conditions in determining policy success.[29]

Following the introduction of its startup visa programme, Estonia saw arrivals of non-EU founders increase by

121%

CHART 3.14. Estonia's startup visa programme boosted its number of non-EU founders



Source: Revelio Labs (2025) and authors' calculations.

Note: This chart shows the estimated coefficients from a difference-in-differences regression comparing the number of non-EU founders across Estonia, Lithuania and Latvia with those in Hungary, Poland, the Slovak Republic and Slovenia. The baseline period is the year prior to the introduction of startup visas. All regressions include destination, origin and year fixed effects. The 95 per cent confidence intervals are based on standard errors clustered at the origin-destination level.

SHIFTING TALENT FLOWS

In 2023, EBRD economies in the EU issued 2.7 times more employment permits per capita than advanced European countries and, unlike in advanced European economies, the share issued on the basis of employment was larger than the share issued for family reunification reasons.[30] These countries continued to face severe labour shortages, as many domestic workers had migrated westwards following EU accession, with significant gaps emerging in construction, tourism and healthcare. Croatia saw the largest inflow of immigrants per unit of population. In 2021, it replaced a quota system with a labour-market test (although exemptions to this requirement are common).

Immigrant workers' countries of origin have changed markedly. In 2015, over 80 per cent of employment

[28] See Revelio Labs (2025).

[29] See Deisemann and Schweiger (forthcoming).

[30] See Eurostat (2025).

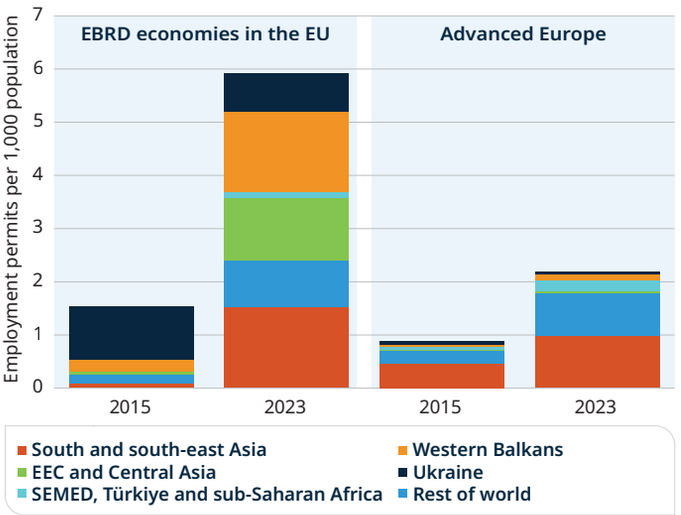
permits went to nationals of EBRD countries outside the EU, primarily Ukraine and countries in the Western Balkans. By 2023, this share had dropped to less than 60 per cent (see Chart 3.15). The gap was filled by workers from other regions, notably south and south-east Asian countries, especially Nepal and the Philippines, as well as Belarus and Russia. Asian workers were over-represented in the hospitality and manufacturing sectors.

Before Russia's invasion, Ukrainians formed the largest group of non-EU workers in Czechia, Estonia, Hungary, Latvia, Poland and the Slovak Republic. After the invasion in 2022, many returned to Ukraine to support the war effort, worsening already severe labour shortages in these countries.[31] By 2023, regular employment permits for Ukrainians had plummeted – down 80 per cent in EBRD economies in the EU and 60 per cent in advanced Europe. While temporary protection permits for Ukrainian refugees (valid until March 2026 with full working rights) partially offset this decline, a disproportionate percentage of these permits went to women and children fleeing the war. As a result, employment rates among working-age Ukrainian refugees varied widely, from 8 per cent in Croatia to 66 per cent in Lithuania as at September 2023.[32] Some countries, including Poland and Czechia, introduced pathways from temporary protection to labour-based residence permits.[33] Box 3.4 discusses how Ukrainian refugees in Poland are integrating through entrepreneurship.

WHERE DOES THE FOREIGN TALENT WORK?

Despite increased migration flows, foreign-born workers make up just 6 per cent of the workforce in EBRD economies in the EU – a fraction of advanced Europe's share of 22 per cent. In both regions, immigrant workers are heavily concentrated in elementary occupations – jobs requiring simple, routine physical tasks, such as cleaning, construction labour, waste collection and farm work. Foreign-born workers (mostly from other EU economies) hold 12.7 per cent of elementary jobs in EBRD economies in the EU and more than 40 per

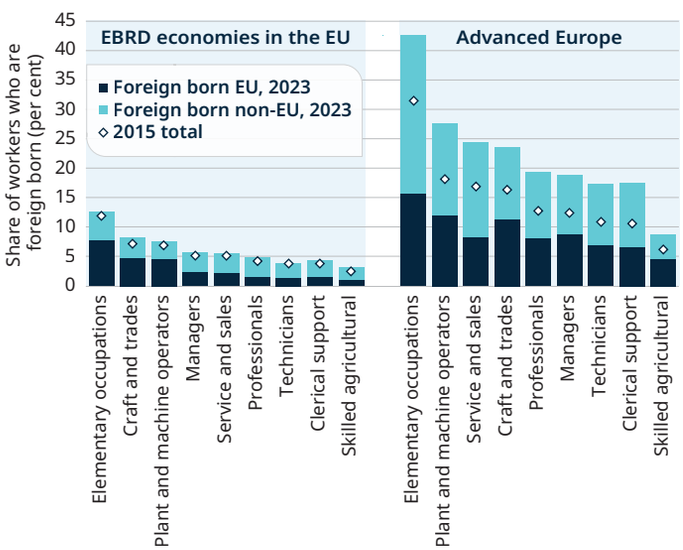
CHART 3.15. The composition of labour immigrants in EBRD economies in the EU is changing



Source: Eurostat (2025) and authors' calculations.

Note: Unweighted averages across countries. "South and south-east Asia" comprises Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, India, Indonesia, Laos, Malaysia, the Maldives, Myanmar, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, Timor-Leste and Vietnam.

CHART 3.16. Foreign-born workers typically work in occupations that do not require a tertiary education



Source: Eurostat (2015 and 2023 surveys) and authors' calculations.

Note: Unweighted averages across countries. Occupational classifications follow ISCO-08 (one-digit). Shares are calculated using survey-provided population weights. 2023 data include employed individuals only. Luxembourg is omitted as it is an outlier.

[31] See Brodersen, Kopper and Kahn (2022).
[32] See European Migration Network (2024).
[33] See Migration Policy Group (2025).

cent in advanced Europe (see Chart 3.16). Craft workers and plant and machine operators – positions typically requiring at least some secondary education – make up the second- and third-largest shares of foreign-born workers in EBRD economies in the EU.

In sum, immigration needs span the entire skills spectrum and have, to date, been concentrated in the lower-skilled, lower-paid segment of the labour market.

STIMULATING ENTREPRENEURSHIP IN YOUNG SOCIETIES

Unlike their rapidly ageing counterparts, young economies face the challenge of creating a sufficient number of high-quality jobs for labour-market entrants. Sub-Saharan Africa as a whole, for instance, is projected to be home to around one in five workers globally by 2050 and will need to generate up to 15 million new jobs annually.[34]

Entrepreneurship is a powerful tool for creating such jobs. Yet would-be entrepreneurs face three major barriers: access to finance, skills and markets. Policy can be effective in relaxing these constraints.

Reforms such as one-stop registration make it easier to start a business, but without additional support, most new firms remain small, with low productivity.[35] Larger capital injections beyond microcredit can help promising entrepreneurs to grow their businesses and create jobs.[36] While traditional classroom training often has a limited impact on firm performance, mentoring and interventions aimed at changing mindsets and aspirations show stronger results.[37]

Digital tools and broadband access can open up new markets and enhance productivity, particularly for young firms.[38] Export promotion and trade facilitation programmes can enable businesses to scale up production; SMEs gaining access to international markets tend to improve product quality and profit margins.[39] Wage subsidies and programmes supporting skills development can boost employment in the short term, but lasting growth usually relies on these interventions being combined with improved access to finance and product markets.[40]

The most effective programmes in developing countries involve targeting: for example, identifying entrepreneurs with high growth potential and offering them integrated support in the form of funding, mentorship and market access.[41] Box 3.5 discusses this in the context of the EBRD Youth in Business programme rolled out in the Western Balkans, SEMED and Central Asia. The analysis below looks in greater detail at the challenges faced by entrepreneurs in young economies.

COUNTRIES' AGE STRUCTURE AND ENTREPRENEURSHIP

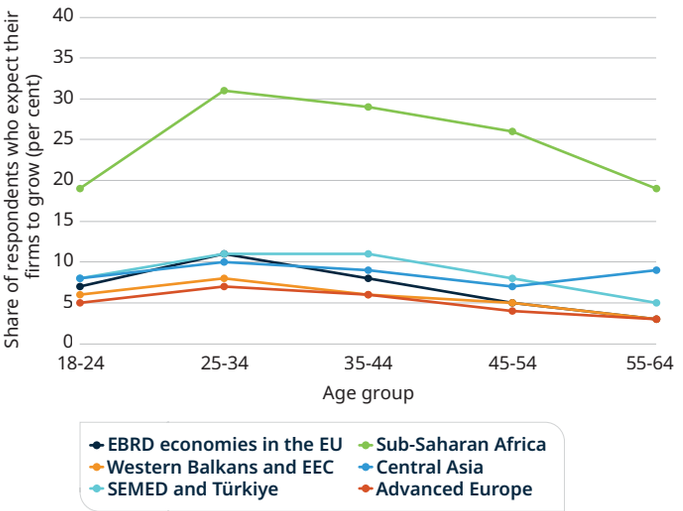
Countries with younger populations tend to exhibit higher entrepreneurial activity due to young people's greater dynamism and comparative advantage in creativity and learning new technologies.[42] About 31 per cent of Global Entrepreneurship Monitor survey respondents aged 25-34 in sub-Saharan Africa report owning a business with at least one employee and plans to grow in the following five years, compared with 7.2 per cent of individuals of the same age in advanced Europe.[43]

On the one hand, entrepreneurship in lower-income countries often amounts to necessity-driven self-employment in circumstances where employment alternatives are limited. As about 70 per cent of African firms with at least one employee operate informally, policy should help these firms to formalise as a stepping-stone towards better employment.[44] On the other hand, technology and returning diasporas have fostered an ecosystem of promising young firms comparable to startups in developed economies, with educated founders and workers.[45] For example, technology-enabled startups in the areas of agritech, fintech and biotech grow faster than the average firm (see Chart 3.18).

[34] See IMF (2024).
[35] See Branstetter et al. (2014).
[36] See McKenzie (2017).
[37] See Brooks, Donovan and Johnson (2018).
[38] See Hjort, Sølvsten and Wüst (2017).
[39] See Atkin, Khandelwal and Osman (2017).
[40] See de Mel, McKenzie and Woodruff (2019).
[41] See McKenzie (2017).
[42] See Liang, Wang and Lazear (2018).
[43] See Global Entrepreneurship Research Association (n.d.).
[44] See Cruz et al. (2025) and ILO (2025).
[45] See Colonnelli et al. (forthcoming).

Startups in Africa are concentrated in a few urban hubs, such as Cairo, Cape Town, Johannesburg, Lagos and Nairobi. Accra, Addis Ababa, Dakar and Kigali are emerging as new hotspots, aided by the presence of universities and research and training centres.[46] Across these key African hubs, governments are moving from ad hoc programmes to statutory "startup acts" that combine eligibility criteria for a startup "label", tax relief (often time-bound), seed/co-investment funds, incubator facilities, regulatory sandboxes, fast-tracked intellectual property registration or issuance of permits and, in some cases, preferential or simplified access to public procurement for innovative SMEs.

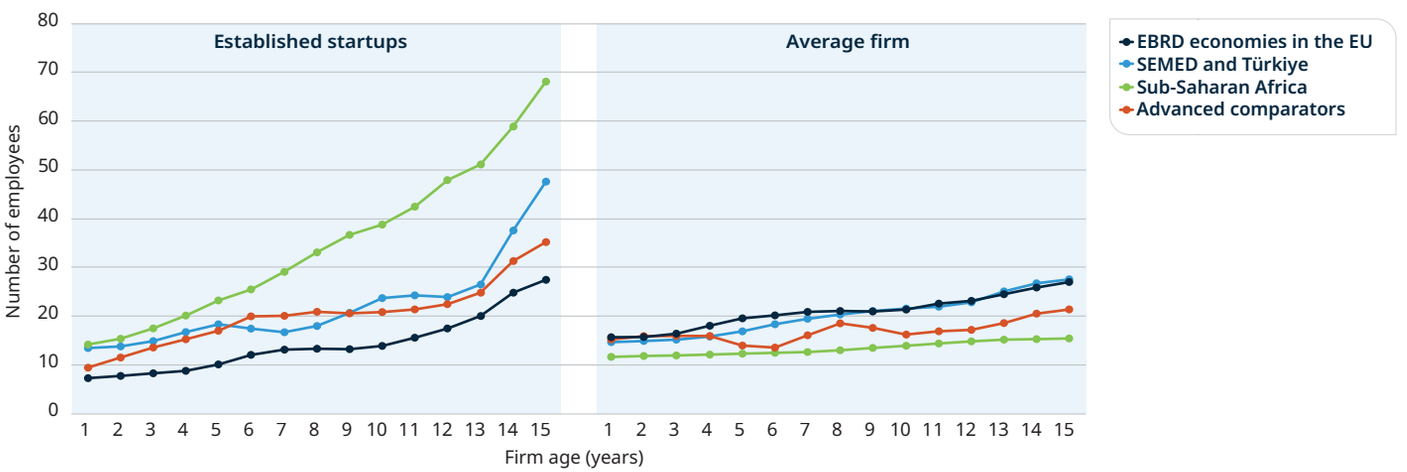
CHART 3.17. One in three people aged 25-34 in sub-Saharan Africa is a business owner with at least one employee and plans to grow in the next five years



Source: Global Entrepreneurship Research Association (n.d.) and authors' calculations (years 2012 to 2021).

Note: This chart plots the share of survey respondents who own a business with at least one employee and expect to grow their firm in the following five years.

CHART 3.18. Tech-enabled startups grow faster than the average firm



Source: Colonnelli et al. (forthcoming).

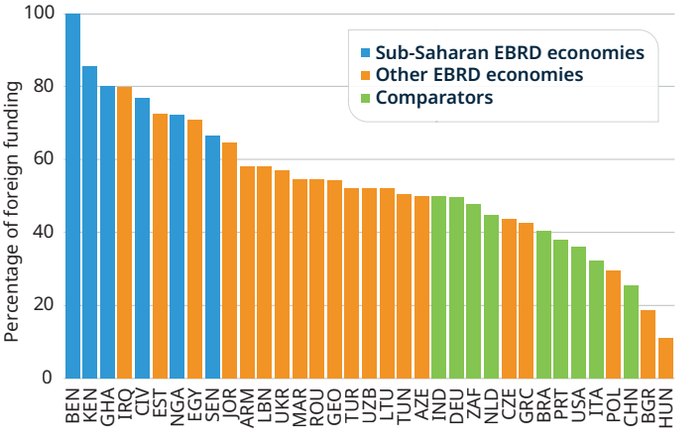
Note: This chart, reproduced from Colonnelli et al. (forthcoming), presents the average number of employees by firm age, using local polynomial smoothing. It incorporates data on established startups from the PitchBook dataset and the World Bank Enterprise Survey dataset. Established startups are defined as companies that have secured venture capital (pre-seed, seed, series A-E) or growth equity funding. "Advanced comparators" comprise Germany, Italy, the Netherlands, Portugal and the United States.

[46] See IFC (2025).

Tunisia's startup label programme, for instance, has been shown to have created jobs and increased business survival.[47] In 2022, Nigeria created a dedicated council chaired by the President and an NGN 10 billion (€5.7 million) seed fund for startups. Nigerian legislation also provides for multi-year tax holidays, investor tax credits, corporate tax relief (including deductions for research and development) and explicit routes for labelled startups to enter into procurement contracts with the federal government. Kenya's Startup Bill, meanwhile, passed in January 2025 subject to presidential approval, introduces labelling, a startup fund and various fiscal and non-fiscal incentives for startups. Senegal's 2020 Startup Act introduced tax and customs preferences, training and financing tools and simplified access to procurement, alongside labelling and a one-stop framework. Côte d'Ivoire's 2023 law for digital startups established a labelling committee and introduced tax and financing incentives for innovative firms. Benin's 2023 act incorporated startup labelling with explicit fiscal incentives into the tax code, along with customs relief for developing product prototypes.

Between 2010 and 2023, the number of tech-enabled startups across Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal surged by 700 per cent, with growth rates comparable to those seen in advanced economies.[48] In 2023, fewer than 23 per cent of business founders in Europe and North America had been educated abroad, whereas nearly half of African entrepreneurs had earned their degrees outside their home country. African tech startups depend more heavily on foreign capital, as founders typically secure seed and venture funding from the countries where they obtained their tertiary education, while local capital markets remain considerably less developed.[49] In Benin, for example, 100 per cent of funding for startups comes from outside the country (see Chart 3.19). In Kenya, Ghana, Côte d'Ivoire, Nigeria and Senegal, foreign sources account for between 67 per cent and 85 per cent of funding, well above the shares in higher-income economies.

CHART 3.19. Most financial capital for startups in sub-Saharan Africa comes from abroad



Source: Colonnelli et al. (forthcoming) based on the PitchBook and Revelio datasets.

Note: Data relate to 2023. The share of foreign funding is calculated by Colonnelli et al. (forthcoming) as the share of total deal size sourced from countries outside the target country.

In Kenya, Ghana, Côte d'Ivoire, Nigeria and Senegal, foreign sources account for between

67%

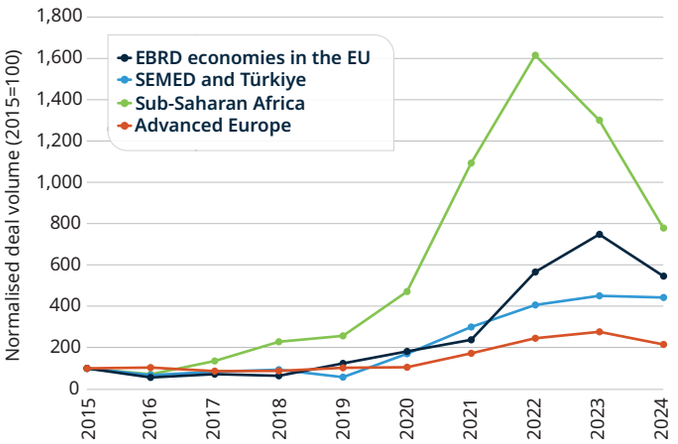
and

85%

of startups' funding, well above the shares in higher-income economies

[47] See IMF (2024)
[48] See Colonnelli et al. (forthcoming).
[49] Ibid.

CHART 3.20. **Venture capital funding for African economies has been particularly volatile**



Source: LSEG Data & Analytics (n.d.) and authors' calculations.

Note: The index is based on total volume of private equity deals compiled from data vendors, investor surveys and other sources. A deal is defined as a single funding round, which may include multiple investors. Central Asia and the Western Balkans are omitted due to the small number of observed transactions.

As a result, startup funding in Africa often flows from countries with historical ties, such as a shared language or colonial links. This greater reliance on foreign capital makes African startups more vulnerable to global economic shocks. After years of growth, global startup funding declined sharply in 2023 due to rising interest rates, with sub-Saharan Africa's nascent startup ecosystem experiencing a particularly steep drop (see Chart 3.20). Sub-Saharan African entrepreneurs strongly prefer equity to debt, especially from investors with regional knowledge and experience.[50]

To support tech-enabled startups in sub-Saharan Africa, policymakers can further tap into the African diaspora. For instance, return migration could be encouraged by regimes offering expedited business registration for returning migrants, tax breaks and co-investment schemes matching their capital.[51] Local venture-capital markets could be supported by the use of government-backed funds, investor tax credits or dedicated programmes run by development finance institutions. Innovation forums – such as Kenya's Innovation Week, organised by the national innovation authority – can further showcase local talent and foster collaboration between local innovators and international investors.

CONCLUSIONS AND POLICY IMPLICATIONS

Demographic change has intensified competition for global talent. In both young and rapidly ageing economies, labour markets need to adapt to the rapid demographic change by making jobs more age friendly, employing new AI tools, encouraging entrepreneurship and using migration policies to alleviate specific labour shortages.

Making jobs more age friendly through greater flexibility, lower physical demands and better working conditions can help retain older workers, while also increasing female labour-force participation. At the same time, despite sustained improvements in the age friendliness of jobs, some occupations are likely to remain less age friendly, notably in manufacturing and construction. Targeted support for older jobseekers and incentives to delay retirement, including more flexible transitions into retirement, can further increase labour-force participation in rapidly ageing societies.[52]

Automation and advances in AI can boost productivity in many jobs. At the same time, many workers may require reskilling, with young people, women and rural workers most exposed to AI. Targeted reskilling programmes, alongside initiatives that facilitate AI adoption by SMEs (such as advisory vouchers), could ease labour-market transitions brought about by increased automation.

Labour migration can alleviate acute shortages in healthcare, construction, hospitality and tourism, as well as selected technical occupations. To be effective, migration policies need to be well designed, with well-calibrated recognition of skills acquired abroad, integration support for migrants (including language tuition) and sufficient oversight to prevent the exploitation of foreign workers.

Support for entrepreneurship is important in economies with young and ageing populations alike. Effective support packages can combine grant and loan financing for young firms with mentoring and advisory services aimed at facilitating access to new markets and investment in digital infrastructure.

[50] See Colonnelli et al. (forthcoming).
[51] See Bassetto and Ippedico (2024).
[52] See Eurofound (2025).

BOX 3.1.

DATABASES AND DEFINITIONS

EU LABOUR FORCE SURVEY

The European Union Labour Force Survey is a harmonised quarterly household survey run by national statistical institutes and coordinated by Eurostat, providing comparable labour-market data for people over 15 years of age across all EU member states, as well as several candidate, neighbouring and European Free Trade Association countries. Individual-level microdata span 1983-2023 for the EU countries, Iceland, Norway, Switzerland and the United Kingdom. Key variables include labour status, demographics, education, and detailed occupation and sector codes.

CONSTRUCTING THE AGE-FRIENDLINESS INDEX FOR EU LABOUR FORCE SURVEY OCCUPATIONS

The Age-Friendliness Index is defined based on US occupations (OCC1990)[53] and is aligned with the EU Labour Force Survey occupations coded in the International Standard Classification of Occupations (ISCO), which transition from ISCO-88 to ISCO-08 over the period from 1998 to 2023. The 299 Age-Friendliness Index-scored OCC1990 occupations are mapped to ISCO-88.[54] As there are many interlinkages, the Age-Friendliness Index at the ISCO-88 three-digit level is computed as the unweighted mean across all linked OCC1990 occupations. Four ISCO-88 groups without direct matches are assigned the Age-Friendliness Index score of their closest counterparts (for example, special-education teaching associate professionals are assigned the score of special-education teaching professionals).[55] As national classifications move from ISCO-88 to ISCO-08 during the observation window, the International Labour Organization's official correspondence is applied. For each ISCO-08 code, the unweighted mean Age-Friendliness Index of its linked ISCO-88 codes is calculated and then aggregated at the ISCO-08 three-digit level. The index is assumed to follow a linear trend at the occupation level, extrapolated beyond 2020, yielding yearly values for each occupation from 1998 to 2023.[56]

The analysis covers 28 countries – 25 EU members (not including Luxembourg or the United Kingdom) plus Iceland, Norway and Switzerland. Data for Cyprus, Bulgaria, Croatia and Malta start in 1999, 2000, 2002 and 2009, respectively. Where respondents report only broad groups (one- or two-digit ISCO codes), the country-year Age-Friendliness Index for that broad group is the unweighted mean of its more detailed subgroups observed in that country-year. Demographic and sectoral analyses retain only observations with three-digit ISCO codes. All analyses are unweighted and restricted to employed individuals with a valid occupation code.

GLOBAL ONLINE CV DATA CAPTURING AI TALENT AND ENTREPRENEURIAL MIGRANTS

The analysis of AI talent and startup visa programmes uses a global dataset of online CVs provided by Revelio Labs, based on harmonised public LinkedIn profiles.[57] It covers over 600 million individuals in more than 200 countries. The data include educational histories, job titles and roles, employers and locations.

AI talent is identified by scanning profile text – titles, summaries and job descriptions – for keywords linked to classical and generative AI, such as "machine learning", "NLP", "computer vision", "TensorFlow", "PyTorch" or "GPT-4/Copilot". Salary is predicted by a position-level model that incorporates information on job title, seniority, employer, location, user-specific tenure at the firm and year of observation. The model is trained on salary data from publicly available visa-application records, self-reported submissions and job postings with disclosed pay. Age is proxied from the year of the first tertiary degree, assuming completion at age 22.

The analysis of startup visa programmes builds on annual origin-destination flows of first-time founders, constructed based on individuals' cross-border moves – the earliest instance when an individual moved from

[53] OCC1990 is a modified version of the 1990 US Census Bureau occupational classification scheme.
[54] See Humlum and Meyer (2020) for details.
[55] See Elias and Birch (1994).
[56] See Kim, Lee and Eggleston (2025).
[57] See Revelio Labs (2025).

a non-EU economy to an EU economy and assumed an entrepreneurial role. Entrepreneurial roles, in turn, are identified from job titles containing terms such as "founder", "co-founder", "owner" or "entrepreneur".

AI OCCUPATIONAL EXPOSURE AND HUMAN-AI COMPLEMENTARITY

An AI occupational exposure index links progress on specific AI capabilities (for example, image and speech recognition, translation, language modelling and reading comprehension) to 52 human abilities through a crowd-sourced relatedness matrix.[58] An occupation's exposure to AI is the weighted average of ability-level exposure based on each ability's prevalence and importance in that occupation.

An index of human-AI complementarity is based on work context variables (communication, responsibility, physical conditions, criticality and routineness) and job-zone training requirements.[59] The ability and work context analysis uses data from the US Department of Labor's standardised database of detailed Standard Occupational Classification (SOC) occupations, O*NET.[60] For each occupation, the dataset reports its task composition and provides ratings for knowledge, skills, abilities, work activities and work context required, based on surveys of workers and managers. It is updated periodically. Existing crosswalks are used to map it to non-US taxonomies of occupations, such as ISCO.

SURVEYING FAMILY FIRMS ABOUT DEMOGRAPHY, AUTOMATION AND LEADERSHIP CHANGE

The EBRD family-owned business survey is a computer-assisted telephone-interview study of 1,520 senior managers in private-sector establishments with a minimum of five employees across Bulgaria, Czechia, Hungary, Poland, Romania and the Slovak Republic, which was conducted between May and July 2025. As part of the survey, top managers, owners or senior administrative staff answered a number of questions about firm demographics, leadership and succession, worker training and skills, technology and automation, recruitment preferences and sales. Sampling was designed with an emphasis on family-owned firms (oversampling firms with at least 50 per cent family ownership).

EUROSTAT RESIDENCE PERMITS DATABASE

The Eurostat database on first residence permits provides annual counts of permits issued by European Economic Area (EEA) countries and Switzerland to non-EEA and non-Swiss citizens from 2014 onwards, disaggregated by citizenship, issuing country and reason: employment, family, education and other (including refugee status and subsidiary protection, humanitarian reasons and victims of trafficking).[61] The data exclude persons under temporary protection (for instance, those displaced from Ukraine). The analysis focuses on first residence permits issued for employment, but anyone with a residence permit is allowed to work in the EEA and Switzerland. EEA citizens do not need permits to work in other EEA countries.

[58] See Felten, Raj and Seamans (2021).
[59] Based on Pizzinelli et al. (2024).
[60] See O*NET (n.d.).
[61] See Eurostat (2025).

BOX 3.2.

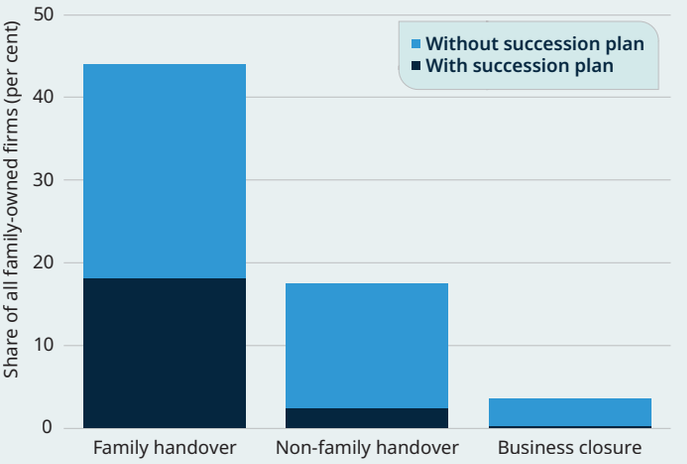
DEMOGRAPHIC CHANGES AND SUCCESSION INTENTIONS IN FAMILY-OWNED FIRMS

Succession matters: how ownership and leadership of companies are passed on affects whether firms survive and thrive. International studies show that while family ownership is not problematic in and of itself, it often gives rise to poorly managed transitions. When heirs are chosen based on family ties rather than competence, firms tend to perform worse than when succession is merit-based and potentially involves individuals from outside the family of owners.[62]

New evidence from the EBRD family-owned business survey spanning Bulgaria, Czechia, Hungary, Poland, Romania and the Slovak Republic reveals that only around 30 per cent of family firms have written up succession plans (see Chart 3.2.1). Around two-thirds of planned transitions stay within the family, with just 20 per cent of firms with transition plans considering external buyers. More than half of firms intending to pass the business on to family have no formal plan in place, leaving them exposed to risks associated with the uncertain timing of transition, its financing and governance and putting otherwise healthy businesses at risk of possible downsizing or closure.

Policy measures can help to promote the preparation of meritocratic succession plans at family firms. The early writing of succession plans can be encouraged with toolkits, advisory vouchers and the provision of subsidised professional services. Owners will also find it easier to sell businesses if search and transaction costs associated with sales are lower. Tax policies can be designed to support continuity over rushed sales. The provision of training and regulations to encourage the establishment of professional management boards can also help to strengthen the quality of governance at family-owned firms and reduce the risks associated with family succession. As the first generation of transition-era owner-entrepreneurs approaches retirement, policies that promote succession planning and expand available transfer options will gain in importance.

CHART 3.2.1. The majority of family-owned businesses do not have a formal succession plan



Source: EBRD 2025 family-owned business survey and authors' calculations.

Note: This chart shows the succession plans of 1,208 firms with more than 50 per cent of shares owned by a single family in Bulgaria, Czechia, Hungary, Poland, Romania and the Slovak Republic. "Family handover" refers to situations where the firm is expected to be passed on or sold to the children of the owner or other family members. "Non-family handover" refers to cases where the firm is expected to be sold to third parties who are not part of the family of the owner. "Business closure" refers to situations where the firm is expected to cease activity once the top manager retires.

[62] See Bennedsen et al. (2007) and Pérez-González (2006).

BOX 3.3.

CYCLICAL MIGRATION IN CENTRAL, EASTERN AND SOUTH-EASTERN EUROPE

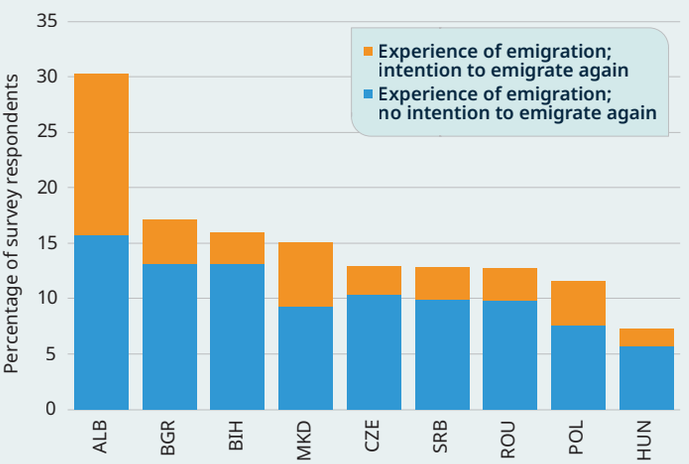
Migration is not necessarily a one-way journey. Many individuals move countries multiple times in their lives, possibly returning home and emigrating again as circumstances change.[63] This cyclical pattern of migration may be driven by evolving economic opportunities, family circumstances and individuals' career prospects.

The 2024 wave of the Euro Survey conducted by the Austrian National Bank (OeNB) sheds light on patterns of repeated migration in Albania, Bosnia and Herzegovina, Bulgaria, Czechia, Hungary, North Macedonia, Poland, Romania and Serbia. On average, 15 per cent of respondents report having lived abroad, ranging from 7 per cent in Hungary to 30 per cent in Albania (see Chart 3.3.1). One-third of all migration spells lasted less than a year, while stays of more than three years were particularly common among respondents in Bosnia and Herzegovina (46 per cent). Returnees in Albania and North Macedonia report being particularly likely to seek another spell abroad.[64]

Notably, unemployment rates are higher among individuals with experience of emigration than among those who have never emigrated. This holds also when controlling for other sociodemographic characteristics and is in line with the fact that returnees often face challenges when reintegrating into home-country labour markets.[65]

These patterns underscore the need for policies that facilitate the reintegration of returnees into the labour market while making good use of their accumulated skills, international networks and entrepreneurial potential.

CHART 3.3.1. A substantial share of the population of emerging Europe has lived abroad



Source: Oesterreichische Nationalbank (n.d.), 2024 wave.
Note: Weighted averages.

[63] See, for example, Paul and Yeoh (2021) and Wahba (2022).
[64] See Oesterreichische Nationalbank (n.d.), 2024 wave.
[65] See Karolak (2020).

BOX 3.4.

UKRAINIAN REFUGEES AND BUSINESS CREATION IN POLAND

Poland has transitioned from being a country characterised by high net emigration to one with significant immigration. Even before Russia's full-scale invasion of Ukraine in 2022, around 1.3 million Ukrainians were already living in Poland, primarily doing temporary or seasonal jobs.[66] The presence of these pre-war labour migrants helped to facilitate the integration of the subsequent inflow of refugees from Ukraine.

By the end of 2022, around 1.4 million Ukrainian refugees had registered in Poland, the vast majority of them adult women and children, as most men were required to remain in Ukraine under conscription rules (with some exempt due to family size or professional status).[67] Many of the men who arrived in Poland settled there and went on to start businesses, contributing to a wave of refugee-led entrepreneurship that distinguishes the post-2022 refugee population from earlier Ukrainian migrants.

Thanks to swift legal and institutional action, Ukrainian refugees were initially granted access to benefits comparable to those available to Polish citizens. Although subsequent legal amendments adjusted the scope of support, those early policies enabled the rapid integration of migrants into the Polish economy, including through entrepreneurial activity.

By 2024, more than 36,000 Ukrainian-owned enterprises had been registered in Poland, most of them small-scale service businesses concentrated in the transport, recruitment and retail sectors.[68] Regression analysis confirms this pattern: a 10 per cent increase in the number of adult male refugees in a Polish county was associated with a 2.5 per cent rise in newly registered Ukrainian-owned firms and an 8.4 per cent increase in capital investment by these firms. This translates into approximately US$ 1,200 (€1,000) in additional capital for every adult male refugee. The analysis also shows that the positive link between Ukrainian refugee inflows and new business formation is driven entirely by adult male refugees, with no significant effect observed for female arrivals in any specifications. Registry data further show that 65 per cent of Ukrainian-owned firms are male owned.

Importantly, this rise in refugee-led businesses did not come at the expense of Polish entrepreneurs. On the contrary, evidence is consistent with a "business multiplier" effect: counties with more Ukrainian-owned firms also saw increases in the formation of Polish-owned businesses. Specifically, each new Ukrainian-owned firm was, on average, associated with the creation of 0.23 new Polish-owned firms. The same pattern held for other foreign-owned enterprises. These effects appear to be driven by local economic spillovers, with Ukrainian businesses generating demand for both upstream services (such as legal, accounting and IT support services) and downstream services (such as transport, warehousing and retail services) in the county. This analysis accounts for a wide range of local factors, such as population size, the presence of pre-existing Ukrainian communities and historical patterns of business formation, helping to isolate the effect of the refugee inflow itself.

Crucially, the association between adult male refugees and new Ukrainian-owned firms emerges only in 2022 and 2023 (after the refugee wave), while no such pattern can be observed in previous years. Furthermore, the increase in firm creation is driven specifically by Ukrainian owners residing in Poland, rather than firms owned by individuals residing abroad. These patterns suggest that the arrival of adult male refugees has a direct impact on entrepreneurship, rather than pointing to a simple co-location of new businesses in counties with dynamic business environments.

The wider economic impact of Ukrainian refugees in Poland is already substantial. A joint study by Deloitte and the UNHCR estimates that Ukrainian refugees contributed between 0.7 per cent and 1.1 per cent to Poland's GDP in 2023.[69] These findings demonstrate that refugees and their entrepreneurship can play a significant role in supporting economic development in the host country.

[66] See Duszczyk and Kaczmarczyk (2022).
[67] See UNHCR (2023).
[68] See Aksoy, Lewandowski and Vézina (forthcoming).
[69] See Deloitte and UNHCR (2024).

BOX 3.5.

THE EBRD'S YOUTH IN BUSINESS PROGRAMME

Access to finance remains elusive for SMEs in many EBRD economies. While the majority of firms are SMEs – with such businesses accounting for up to 99 per cent of all firms and 80 per cent of corporate employment in the Western Balkans, Türkiye and the EEC region – they often find themselves in a gap in the market for financing: too large for microfinance, yet too risky or costly to deal with for commercial banks. According to the latest Enterprise Survey (a representative survey of firms with at least five employees conducted by the World Bank in partnership with the EBRD and the EIB in 2018-20), 20 per cent of SMEs in the EBRD regions cite finance as a major obstacle to doing business, compared with just 3 per cent of firms of a similar size in advanced comparator countries.[70]

Youth-led SMEs may face even greater challenges when it comes to accessing credit. Surveys conducted by the EBRD highlight unmet credit demand among young entrepreneurs, while loan portfolio analyses confirm that they remain under-represented among the clients of financial service providers (banks, microfinance institutions and other non-bank financial institutions).[71] Young women entrepreneurs are particularly underserved, reporting difficulties in terms of meeting eligibility requirements, dissatisfaction with loan procedures and higher borrowing costs.

Limited financial inclusion constrains entrepreneurial activity. Such constraints become particularly critical in regions with young populations, such as SEMED or Central Asia (which have a median age of 26 or less), where youth unemployment is high. In economies where up to one in three young people are not in education, employment or training (see Chapter 1), supporting youth entrepreneurship can generate jobs and improve livelihoods.

Launched in 2019, the EBRD's Youth in Business programme tackles both demand- and supply-side constraints on youth access to finance. Currently active in Central Asia, Egypt, Morocco, Türkiye and the Western Balkans, the programme has supported more than 240 youth-led SMEs by providing advisory services. In 2024 alone, more than 6,000 loans worth a total of €26 million were disbursed to youth-led SMEs. Within one year of engagement, 63 per cent of participating companies reported increased turnover and nearly half had expanded their workforce.

The programme's approach combines: (i) dedicated finance for financial service providers (FSPs) for on-lending to SMEs owned or managed by individuals under 35; (ii) risk-sharing tools to offset perceived lending risks and higher operational costs; (iii) capacity-building for FSPs to help them tailor products, improve digital channels and collect age-disaggregated data; (iv) non-financial support for young entrepreneurs in the form of training, mentoring, networking and improved market access; and (v) policy engagement with regulators and ministries to foster youth-inclusive ecosystems of small firms. A Western Balkans microfinance institution, for example, lowered collateral requirements for youth-led SMEs, launched a startup loan for firms that have been operating for less than 12 months, partnered with business associations to provide tourism-sector training, and revamped its outreach through digital channels and media engagement.

By addressing both sides of the market, Youth in Business helps FSPs reach underserved segments while enabling young people to turn their ideas into employment-generating firms.

[70] See World Bank, EBRD and EIB (n.d.), 2018-20 wave.
[71] Ibid.

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04

The political economy of demographic change

As populations age and fertility rates decline, governments need to respond with mitigating reforms that increase immigration, extend working lives, restructure pensions and harness technological innovation to boost productivity. Public support for these measures varies from economy to economy and is often weak, particularly among older individuals, who increasingly dominate both electorates and leadership positions. As societies age, they tend to become more conservative and less accepting of pension reforms and risk-taking in search of economic growth. While cohort turnover has so far helped to offset some of ageing's effects on public opinion, views have become more polarised. Addressing these challenges will require early, inclusive and well-communicated reforms that take into account country circumstances and both generational and geographical divides.


VOTE

AT A GLANCE

Only

6.9%

of survey respondents in EBRD economies in the EU agree that the government should allow many immigrants of a different race to the majority

71%

of respondents think the government should spend more on pensions

Only

42%

of respondents believe the benefits of AI outweigh the risks

INTRODUCTION

As earlier chapters have shown, demographic change presents major policy challenges across the EBRD regions. Governments will need to respond with reforms, which could include higher levels of immigration, longer working lives, pension reforms and increased productivity growth through technological innovation. Yet public support for these measures is often weak, particularly among older individuals, who increasingly dominate both electorates and leadership positions.

Societies are split when it comes to the risks and benefits of faster technological change. Globally, fewer than half of survey respondents, on average, think that the benefits of AI outweigh its risks at a personal level, though with substantial regional variation. Societies tend to be risk averse, on average, and evenly split when it comes to increasing private ownership (as opposed to public ownership) – both of which are important in driving innovation, entrepreneurship and productivity growth.

When it comes to large-scale immigration and cost-reducing pension reform, prevailing attitudes tend to be hostile. Support for governments providing more generous pensions tends to be universally high, even though the extent of support for providing generous unemployment benefits varies considerably from country to country.

This chapter discusses how demographic trends are influencing the public discourse in the EBRD regions and beyond, affecting popular support for major policy decisions and spending priorities. The priorities of younger and older people often differ. While younger people favour spending on education, housing and climate action, older individuals tend to prioritise healthcare, pensions and military spending. Young societies tend to be more vibrant, entrepreneurial and innovative, but also “angrier”. As people age, they become more sceptical of immigration, environmental protection and economic risk-taking in search of economic growth. These patterns are clearly reflected in votes cast in European elections between 1999 and 2021.

Cohort turnover has helped to offset some of ageing's effects on public opinion so far. For instance, Baby Boomers (born between 1946 and 1964, after the end of the Second World War) and Millennials (born between 1981 and 1996 and coming of age around the turn of the millennium) may have different prevailing beliefs at the same age, reflecting differing life experiences. In particular, younger generations appear to be more open to change and more accepting of economic risk than previous generations at the same age, leading to only modest shifts in average views on immigration, pension reform and growth. However, whether this pattern of generational change will extend into the future is hard to predict. Polarisation is increasing: the gap between the 20th and 80th percentiles in economic and cultural attitudes is widening.

Demographic shifts, such as ageing populations (as discussed in Chapter 1) and declining fertility (as discussed in Chapter 2) affect the age structure of society and the relative sizes of the various cohorts, with "age pyramids" starting to resemble cylinders. Because older individuals vote at higher rates, their preferences exert a disproportionate influence on policy outcomes. By contrast, younger cohorts are becoming both numerically smaller and less politically engaged.

Spatial divides exacerbate generational imbalances. Many electoral systems over-represent depopulating and ageing rural regions, which are often more socially conservative and economically stagnant. This amplifies political preferences that favour the status quo. The global median voter is now estimated to be approaching the age of 44, while political leaders are also growing older, now averaging 60 years of age. In autocracies, leaders have been ageing faster than their populations, in part as advances in longevity have prolonged their tenures. These trends may bias decision-making towards the perspectives of older people. Much has, for instance, been said about the disproportionate influence of the "grey vote" (key to support for Fidesz in Hungary, for instance) or the growing importance of age, rather than class, as a key divide in politics (an important factor behind recent shifts in UK voting patterns, for example). With the rising polarisation of views and complex sets of individual preferences captured in a single vote, political systems may become less stable and predictable, even where shifts in median preferences are relatively modest.

Addressing these challenges will require early, inclusive and well-communicated reforms that take into account country circumstances and both generational and geographical divides. For instance, some societies may be relatively more open to immigration, while others may be more open to longer working lives or greater reliance on technological advances. Gradual implementation, paired with compensation mechanisms, may improve political feasibility and support long-term economic and fiscal resilience.

RESPONDING TO AGEING: A DIFFICULT POLITICAL ECONOMY

Chapters 1 and 3 examine the potential economic benefits of responding to the rapid ageing of the workforce by allowing more immigration, reforming increasingly unsustainable pension systems and boosting productivity growth through technological advances. Can the required reforms gather sufficient public support?

LARGE-SCALE IMMIGRATION

Recent experience suggests that immigration is a divisive issue and that support for high levels of immigration on the scale implied by the calculations in Chapter 1 may be lacking. Anti-immigration sentiment is often viewed as the key driver of the Brexit vote in the United Kingdom in 2016, for instance.[1] More broadly, anti-immigration sentiment has been linked to the rise of right-wing populism in Western democracies.[2] Opposition is rooted in concerns about cultural norms and compatibility, and fairness, as well as worries about pressure on housing and public services such as hospitals, schools and public transport.[3] Those opposed to large-scale immigration often point out that many locals already struggle to find jobs.[4]

Attitudes towards immigration have also become more polarised. Recent analysis based on 200,000 US Congressional speeches and 5,000 presidential communications referencing immigration from 1880 to the present finds that sentiment became less anti-immigration between the Second World War and the passage of the Immigration and Nationality Act in 1965. However, since the late 1970s, political parties in the United States of America have become increasingly polarised in their attitudes towards immigration.[5] Recent research based on voting patterns also indicates that immigration is more polarising in advanced economies than in emerging markets, consistent with evidence presented later in this chapter.[6]

Results from the European Social Survey (ESS), a large-scale household survey covering attitudes and self-reported voting in the latest elections across Europe since the early 2000s, suggest that the vast majority of survey respondents are against admitting many migrants. Attitudes to migration are also less favourable in EBRD economies in the EU than in advanced European economies (see Chart 4.1). The surveys further indicate that attitudes to immigrants from poorer countries outside Europe (those that still have younger populations) are less favourable than attitudes to immigrants of the same race or ethnicity as the current majority of residents in the country in question.[7] In the EBRD regions, support for large-scale migration has been falling in recent decades, in contrast to increases in support in advanced economies. Results from the latest wave of the Life in Transition Survey point to similar patterns. This representative household survey was conducted across the EBRD regions and four comparators in 2022-23, covering at least 1,000 individuals in each of the 37 economies.[8]

PENSION REFORMS

Pension reform is often seen as the "third rail" of politics – an issue so controversial or sensitive that any politician who addresses it risks significant political damage, similar to touching the high-voltage third rail on a railway track. Recent work by the International Monetary Fund (IMF) suggests that almost half of all policies adopted to provide incentives for workers to work longer have never been implemented.[9]

An overwhelming majority of people think that it should be the government's responsibility to provide for the elderly. International Social Survey Programme (ISSP) findings for 35 economies in 2016 show this to be the case for 95 per cent of respondents, compared with 74 per cent who believe it should be the government's responsibility to provide for the unemployed.[10]

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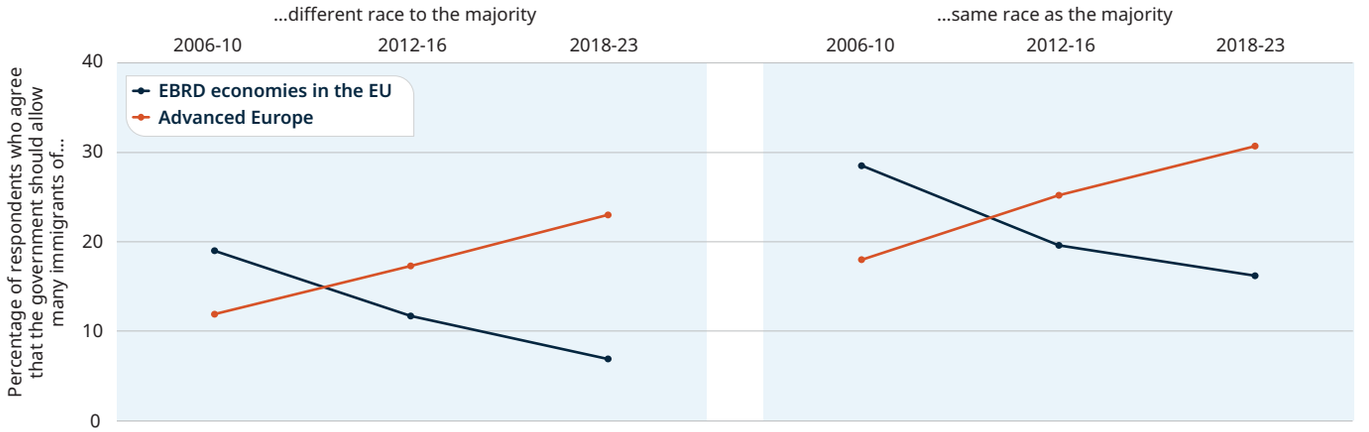
[1] See Eatwell and Goodwin (2018) for a review.
[2] See Colantone and Stanig (2019), De Cleen (2017), Guiso et al. (2017), Ivarsflaten (2008) and Mudde (2007 and 2016).
[3] See Dustmann and Preston (2007).
[4] See IMF (2024).
[5] See Card et al. (2022).
[6] See Gethin and Martinez-Toledano (2025).
[7] See ESS (2025).
[8] See EBRD and World Bank (2024).
[9] See IMF (2024).
[10] See ISSP (2018).

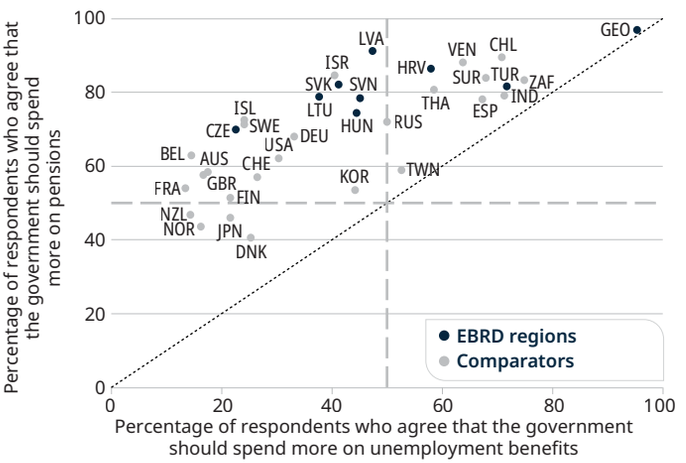
CHART 4.1. **Public support for large-scale immigration is low**



Source: ESS (2025) and authors' calculations.

Note: Based on responses to the question "To what extent do you think people of the different (same) race or ethnic group as most people in the country should be allowed to come and live here?", which included the following options: "allow many", "allow some", "allow a few" and "allow none". The sample is restricted to economies with data available in all three time periods. The EBRD economies in the EU included are Bulgaria, Czechia, Estonia, Hungary, Lithuania, Poland, the Slovak Republic and Slovenia. The advanced European economies are Austria, Belgium, Switzerland, Germany, Denmark, Spain, Finland, France, the United Kingdom, Ireland, the Netherlands, Norway, Portugal and Sweden.

CHART 4.2. **The vast majority of respondents favour more spending on pensions**



Source: ISSP (2018) and authors' calculations.

Note: Based on responses to the question "Listed below are various areas of government spending. Please show whether you would like to see more or less government spending in each area. Remember that if you say 'much more', it might require a tax increase to pay for it." Response options were "spend much more", "spend more", "spend the same as now", "spend less", "spend much less" and "can't choose" for each of the following areas: the environment, health, police and law enforcement, education, military and defence, old-age pensions, unemployment benefits, and culture and the arts. The chart shows the percentage of respondents who selected "spend more" or "spend much more". The 45-degree line is shown.

Some 71 per cent of the population across these economies think the government should spend more on pensions, a ratio that increased slightly between 1996 and 2016.[11] In contrast, this is only true for 43 per cent of respondents when asked about unemployment benefits (see Chart 4.2). The gap between attitudes to pensions and unemployment benefits is similarly pronounced for young respondents.

While attitudes towards larger pensions vary somewhat from economy to economy, the majority favour greater generosity in virtually all economies.[12] A survey by the Oxford Institute of Population Ageing and HSBC Bank further shows that when asked to choose from four reform options – enforcing additional private savings, raising the retirement age, increasing taxes or reducing pension amounts – enforcing additional private savings

[11] See ISSP (2023).
[12] See also Shapiro and Young (1989) and Page and Shapiro (1992).

enjoys the broadest support, typically followed by raising the retirement age, while support for raising taxes and, in particular, reducing pensions is much lower. At the same time, respondents also generally believe that ideal retirement ages should be lower than legal retirement ages. The difference between the median legal retirement age (60 across 18 advanced and emerging economies) and the stated ideal retirement age is almost a year for men and more than three years for women.[13]

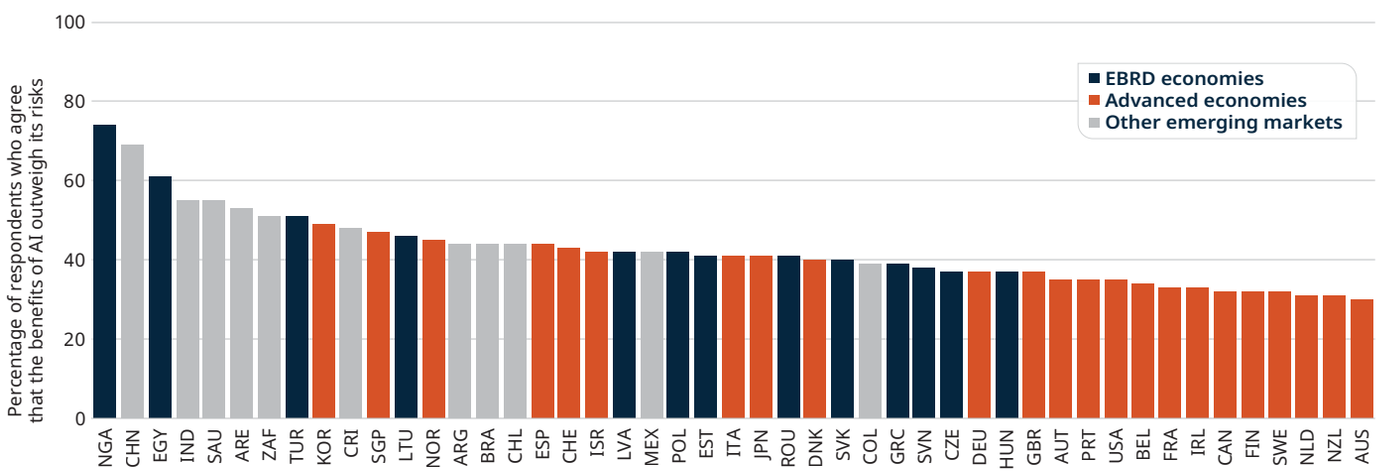
TECHNOLOGICAL ADVANCES AND PRODUCTIVITY GROWTH

Attitudes to prioritising technological advances and economic growth tend to be more evenly split in society. Eurobarometer surveys covering 27 economies in 2024 show that 71 per cent of people agree with the statement that robots and AI are a good thing for society because they help people do their jobs or carry out daily tasks at home (with this share declining slightly between 2017 and 2024).[14] At the same time, an online survey conducted by KPMG in 47 economies in 2024-25 finds that, on average, only 42 per cent of respondents believe that the benefits of AI outweigh the associated risks for themselves.[15]

Attitudes to AI show significant regional variation, with widespread scepticism in many advanced economies, including the United States and much of advanced Europe. This contrasts with more favourable attitudes in emerging markets (including parts of the EBRD regions) – for instance, in Nigeria, China and Egypt (see Chart 4.3). Other surveys point to significant regional differences in attitudes to AI. While respondents in economies in Asia are generally more enthusiastic, those in Europe and North America tend to be more nervous about AI products and services, with Latin America and some economies in the EBRD regions somewhere in between.[16]

More generally, increases in total factor productivity on the scale outlined in Chapter 1 require more innovation, in turn implying greater acceptance of risk and a greater role for private ownership than public ownership, as discussed in the EBRD's *Transition Report 2020-21: The state strikes back.*[17]

CHART 4.3. **Societies differ in terms of their attitudes to AI**



Source: University of Melbourne and KPMG (2025).

Note: Based on the survey question "For you personally, how do the benefits of AI compare to the risks?". Percentage of respondents who say benefits outweigh the risks, slightly outweigh the risks or strongly outweigh the risks.

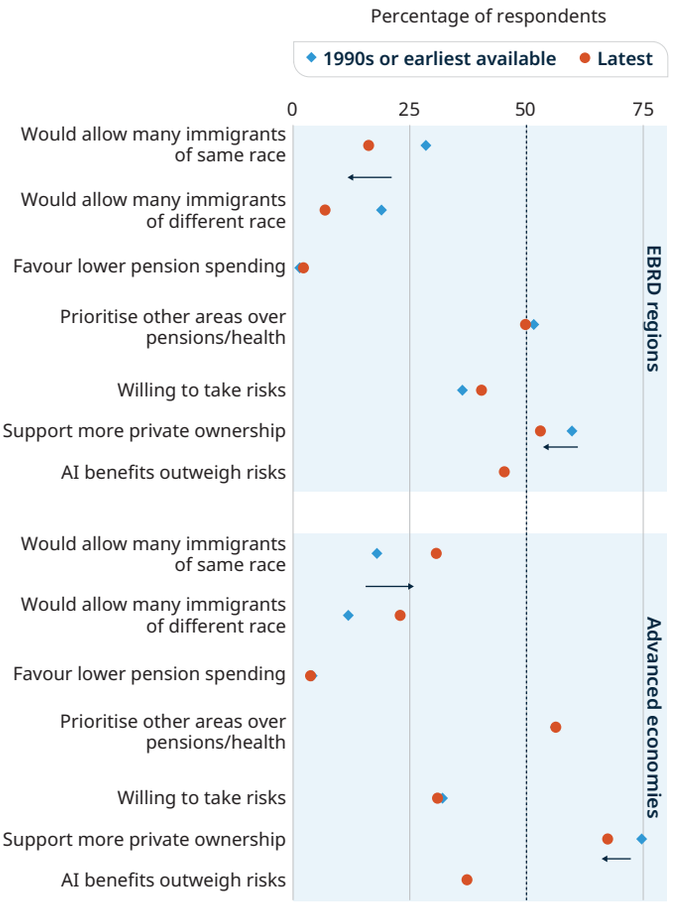
[13] See Dion and Roberts (2008).
[14] See European Commission (2017 and 2025a).
[15] See University of Melbourne and KPMG (2025).
[16] See, for example, Neudert, Knuutila and Howard (2020).
[17] See EBRD (2020).

At the same time, support for greater government ownership and, more generally, a greater role for the state in the economy has been on the rise in the EBRD regions, emerging markets and advanced economies alike, amid high demand for socialising economic risks (see Chart 4.4; support for more private ownership has been declining).[18] When it comes to self-reported willingness to take risks, only around 40 per cent of respondents place themselves in the 6-10 range on a scale where 1 is unwilling to take any risks and 10 is very willing to take risks.

GENERATIONAL DIVIDES: PREFERENCES OF OLDER AND YOUNGER PEOPLE

Older and younger people tend to differ when it comes to economic preferences. Older people typically favour spending on healthcare and pensions over education, infrastructure or climate change mitigation. They also tend to favour labour taxes over capital taxation,[19] and generally have greater concerns about high inflation than low growth.[20] Participants in the Life in Transition Surveys conducted in 2010 (LiTS II) and 2022-23 (LiTS IV) were asked to identify their top priority for government spending, choosing from seven alternatives: education, healthcare, pensions, housing, assisting the poor/reducing inequality, combating climate change, and public physical infrastructure (such as public transport and roads).[21] (The 2022-23 wave of the survey had a longer menu of options that also included creating jobs and digital infrastructure, such as broadband and mobile networks.)

CHART 4.4. The difficult political economy of responding to ageing



Source: ESS (2025), ISSP (2023), EVS (2022), WVS (2024), EBRD and World Bank (2011 and 2024) and authors' calculations.

Note: Samples are balanced within variables over time, but country coverage and years vary across variables. All variables are scaled so that they go in the direction of support for reform (for immigration, pension reform, willingness to take risks, and so on). For immigration questions, see notes accompanying Chart 4.1. For the question on pensions, see notes accompanying Chart 4.2; that chart shows the percentage of respondents who reply "spend more" or "spend much more", whereas this chart shows the share of respondents saying "spend less" or "spend much less". "Support more private ownership" is based on the 1995-98 and 2017-22 waves of the Integrated Values Survey. "Private ownership of business and industry should be increased" versus "Government ownership of business and industry should be increased" is on a 1-10 scale (coded as those selecting 1-5). "Willing to take risks" is based on responses to "Please rate your willingness to take risks, in general, on a scale from 1 to 10, where 1 means that you are not willing to take risks at all, and 10 means that you are very much willing to take risks" (coded as those selecting 6-10) from the Life in Transition 2010 and 2022-23 survey waves. For questions about top priorities, see notes accompanying Chart 4.5. For the question on attitudes to AI, see notes accompanying Chart 4.3.

[18] See EBRD (2020 and 2024) and Koczan and Plekhanov (2024).
[19] See Casamatta and Batté (2016), Hess, Nauman and Steinkopf (2017) and Lynch and Myrskylä (2009).
[20] See Bojar and Vlandas (2021) and Vlandas (2018 and 2023).
[21] See EBRD and World Bank (2011 and 2024).

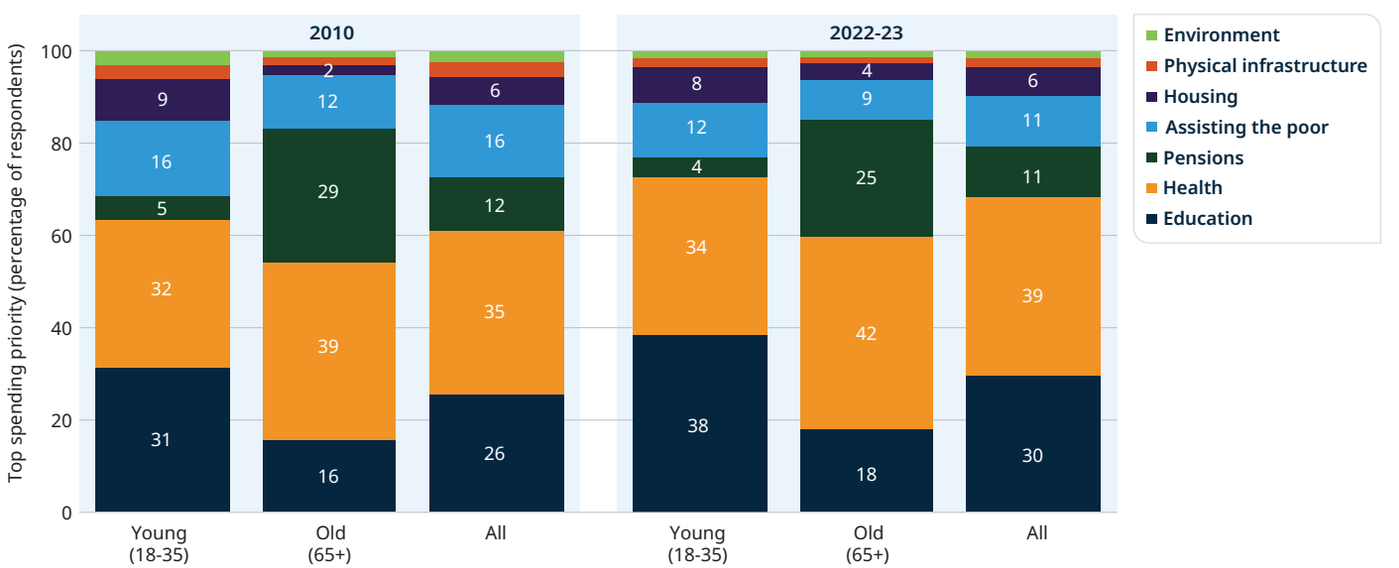
In the 2022-23 survey round, most people thought health and education should be the top priorities for government spending (at 39 per cent and 30 per cent of votes, respectively; see Chart 4.5). Among respondents aged 18-35, 72 per cent of respondents saw either education or health as the top priority. For those aged 65 and over, health, pensions and education were seen as the top priorities, in that order. Among younger people, the balance of support (the share of votes for health minus the share of votes for education) was 4 percentage points in favour of education. Among older respondents, the balance was much larger, at 24 percentage points in favour of health.

The overall preference for health over education across society has changed little between 2010 and 2022-23 (by 0.4 percentage point in favour of health, possibly also reflecting the impact of the Covid-19 pandemic). At the same time, the views of younger and older people have become significantly more polarised: the balance of preferences of younger people has shifted 5 percentage points in favour of education, while the balance of preferences of older people has shifted 0.5 percentage point in favour of healthcare. These differences are statistically significant at the 1 per cent level. The overall shift in favour of healthcare reflects the fact that societies are becoming older, with the views of younger cohorts carrying less weight.

In this case, the polarisation of views reflects both the effect of ageing and changes in views across generations. In particular, the young of today prioritise education more than the previous generation. Indeed, research on public opinion finds that many changes in attitudes (for instance, towards gender norms or immigrants) happen primarily through cohort replacement (as young people who grew up in different social conditions replace those that came before them),[22] while in other cases, attitudes change considerably as people age (for instance, in relation to LGBTQI+ rights).[23]

The analysis in this chapter separates age effects (the evolution of individual attitudes as people age) from cohort effects (differences in preference across

CHART 4.5. **Younger people favour spending on education, while older people favour healthcare and pensions**



Source: EBRD and World Bank (2011 and 2024).

Note: Respondents were asked to choose the top spending priority from a menu of options. In the chart, answers add up to 100 per cent over the subset of options included in both survey waves. The sample of countries is balanced across years.

[22] See Brooks and Bolzendahl (2004), Kiley and Vaisey (2020), Ochoa and Vaisey (2024) and Vaisey and Lizardo (2016).

[23] See Aksoy et al. (2020), Kiley and Vaisey (2020) and Kranjac and Wagmiller (2022).

generations at the same age – for instance, those born in the 1960s surveyed at age 30 in the 1990s compared with people born in the 1980s surveyed at age 30 in the 2010s).[24] It distinguishes between the Silent Generation or before (those born before 1946), Baby Boomers (born 1946-64), Generation X (1965-80), and Millennials and Gen Z (born after 1980; the same definitions are used in Chapter 2).

The analysis draws on a number of large household surveys covering millions of respondents around the globe over a span of almost half a century.

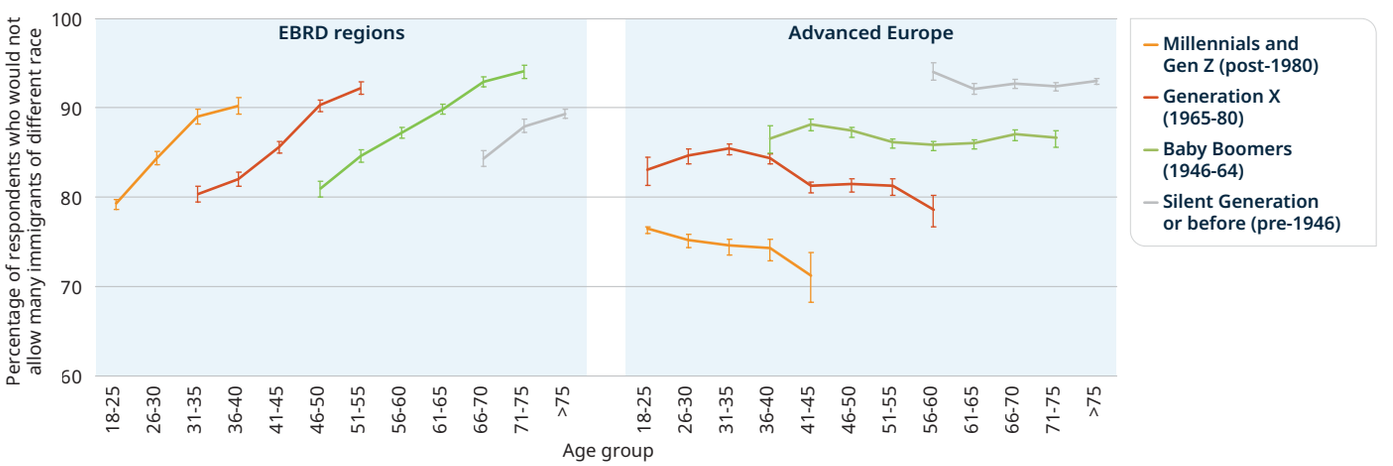
The Integrated Values Survey – a combination of the World Values Survey (WVS) and the European Values Survey (EVS) – covers more than 665,000 respondents in 118 economies. Its seven waves span the longest time period, from 1981 to 2022.[25] The four Life in Transition Survey waves conducted by the EBRD in partnership with the World Bank contain the views of more than 163,000 respondents across 50 economies over the period 2006-24.[26] They predominantly target economies in the EBRD regions, including selected economies in sub-Saharan Africa in the most recent wave.[27]

The European Social Survey covers 39 economies in 11 waves over the 2002-23 period, with more than 530,000 respondents.[28] These surveys focus on Europe and include questions about voting in the last election. The Gallup World Poll covers 168 economies across annual surveys over the 2006-22 period.[29] More than 2.5 million observations are used to construct emotional portraits of younger and older societies (see Box 4.1).

IMMIGRATION

In the EBRD economies, people become more anti-immigration as they age (see the steep age gradients in Chart 4.6). These findings, which draw on the ESS, are consistent with those of a larger set of economies and echo the results of more starkly worded questions in the Integrated Values Survey, where older people are more likely to say they would not want immigrants or people of a different race as neighbours. These findings are also in line with other studies showing that aversion to immigration and support for anti-immigration political parties tend to be stronger among older citizens than people in other sociodemographic groups.[30]

CHART 4.6. In the EBRD regions, anti-immigration sentiment is stronger among older people and has been rising across the board



Source: ESS (2025) and authors' calculations.

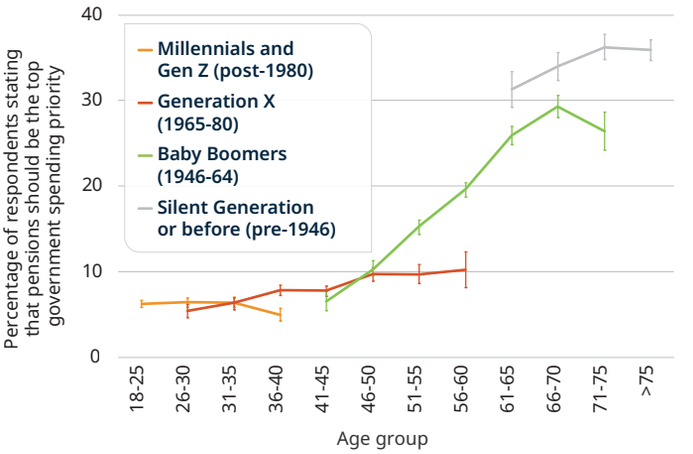
Note: See notes accompanying Chart 4.1. The sample is restricted to age-cohort cells with at least 1,000 respondents and representation from at least 75 per cent of countries within each regional group. Error bars represent 95 per cent confidence intervals.

[24] On the challenge of separating age, cohort and period effects (where the latter represent shifts in attitudes affecting all demographic groups at the same time, for instance, after crises or reforms), see Fosse and Winship (2019).
[25] See EVS (2022) and WVS (2024).
[26] See EBRD and World Bank (2007, 2011, 2016 and 2024).
[27] The results of the most recent SSA survey wave will be published in early 2026.
[28] See ESS (2025).
[29] See Gallup (2023).
[30] See Dotti (2024).

In the EBRD regions, anti-immigrant sentiment is also stronger among younger generations than earlier ones. Millennials and Gen Z are more opposed to immigration than Generation X were when they were the same age (see Chart 4.6). Differences by age and cohort, therefore, point in the same direction (see Charts 4.1 and 4.4).

In advanced European economies, age patterns are less pronounced (people do not appear to become more anti-immigration as they age) and, if anything, attitudes to immigration have been softening across the board. While predicting attitudinal shifts is difficult and subject to considerable uncertainty, if these trends were to continue, generational change could contribute to attitudes to immigration softening in advanced economies. This is in line with the findings of other studies, based on the ESS, which have also highlighted more favourable attitudes towards immigrants across cohorts in advanced Europe.[31] In contrast, anti-immigration sentiment could be expected to harden in the EBRD regions, reflecting both the effects of ageing (larger groups of society with more negative views on immigration) and generational shifts.

CHART 4.7. Older people prioritise spending on pensions



Source: EBRD and World Bank (2007, 2011, 2016 and 2024) and authors' calculations.

Note: This chart shows the percentage of respondents selecting pensions as their first priority for extra government spending by birth cohort across age groups, based on responses to "In your opinion, which of these fields should be the first and second priorities for extra government spending?" The sample includes all EBRD economies surveyed in at least three waves. Error bars represent 95 per cent confidence intervals. Only age-cohort cells with at least 1,000 respondents are included. Answers add up to 100 per cent over the subset of options included in all waves.

PENSIONS AND OTHER SPENDING PRIORITIES

Older respondents, predictably, prioritise spending on pensions more (see Chart 4.7). A similar pattern is observed for health spending. While health services are provided to the entire population, funds are disproportionately spent on older people. In the United Kingdom, recent research finds that healthcare spending increases after age 50 and escalates after age 70. Average hospital spending on an 89-year-old man is around three times average spending on a 70-year-old and almost nine times that on a 50-year-old.[32] Spending on people in their last year – and particularly in their last month – of life also accounts for a disproportionate share of overall healthcare spending.[33]

In contrast, support for spending on education, housing and job creation declines with age. Generational differences are generally more muted.

Older respondents are also more likely to favour increases in military spending.[34] Regression analysis drawing on surveys by the ISSP covering nine EBRD economies and 24 comparators shows that support for increases in military and defence spending is higher among older respondents (particularly those aged 65 and over), taking into account other individual characteristics and country of residence. Older respondents in the Integrated Values Survey and Gallup World Polls also tend to have greater confidence in the military.[35] This is also consistent with the findings of other studies. For instance, in the United States, younger people prefer cuts to military spending.[36] In Germany, recent research points to substantial willingness to pay

[31] See Bazan-Monasterio, Gil-Lacruz and Gil-Lacruz (2021), McLaren and Paterson (2019) and Schmidt (2021).
[32] See Kelly, Stoye and Vera-Hernandez (2015).
[33] See Luta et al. (2024) and Marie Curie (2025).
[34] This finding is based on an OLS regression of a binary indicator of support for increases in military and defence spending on age-group indicators (comparing respondents aged 65 and older with respondents aged 30 and younger), controlling for country fixed effects, with standard errors clustered at country level.
[35] See EVS (2022), WVS (2024) and Gallup (2023).
[36] See Kafura (2020).

for an increase in troop numbers, the establishment of a European army and an improved air defence system (in contrast, the reintroduction of compulsory military service does not enjoy public support). Here too, older respondents (as well as men) express a higher willingness to pay for these things, controlling for household income.[37]

Support for higher military spending has also increased in EU economies since the start of the war on Ukraine. For instance, Eurobarometer surveys have asked respondents what they would like the EU budget to be spent on from a list of 15 options, including defence and security, education, transportation, digital infrastructure, climate change mitigation, agriculture and rural development, regional investment and employment, and public health.[38] The share of respondents choosing defence and security as their top priority has doubled, on average (from 8 per cent to 16 per cent), between 2020 and 2025 in the 12 EBRD economies in the EU included in the survey and has increased from 7 per cent to 20 per cent, on average, in the 14 advanced EU economies. According to the results of a survey conducted by the European Council on Foreign Relations in 2025, more people would support than oppose increasing national defence spending in all EBRD economies in the EU included in the survey (for example, more than 70 per cent of respondents in Poland and around 56 per cent of participants in Estonia would support increasing national defence spending; in the latter, spending at least 5 per cent of GDP on defence enjoys more than 55 per cent support).[39]

The share of respondents regarding defence and security as the top spending priority has

doubled

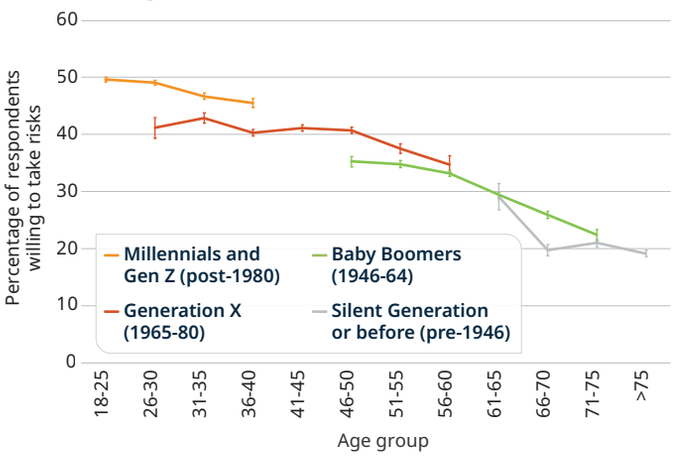
between 2020 and 2025 in EBRD economies in the EU

Differences by age and cohort are more muted when it comes to green attitudes. In advanced economies, younger cohorts are more likely to believe in prioritising the environment over growth. However, most emerging markets, including economies in the EBRD regions, do not display clear patterns by cohort or age.

TECHNOLOGICAL ADVANCES AND PRODUCTIVITY GROWTH

Older people tend to be less willing to take risks than younger people (see Chart 4.8). This pattern holds in both the EBRD economies included in the Life in Transition Survey and in Germany.[40] In contrast, self-reported willingness to take risks has risen across cohorts in the EBRD regions. Here, age and cohort patterns point in opposite directions: while risk tolerance falls with age in each cohort, risk-averse older cohorts are replaced by more risk-tolerant younger cohorts.

CHART 4.8. Older people are less willing to take risks, but risk-taking has increased across cohorts



Source: EBRD and World Bank (2011, 2016 and 2024) and authors' calculations.

Note: Based on responses to "Please rate your willingness to take risks, in general, on a scale from 1 to 10, where 1 means that you are not willing to take risks at all, and 10 means that you are very much willing to take risks" (coded as those selecting 6-10). The sample includes all EBRD economies surveyed in all three waves. Only age-cohort cells with at least 1,000 respondents are included.

[37] See Qari et al. (2024).
[38] See European Commission (2020 and 2025b).
[39] See Krastev and Leonard (2025).
[40] See EBRD and World Bank (2024).

This accounts for the relatively small changes in average propensity to take risks (see Chart 4.4), but the greater societal polarisation of preferences. Increased willingness to take risks among younger generations is not universal. In Germany, for instance, younger generations are also less willing to take risks, amplifying the effect of ageing.

Higher levels of risk aversion, in turn, are found to be correlated with slower adoption of new technologies (for instance, delaying the adoption of new technologies in agriculture or investments in green technologies).[41]

Similarly, in the post-communist economies in the EBRD regions, respondents tend to favour greater government ownership more as they age (see Chart 4.9, panel A). A similar age profile is observed among the younger generations, including among those coming of age after the start of the post-communist transition. Differences by age and across cohorts are much smaller, or absent, in other emerging markets (see Chart 4.9, panel B).

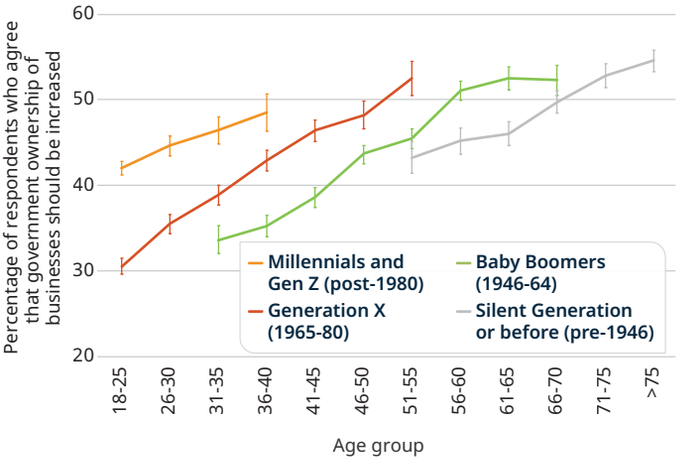
Support for greater government ownership has also increased across cohorts in the post-communist economies and in advanced economies.[42] While the magnitude of these shifts is relatively modest, in many economies, views on the merits of greater public versus private ownership are split fairly evenly, and small changes in prevailing preferences could shift the position of the median voter.

Older people tend to feel they know less about AI technology and have a less positive view of it.[43] The results of a Eurobarometer survey covering the EU-27 economies indicate that older people are also more likely to believe that AI will destroy more jobs than it creates.[44]

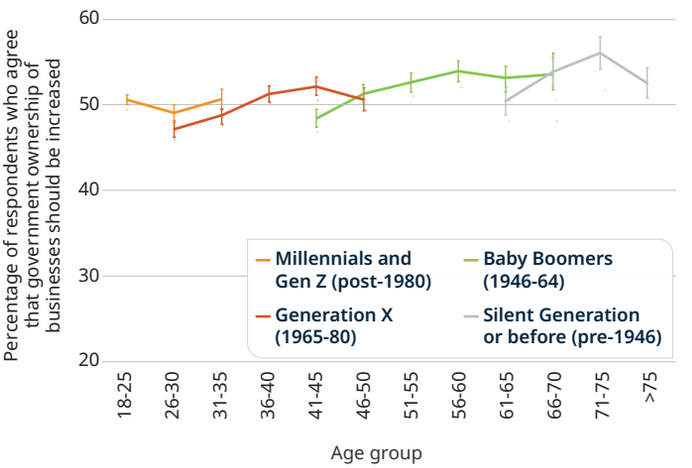
In sum, older societies are likely to be more risk averse and less focused on the pursuit of economic growth and technological advances. The effects of ageing could be offset in part by generational change, with younger generations being more entrepreneurial and keener on digital technologies.

CHART 4.9. Support for government ownership

Panel A. In the EBRD regions, support increases with age across cohorts



Panel B. Differences by age and across cohorts are much smaller, or absent, in other emerging markets



Source: EVS (2022), WVS (2024) and authors' calculations.

Note: This chart shows the percentage of respondents selecting 6-10 in response to the following survey question: "How would you place your views on this scale? 1 means you agree completely with the statement that private ownership of business should be increased; 10 means you agree completely with the statement that government ownership of business should be increased; and if your views fall somewhere in between, you can choose any number in between. Error bars represent 95 per cent confidence intervals. The sample includes 27 post-communist economies in the EBRD regions (Panel A) and 46 other emerging-market and developing economies (Panel B). Only age-cohort cells with at least 1,000 respondents and representation from at least 75 per cent of countries within each regional group are shown. Emerging-market and developing economies are as classified in the IMF's *World Economic Outlook* in April 2025.

[41] See, for instance, Hegnes Sendstad and Chronopoulos (2021), Meunier (2014) and Spiegel, Britz and Finger (2021).
[42] See EBRD (2020).
[43] See Ipsos (2024) and Stein et al. (2024).
[44] See European Commission (2025a).

RECONCILING POLARISING OPINIONS AND ATTITUDES IN A SOCIETY

The previous section notes substantial differences in attitudes and resulting policy preferences within societies when it comes to policy responses to ageing. Ageing itself can contribute to greater polarisation of policy preferences and beliefs, as the views of older and younger people become more extreme, while the relative weight of older voters in the electorate rises.

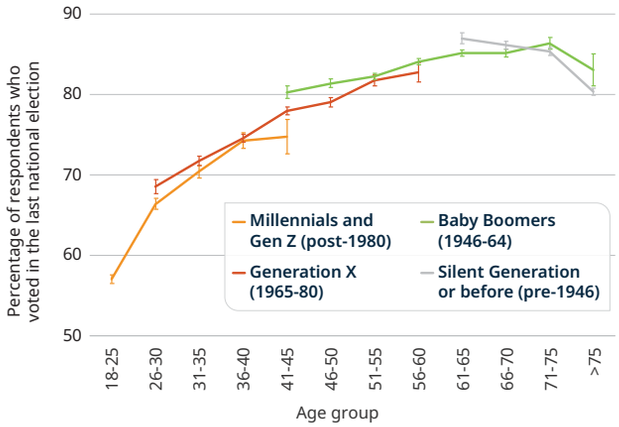
Governments and political institutions are facing an increasingly challenging job of reconciling these diverging views. This section examines some key challenges that demographic shifts create for governments in this respect.

DIFFERING PROPENSITIES TO VOTE: AN AGEING MEDIAN VOTER

Various mechanisms amplify the weight of the views of older people in a democratic process and, consequently, the impact of ageing on public choice. Eligible voters are older than general populations, as only adults (typically aged 18 and above) are eligible to vote.

Young people have a substantially lower propensity to exercise their right to vote (see Chart 4.10).[45] Propensity to vote has continued to decline somewhat across cohorts, pointing to growing political disengagement among younger people of recent generations. As a result, the median voter is about two years older than the median adult (both in the EBRD regions and in a global sample of all territories covered by the 2024 UN World Population Prospects dataset).[46] This roughly corresponds to the difference in age structure between, for example, Greece and Bulgaria (the latter being the oldest country in emerging Europe).

CHART 4.10. Young people are less likely to vote

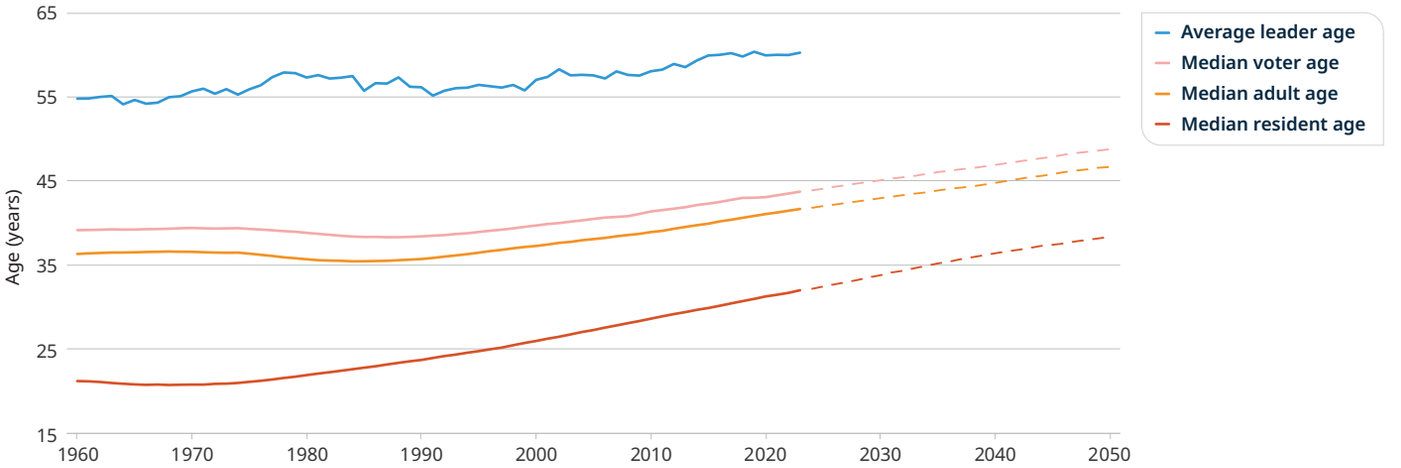


Source: ESS (2025) and authors' calculations.

Note: This chart shows average self-reported voting in the last national election by birth cohort across age groups based on responses to the following survey question: "Some people don't vote nowadays for one reason or another. Did you vote in the last [country] national election in [month/year]?" Error bars represent 95 per cent confidence intervals. The sample includes 18 economies in the EBRD regions and 16 advanced European economies over the 2002-23 period. Only age-cohort cells with at least 1,000 respondents and representation from at least 75 per cent of countries are shown.

[45] See, for example, Gallego (2010) and Holbein and Hillygus (2020) on lower turnout among young people.
[46] See UNDESA (2024).

CHART 4.11. **Over-representation of older people: political leaders and median voters are much older than the median resident**



Source: V-Dem (2024), UNDESA (2024), ESS (2025) and authors' calculations.

Note: Simple averages across 166 to 175 economies for average leader age and across 237 economies for median resident, adult and voter age. Median resident age refers to the median age of the total population in the average economy. Median adult age refers to the median age of the population aged 18+ in the average economy. Median voter age corresponds to the median adult age weighted by age-specific voting propensity, which is estimated on a country-specific basis for the subset of countries included in the ESS and interpolated linearly between available data points, where years before the first available year use the earliest year's value and years after the last available year use the latest year's value. For countries not in the ESS, age-specific voting propensity is imputed using the cross-country average for each specific year. "Leader" refers to the head of state or head of government, whoever is more powerful, as at 31 December of each year. The head of government is chosen if the two are equally powerful. Projections are based on the UN medium variant scenario.

The median voter is about
two years
older than the median adult

Globally, the median adult in the average economy is 42, but the median voter is approaching the age of 44 based on age-specific propensities to vote derived from the ESS (see Chart 4.11). Demographic projections based on the UN medium variant scenario (see Chapter 1) put the median voter at age 49 by 2050.[47] In the EBRD regions, while the median adult is 43, the median voter is 45 (up from 39 in 1960) and could be 50 by 2050. While the median voters in the EBRD regions and advanced European economies are currently 20 and 13 years away from retirement, respectively, that gap could shrink to 15 and 8 years by 2050.

The political influence of ageing populations could also be strengthened by non-linearities in electoral systems (such as the first-past-the-post system in the United Kingdom, which could amplify the effects of small shifts in voter demographics), as well as the uneven geography of ageing. As highlighted in Chapter 1, while many EBRD economies are experiencing national-level ageing and, in some cases, population shrinkage, these trends are most pronounced in rural and less populous areas. In contrast, urban centres often continue to grow or stabilise, supported by both internal migration from smaller municipalities and international migration. Minimum thresholds in regional representation (such as

[47] See UNDESA (2024).

In the EBRD regions, the median voter is

45

(up from **39** in 1960) and could be **50** by 2050

a minimum number of seats per electoral constituency) can also result in an over-representation of ageing, depopulating areas that retain representation in parliament above the levels that their current population levels would otherwise imply. These effects could skew the national vote more towards the needs of older voters, rather than investments that lay the foundations for future growth.

MANY BELIEFS, ONE VOTE

People have a complex set of individual policy preferences when it comes to spending priorities, attitudes to immigration, the balance of productivity growth and economic risk, and many other issues. For instance, people can be culturally conservative and economically liberal, or vice versa. With enough granularity, each set of preferences may be unique. Yet, individuals only have one vote to cast, thereby delegating their preferences to governments. In addition to individuals' demand for various policies, the ways in which individuals prioritise and reconcile their preferences with one vote matter, as does the supply of politicians offering policy packages. The next subsections look at these issues in turn.

The analysis that follows examines voting patterns by combining the large-scale ESS household survey, which includes questions on self-reported voting in the last election, with information on the stated policy priority of each party derived from the Manifesto Project Dataset (MPD).[48] The resulting dataset covers more than 440,000 individuals across 16 economies in the EBRD regions and 16 advanced economies over the 2002-22 period.[49]

Analysing votes as opposed to stated preferences has several advantages. It mitigates concerns about social acceptance bias in survey questions (for instance, people may be reluctant to say that they are unwilling to have immigrant neighbours). It also provides insights into which voter preferences dominate when voters need to reconcile their complex beliefs with a single vote. For instance, an individual may support immigration and support reducing the generosity of pensions and other welfare benefits, but may be forced to choose between an anti-immigrant, anti-welfare party and a party supportive of both immigration and a large welfare state.

Self-reported voting in the ESS aligns well with official election results. Correlations are around 0.95 when comparing the largest party's share of the vote in the ESS (self-reported) with official results. In the EBRD regions, for the median election, the difference between the self-reported share of the vote of the largest party and the official result is around 2.2 percentage points (1.4 percentage points in other economies). For 76 per cent of elections in the EBRD regions (and 88 per cent of elections elsewhere), the self-reported share of the vote of the largest party is within 5 percentage points of the official result. Discrepancies could, in part, reflect missing responses in the ESS and/or survey fieldwork spanning several elections.

The MPD uses text analysis to code and quantify the statements that parties make in their manifestos. The analysis seeks to identify key issues that the party candidate regards as important. In particular, the MPD first turns election manifestos into thousands of single-issue "quasi-sentences", each containing one

[48] See Manifesto Project Dataset (2024).
[49] See also Moriconi, Peri and Turati (2022 and 2025) on links between immigration and voting using merged ESS-MPD data.

statement. Each sentence in a manifesto can contain several quasi-sentences. Native-language experts then assign each quasi-sentence to one – and only one – of 56 policy categories. The relevance of a topic is then calculated as that topic's share of all quasi-sentences in a manifesto.

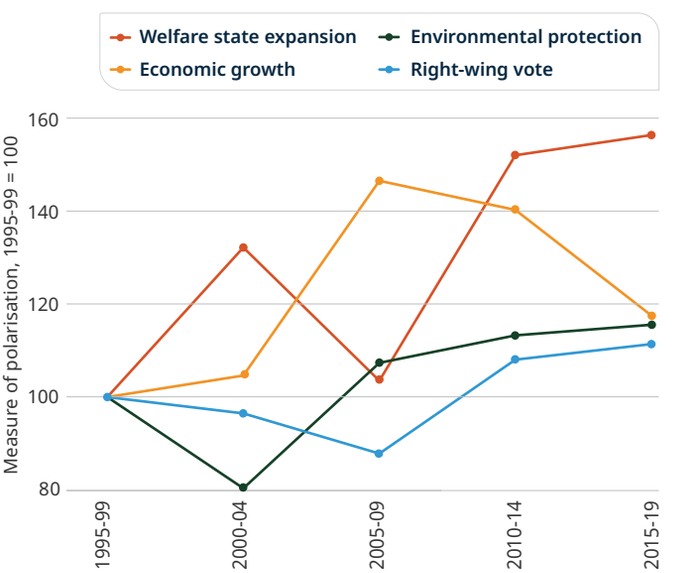
Mentions can be positive/favourable or negative/unfavourable. Take, for instance, the following sentence from the 2014 manifesto of BSP Left Bulgaria (a centre-left electoral alliance led by the Bulgarian Socialist Party): "The role of the BSP is to protect labour, to provide conditions for economic growth and to improve social policy". It contains three quasi-sentences: (1) "The role of the BSP is to protect labour" coded as positive for the category "labour groups", (2) "to provide conditions for economic growth" coded as positive for "economic growth" and (3) "and to improve social policy" coded as "welfare state expansion". A further example of a positive statement on immigration reads: "Türkiye showed its humanitarian aid reflex by implementing an 'Open Door' policy and became the country that accepted the highest number of asylum seekers in the world" (Justice and Development Party, 2018 election, Türkiye). Meanwhile, a negative statement on immigration reads: "The Syrian refugee crisis has become a serious problem not only because of the humanitarian tragedies it creates, but also because of the economic costs it imposes on our country" (Republican People's Party, 2018 election, Türkiye). The following statement is a further example of a statement on welfare state limitation from the Liberals' Movement, Lithuania (2012 election): "No wastage of funds on benefits [...] Some of the compensation and benefits will be paid as income tax credits. This will make people want to work, even if they are on benefits."[50]

Based on this analysis, each party in each election gets an MPD score of 0 to 100 for each policy issue. For topics on which both positive and negative mentions are available, the score ranges from -100 to 100 and takes into account the balance of positive and negative statements.

While the average implied vote on various issues has not changed much from the late 1990s to the late 2010s, the vote has become considerably more polarised in many areas. Polarisation, for the purposes of this chapter, is measured as the difference between the 20th and 80th percentiles of the vote. For instance, the distribution of the political parties on a left-right scale in the 2017 French presidential election would see the Socialist Party falling into the 20th percentile and the Republicans falling into the 80th percentile.

Generally speaking, such polarisation manifests itself more strongly in the difference between the 20th and the 80th percentiles of the vote when it comes to each issue in each economy. For instance, the distance between the 20th and 80th percentiles of the votes of selected parties on the right-left scale, quantified as a composite measure of left-right political positioning that combines parties' positions across multiple policy issues, increased by around 11 per cent between 1995 and 2019 (see Chart 4.12). In other words,

CHART 4.12. Increasingly polarised vote

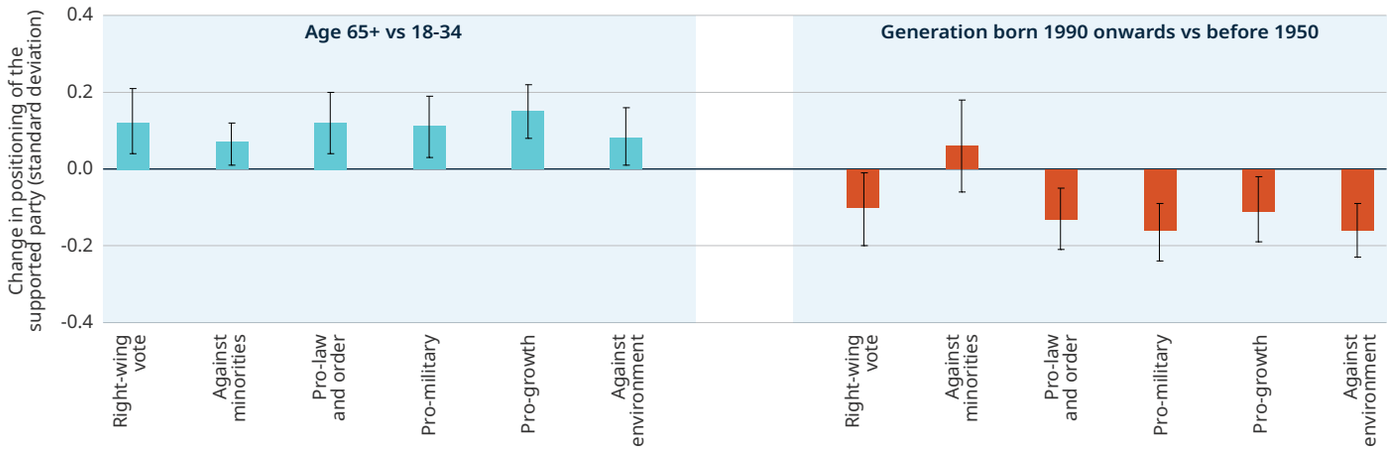


Source: Manifesto Project Dataset (2024) and authors' calculations.

Note: This chart shows measures of polarisation: the simple average across countries of the differences in the MPD score of party manifestos corresponding to the 20th and 80th percentiles of the vote in a given election on each dimension. The right-wing vote is based on the Right-Left (RILE) Index of party ideology, a composite measure of left-right political positioning. The sample includes 16 economies in the EBRD regions and 16 advanced economies.

[50] See Manifesto Project Dataset (2024).

CHART 4.13. **As societies age, they tend to become more conservative and less accepting of pension reforms and risks taken in search of growth – offset by generational change**



parties on the far right and far left ends of the political spectrum started to receive more votes. Views on the welfare state also exhibited much greater polarisation over time, while views on the value of economic growth became considerably more polarised, particularly around the time of the 2008-09 global financial crisis. Environmental protection is another area that saw considerable polarisation. While polarisation trends are not universal, they appear to be pronounced in areas of direct relevance to societies' response to ageing.

The regression analysis that follows aims to disentangle the ageing and cohort effects in people's vote that, combined, may underpin the observed polarisation of views. To this end, it examines how the salience of a given topic (such as economic growth) in the manifesto of the party an individual voted for relates to the individual's age and birth cohort, controlling for individual-level characteristics (such as gender and education) and country-election-year fixed effects (to take into account various characteristics of the local political landscape at the time). The results are summarised in Chart 4.13, which shows the estimated coefficients for people aged 65+ relative to those aged 18-34, expressed as a fraction of the standard deviation of the dependent variable. The chart also shows the cohort effects of the youngest generation (those born

Source: ESS (2025), Manifesto Project Dataset (2024) and authors' calculations.

Note: This chart shows standardised coefficients from OLS regressions of policy priorities (MPD scores) of the parties that respondents voted for in the last election on age (at the time of the election) categories (18-34 (used as the base category), 35-49, 50-64 and 65+) and birth cohorts, controlling for gender, education, employment status, urban/rural locality and country-election-year fixed effects. Given the relatively short time series for which ESS and MPD data can be combined, people of different birth cohorts are not observed across all age groups (for instance, those born in the 1990s are only observed young, while those born in the 1950s are only observed at later ages). The regression, therefore, uses subsets of the variation across age groups and cohorts. Dummy variables for generations differ from the ones used above. The right-wing vote is based on the RILE Index of party ideology, a composite measure of left-right political positioning. The sample includes 16 economies in the EBRD regions and 16 advanced economies with elections between 1999 and 2021. Error bars represent 95 per cent confidence intervals based on standard errors clustered at country level.

after 1990) compared with the oldest generation (those born before 1950). Table 4.1 presents the full set of results for cohort and age categories. While age and time of birth are closely linked in this dataset, the elections span almost two decades and the analysis tracks people born around the same time as they age, as well as people of the same age born at different times. With many economies included in the dataset, it is also possible to control for country-year fixed effects, thus isolating any factors affecting all votes in a given election.

The vote of older people tends to be significantly more right wing, favouring parties that run on anti-minority platforms, prioritise law and order and the military, and are more supportive of economic growth and less supportive of environmental protection. These effects are statistically significant at conventional levels. Their magnitude is meaningful although relatively modest, ranging from 7 per cent to 15 per cent of the standard deviation of the views on a given issue.[51] In terms of the right-wing vote, the estimated difference between those aged 65+ and 18-34 roughly corresponds, for instance, to

TABLE 4.1. As societies age, they tend to become more conservative and less accepting of pension reforms and risks taken in search of growth – offset by generational change

Dependent variable:		(1) Right-wing vote	(2) Against minorities	(3) Pro-law and order	(4) Pro-military	(5) Pro-growth	(6) Against environment
Age	35-49	0.026*	0.017	0.027	0.029	0.034*	-0.013
		(0.014)	(0.019)	(0.018)	(0.018)	(0.018)	(0.015)
	50-64	0.046*	0.035*	0.049*	0.032	0.056**	0.022
		(0.023)	(0.018)	(0.027)	(0.025)	(0.027)	(0.026)
	65+	0.122***	0.068**	0.116***	0.110***	0.150***	0.083**
		(0.041)	(0.026)	(0.040)	(0.039)	(0.034)	(0.036)
Born	1950s-1960s	-0.080***	-0.043***	-0.066**	-0.049	-0.065**	-0.045***
		(0.023)	(0.013)	(0.028)	(0.031)	(0.028)	(0.012)
	1970s-1980s	-0.047	-0.035	-0.052***	-0.034	-0.079**	-0.066***
		(0.030)	(0.038)	(0.017)	(0.021)	(0.037)	(0.012)
	1990s or after	-0.105**	0.059	-0.130***	-0.165***	-0.105**	-0.160***
		(0.045)	(0.059)	(0.037)	(0.039)	(0.044)	(0.034)
R-squared		0.013	0.002	0.009	0.008	0.008	0.013
Observations		250,185	224,423	250,185	248,993	250,185	250,185
Fixed effects		Country-election-year	Country-election-year	Country-election-year	Country-election-year	Country-election-year	Country-election-year

Source: ESS (2025), Manifesto Project Dataset (2024) and authors' calculations.

Note: See notes accompanying Chart 4.13. Regressions include categories for age at the time of the election, birth cohorts, individual-level characteristics (gender, education, employment status, urban/rural locality) and country-election-year fixed effects. Standard errors in parentheses are clustered at country level. ***, ** and * denote statistical significance at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

[51] See Moriconi, Peri and Turati (2022 and 2025).

half the difference between the 2019 election manifestos of the Polish People's Party, a conservative political party in Poland, and the Civic Coalition, the political alliance currently in power. Similarly, in Hungary, looking at the differences between the salience of law and order in the voting patterns of those aged 65 and above and 18- to 34-year-olds points to a magnitude equivalent to around half the difference (in the 2018 election) between the ruling Fidesz party and Together, a social-liberal political party formed by former Prime Minister Gordon Bajnai.

Generational change leans strongly against the effects of ageing. Younger generations tend to vote more left wing, for parties running on pro-minority platforms, those less likely to emphasise law and order or the military, and those more supportive of the green agenda and less focused on economic growth. All of these effects, apart from that on attitudes towards minorities, are statistically significant. The largest estimated effect is that of the new generation's stance on the green economy.

Where average party positions are concerned, the effect of ageing is largely offset by generational change. To what extent generational change may continue to offset the impact of ageing on prevailing political views in future is hard to predict.[52]

At the same time, the combination of significant effects of ageing and generational change pulling in opposite directions has contributed to the observed polarisation of the vote. This polarisation along generational lines can be large. For instance, while 64 per cent of voters aged 65 and above are estimated to have voted for the Conservatives in the 2019 UK election, this was only the case for 19 per cent of those aged 18 to 24 (based on estimates by Ipsos).[53]

AGEING LEADERS

Once individuals cast their votes, the leaders they elect are in charge of steering policymaking. Like the voters who elect them, leaders, too, have been ageing.

Leaders tend to be older than the population that elects them. Younger people are under-represented in parliament, more so than women.[54] In part, this could reflect the minimum age requirements to run for office, which are often higher than those to vote. For instance, many economies, including in the EBRD regions, require presidential candidates to be at least 30, 35 or 40, and candidates to be at least 21 or 25 (or, less commonly, even 35 or 40) to become a member of parliament (based on the Inter-Parliamentary Union Parline database).[55] In part, voters prefer experience and tenure when selecting candidates.[56] In democracies, the age profile of campaign finance donors may also make a difference. In the United States, for example, the median donor is 66 years old, and they donate more to candidates who are closer to them in age.[57]

On the one hand, it is natural for leaders to age as populations age. People prefer to vote for members of their party who are closer to themselves in age.[58] It also takes longer to acquire the necessary knowledge and experience in a modern economy. Indeed, innovators have also aged: recent work relying on data on Nobel Prize winners and great inventors finds that great achievements in knowledge are produced by older innovators today than they were a century ago, with the age at which noted innovations are produced having increased by around six years over the 20th century.[59]

On the other hand, the ageing of leaders may result in over-representation of the views of older voters, as the "inner values" of leaders may relate more closely to those of their birth cohort, rather than their median voter, diminishing society's dynamism and appetite for reform.[60] Older leaders tend to cater to older voters. For instance, in a study of US Congress between 2005 and 2009, older members were more likely to introduce legislation dealing with less salient senior issues (which receive less media attention), such as continuing

[52] See also Calvo, Pons and Shapiro (2025). Note, too, that the short time span of the dataset allows for only partial separation of ageing and cohort effects. The impact of ageing remains similar in estimations where time-of-birth variables are not included.
[53] See Skinner and Mortimore (2019).
[54] See Stockemer and Sundstrom (2022).
[55] See Inter-Parliamentary Union (n.d.).
[56] See Magni-Berton and Panel (2020) and Rehmert (2022).
[57] See Bonica and Grumbach (2025).
[58] See Webster and Pierce (2019) and Sevi (2021).
[59] See Jones (2005).
[60] See Goodhart and Pradhan (2020).

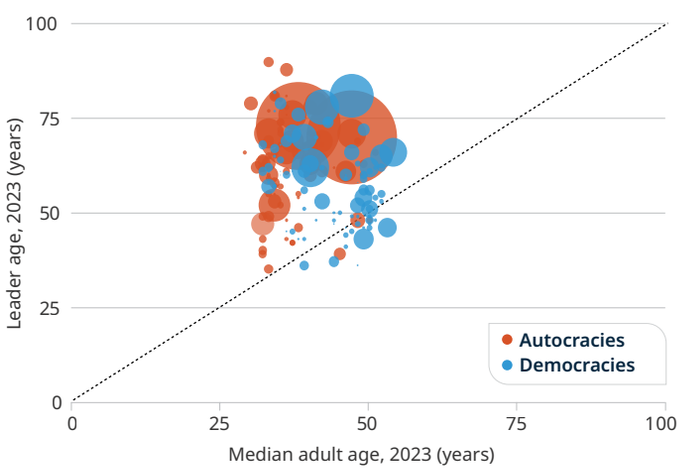
education, elder abuse and nursing-home regulation.[61] This makes it rational for older voters to tend to prefer older politicians, as they (correctly) expect them to better defend their own interests.[62]

Older leaders may also be more risk averse and less supportive of innovation. Recent research finds that chief executive officer (CEO) age is negatively related to risk-taking behaviour and innovation, though it is positively related to financial performance.[63] The disruptiveness of innovations also declines with inventor age.[64]

At the same time, the young may feel increasingly disillusioned with politics, a trend seen in global voting patterns. Indeed, the young are less likely to vote if candidates are older.[65] This disengagement could exacerbate intergenerational conflict.[66] To trace the age of leaders over time, the following analysis relies on a global country-year dataset on leader characteristics, combining information from V-Dem 14 and primary data collection to determine the age of the figure that holds the highest executive authority and wields de facto control over political decision-making in the country for each year.[67] The dataset covers 175 economies, with some series stretching over the 1789-2023 period (coverage varies by country).

In the average economy globally, the leader is now around 60 years old, about 19 years older than the median adult (see Chart 4.11). This gap between the age of leaders and the age of an average adult is particularly pronounced in younger economies (typically in Africa; see Chart 4.14). For instance, in Côte d'Ivoire and the Republic of the Congo, leaders are more than 45 years older than the median adult. The gap is also larger in autocracies (26 years on average) than in democracies (12 years; see Chart 4.15, which uses the V-Dem Electoral Democracy Index to distinguish between democratic and autocratic regimes).[68] In part, this reflects the fact that 47 per cent of regimes classified as autocracies using V-Dem data are found in Africa, a continent that still has relatively young populations.

CHART 4.14. Most leaders are older than their adult populations – more so in younger economies and autocracies



Source: V-Dem (2024), UNDESA (2024) and authors' calculations.

Note: Economies are classified as autocracies if they have a V-Dem Electoral Democracy Index of less than 0.5. Median adult age refers to the median age of the population aged 18+. The 45-degree line is shown. Bubble size denotes the size of the population aged 18+ in 2023.

[61] See Curry and Haydon (2018).
[62] See Magni-Berton and Panel (2020).
[63] See Han and Jo (2024).
[64] See Kaltenberg, Jaffe and Lachman (2023).
[65] See Castanho Silva (2024) and Pomante and Schraufnagel (2015).
[66] See Esping-Andersen and Sarasa (2002), Hess, Nauman and Steinkopf (2017), Kotlikoff and Burns (2012) and Pickard (2019).
[67] See V-Dem (2024).
[68] See V-Dem (2024).

Leaders of countries are, on average, older than the CEOs of large corporations. The age of CEOs of Fortune 500 companies averaged 59 in 2024,[69] while the age of CEOs of S&P 500 companies averaged 54 years in 2022. This compared with 60 years for national leaders.[70] While the age of S&P 500 CEOs at appointment also increased over time, the increase was less pronounced than that of national leaders.

In democracies, the gap between the average age of leaders and adults has remained broadly stable over time. However, in autocracies, leaders have been ageing faster than their populations (see Chart 4.15). They are now almost a generation older than the median adult (26 years older in 2023, up from 19 years in 1960). In democracies, the gap has fluctuated between 20 and 15 years over this period – if anything, trending down slightly.

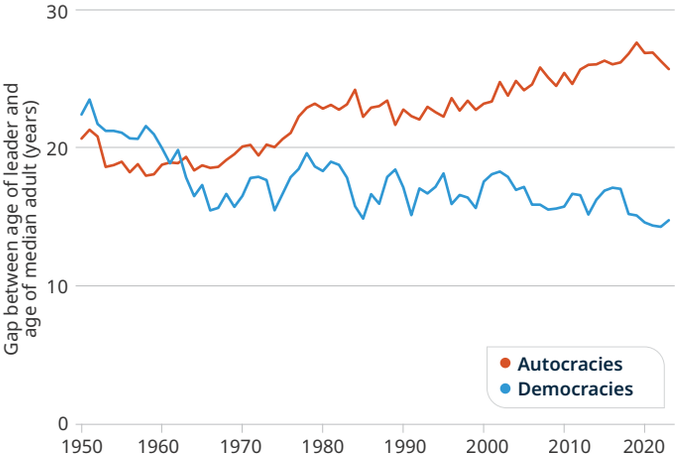
This largely reflects the longer average tenures of autocrats, in part on account of improvements in health and longevity (see Chart 4.16).[71] The average tenure in autocracies has risen from about 4 years in the 1910s to more than 10 years in the 2020s, and the increase in the length of tenures has been more pronounced than the increase in the age of the leader on election. In contrast, as many democracies implemented term limits for heads of state in the post-Second World War period, tenures have come down from a peak of more than six years in the 1940s to around four years in the 2020s.

The average tenure in autocracies has risen from about **4 years** in the 1910s to more than

10 years

in the 2020s

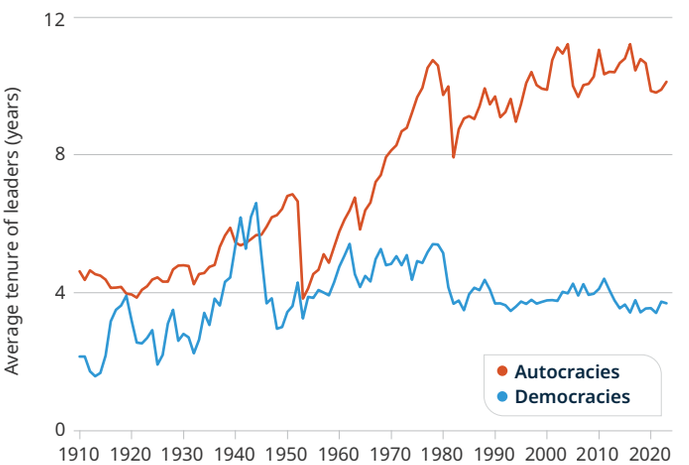
CHART 4.15. In autocracies, leaders are ageing even faster than their populations



Source: V-Dem (2024), UNDESA (2024) and authors' calculations.

Note: Economies are classified as autocracies if they have a V-Dem Electoral Democracy Index of less than 0.5. Simple averages of 163 to 175 economies. Median adult age refers to the median age of the population aged 18+.

CHART 4.16. In autocracies, tenures have also lengthened



Source: V-Dem (2024), UNDESA (2024) and authors' calculations.

Note: Economies are classified as autocracies if they have a V-Dem Electoral Democracy Index of less than 0.5. Simple averages of 120 to 175 economies.

[69] See Madison Trust Company (2024).
[70] See SpencerStuart (2023).
[71] Other factors, such as better control of information, may have also contributed. See, for instance, Guriev and Treisman (2019) and Friebel and Seabright (forthcoming).

In autocracies, increases in leader age and tenure in office appear to weigh on economic outcomes. Drawing on a large sample of more than 400 dictators in 76 economies, evidence shows that a one-year increase in dictator age decreases economic growth by 0.12 percentage point, and this relationship holds when looking specifically at random leadership transitions due to natural deaths or terminal illnesses.[72] Longer effective (as opposed to statutory) tenures have, in turn, been associated with lower growth, higher inflation and deteriorating institutional quality (and this effect is especially pronounced in young states in Africa and the Middle East).[73] The negative effects of rising tenures on growth in autocracies could reflect the impeded flow of information needed to support decision-making, as well as changes in the personality of dictators, among other factors.[74] Long tenures may also make eventual transfers of power more difficult.[75]

A one-year increase in dictator age decreases economic growth by

0.12 percentage point

CONCLUSIONS AND POLICY IMPLICATIONS

The analysis in this chapter underscores the fact that when it comes to policy responses to demographic change (immigration, pension reform and technological advances to support productivity growth), societies can be strongly opposed to reform or views can be deeply divided. With the rising polarisation of views and complex sets of preferences captured in a single vote, political systems may become less stable and predictable, even where shifts in median preferences are relatively modest. Yet, in the absence of reforms, fiscal pressures from ageing, amid unchanged entitlements for workers and pensioners, may become unsustainable.

Reform packages in response to demographic change inevitably need to take into account differences in prevailing attitudes and beliefs across society and the political economy of public choice. For instance, some societies may become relatively more open to immigration, while others may embrace longer working lives or opt to rely more on technological advances.

Prevailing attitudes and beliefs evolve over time. However, it is far from obvious that as societies age, they warm politically to the policy responses that can reduce the economic and fiscal costs associated with ageing. If anything, the findings of this chapter indicate that, for some, the opposite may be true – reflected, for instance, in rising anti-immigrant sentiment in the EBRD regions. In this light, there appears to be no benefit to postponing reforms of pensions, healthcare systems, immigration or frameworks for innovation.

Pension reforms could be frontloaded, but phased in over long time periods, possibly with grand-fathering clauses for current voters, to improve their chances of being passed and implemented. Recent research focusing on the 2012 increase in the Dutch statutory retirement age from 65 to 67, for example, highlights how incremental steps in the reform process, such

[72] See Jong-A-Pin and Mierau (2022).
[73] See Papaioannou and van Zanden (2014).
[74] Ibid.
[75] See Ganesh (2025).

as starting by phasing out early retirement schemes, appear to have helped the government to prepare the public for the larger reform.[76] Opt-out clauses may be considered as long as they are not designed as a default option and require an explicit request. Voluntary late retirement can be incentivised by sharing some of the associated cost savings with individuals who choose to work longer. Some economies (including, for instance, Bulgaria, Croatia, Czechia, Estonia, Greece and the Slovak Republic in the EBRD regions) have explicitly linked future increases in the retirement age to changes in life expectancy.

While older respondents have displayed relatively strong resistance to raising the retirement age, public discussion has helped raise support for such reform among virtually all groups, likely pointing to a collective learning process in which respondents gradually update both their expectations and preferences on the retirement age in response to new information and communication. The results also underline the usefulness of reliable and easily understandable information on the financial position of the pension system. Young respondents, in particular, appear to have rather naive expectations as to their possibilities for early retirement, possibly holding back support for reform. The issuance of independent reports also helps raise public awareness.[77] Reforms aimed at lengthening working lives should further acknowledge differences in the age-friendliness of occupations, as discussed in Chapter 3.[78]

More generally, recent work by the IMF highlights how communication and information strategies can shift policy views, especially when forged in a context of trust.[79] Randomised survey experiments in different policy areas and in countries at different stages of development show that providing information to populations can correct misperceptions about policies and increase support for reforms. Raising awareness on the need for reform can often help, and explaining the effect of policies and how they work appears critical to increasing the social acceptability of reform. At the same time, a lack of trust in the parties involved in the reform and in governments' ability to adequately implement policies and mitigating measures can still undermine social acceptability. Conducting and disseminating policy research by independent, non-partisan institutions has often been key to raising awareness about the need for reform and to building consensus.[80]

Some economies have considered lowering the voting age in an attempt to correct for age-related political biases (as seen, for instance, in the United Kingdom's recent initiative to lower the voting age to 16). Its effect is, however, likely to be modest compared with the ageing of the median voter.

Given limited support for large-scale immigration, migration policies could help to ensure that arriving migrants are matched well to the skills shortages and labour-market needs of the recipient economy (see Chapter 3). Addressing potential congestion from migration also requires prioritising public investment in infrastructure, housing, and health and education services. Building public support and social acceptability for such policies is crucial, as political backlash has become increasingly common, even in cases where the economic effects of immigration are estimated to be positive and substantial.[81]

Popular and unpopular reforms may also need to be combined in tailored packages, yielding something for all groups (with complementary policies and compensatory measures).[82]

Demographics also affect the "emotional state" of all societies. Younger societies may be more innovative and risk taking, but also angrier, as discussed in Box 4.1. In these societies, strengthening the quality of education (the key spending priority for the young) and providing jobs for new entrants to the labour market will be crucial to maintaining the social contract.

[76] See Parlevliet (2015).
[77] Ibid.
[78] See Chapter 3 and Sauré et al. (2025).
[79] See IMF (2024).
[80] Ibid.
[81] See Albrizio et al. (2024), Alesina and Tabellini (2024), Dustmann and Preston (2019), Mayda (2006) and IMF (2025).
[82] See IMF (2025).

BOX 4.1.

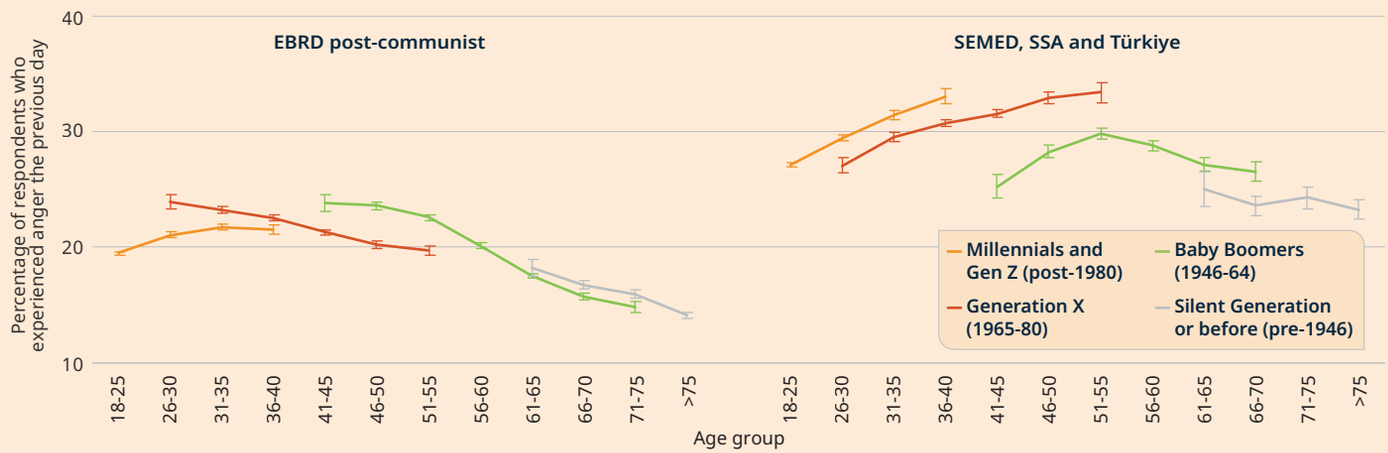
A PORTRAIT OF EMOTIONS IN OLD AND YOUNG SOCIETIES

Like attitudes and beliefs, the emotions that people frequently experience also vary between and within societies, including by age and cohort. Demographic shifts can, therefore, affect society in fundamental ways at a primary emotional level, influencing how people interact with each other, how they think and how they feel. This box presents a "portrait" of emotions in the EBRD regions and beyond, drawing on the Gallup World Poll, a large annual survey containing more than 2.5 million observations across 168 economies over the 2006-22 period.[83]

As life satisfaction has increased in the post-communist economies in the EBRD regions (as documented in previous *Transition Reports*),[84] negative emotions such as anger, sadness and worry have become less common. More recent generations are less likely to have experienced, say, anger the day before the survey than previous generations at the same age (see Chart 4.1.1; on average, around 23 per cent of respondents report having experienced anger on the day prior to the survey). The share of respondents saying they have experienced stress, while having increased somewhat, also remains lower than in many other emerging markets and advanced economies.

In contrast, negative emotions (particularly sadness, stress and worry) have been on the rise in many emerging markets (see Chart 4.1.2). "Younger" economies in the EBRD regions – particularly in SEMED and SSA – also stand out in terms of higher and/or rising levels of anger, sadness, stress and worry. In SEMED, SSA and Türkiye, anger was experienced by around 29 per cent of respondents on a given day in 2022.[85] High youth unemployment, perceptions of declining standards of

CHART 4.1.1. Negative emotions have become less common across cohorts in the EBRD's post-communist economies, unlike in SEMED, SSA and Türkiye



Source: Gallup (2023) and authors' calculations.

Note: The sample is restricted to age-cohort cells with at least 1,000 respondents and data from at least 75 per cent of economies in each regional group. The EBRD post-communist sample includes 28 economies. SEMED, SSA and Türkiye comprise Benin, Côte d'Ivoire, Egypt, Ghana, Iraq, Jordan, Kenya, Lebanon, Morocco, Nigeria, Senegal, Tunisia, Türkiye and the West Bank and Gaza. Error bars represent 95 per cent confidence intervals.

[83] See Gallup (2023).
[84] See EBRD (2016 and 2023).
[85] See Gallup (2023).

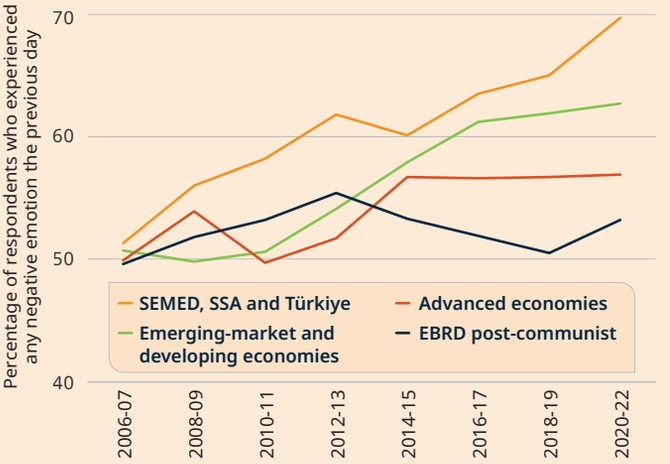
living, corruption and associated dissatisfaction and anger are often seen as some of the factors behind the 2011 Arab Spring protests.[86] The share of people reporting anger, sadness, stress and worry has also been rising among younger generations (as can also be seen in Chart 4.1.1 on anger). Mirroring these trends, the share of respondents reporting enjoyment has been declining.

These patterns are consistent with the evolution of prevailing emotions across the lifecycle. Chart 4.1.3 illustrates the likelihood of experiencing negative emotions on a given day as a function of age using a flexible cubic spline specification, which allows for non-linearities in the link between age and emotions, controlling for gender, education, urban/rural locality and fixed effects for combinations of economy of residence and year of the survey.

The estimates indicate that while younger people are more likely to experience anger than older people, older respondents are more likely to report worry and sadness. Stress typically peaks in middle age, but has been rising across cohorts. People are less likely to report enjoyment as they age. In sum, ageing societies may be more docile, but also sadder, more worried and, as documented here, more risk averse, while societies with younger populations may be less polarised, but angrier.

Negative emotions such as anger and sadness have been associated with disillusionment with the political process and the rise of populism. For instance, recent work demonstrates that negative affect – measured using self-reported emotions in surveys, as well as automated text analyses of Twitter/X data – can predict individual-level support for populist politicians at general elections in Europe and was a predictor of district-level support for Brexit in the 2016 referendum in the United Kingdom. It was also found to be associated with higher county-level vote shares for Donald Trump in the 2016 and 2020 US presidential elections.[87]

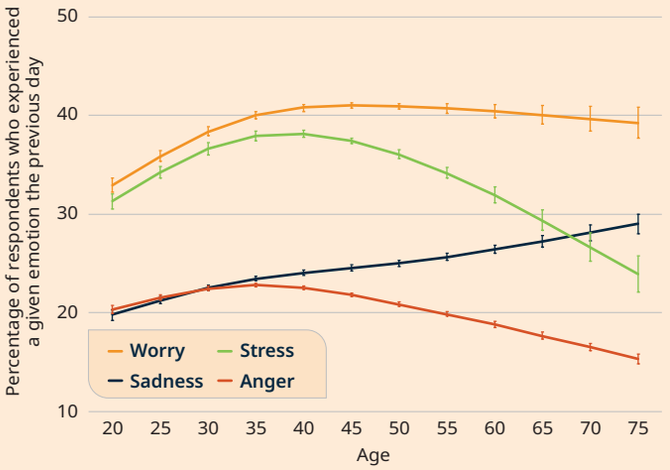
CHART 4.1.2. Negative emotions have been on the rise in many emerging markets



Source: Gallup (2023) and authors' calculations.

Note: This chart shows the percentage of respondents who experienced any negative emotion the day before the survey (sadness, worry, stress or anger) by year and regional group. The sample is balanced across years within each regional group and contains 24 advanced economies, 25 post-communist economies, 49 emerging markets and developing economies, and 10 economies in SEMED, SSA and Türkiye. Advanced, emerging-market and developing economies are as classified in the IMF's *World Economic Outlook* in April 2025.

CHART 4.1.3. Younger people are more likely to experience anger, while older people tend to be more worried



Source: Gallup (2023) and authors' calculations.

Note: This chart shows adjusted predictions by age from OLS regressions of binary indicators of whether respondents experienced anger, sadness, stress or worry the previous day. Regressions include individual-level characteristics (gender, highest level of education, urban/rural locality) and economy-year fixed effects. Age enters the regression using restricted cubic splines, with four knots placed at equally spaced quantiles of the age distribution. The sample covers 168 economies over all available years. Error bars represent 95 per cent confidence intervals based on standard errors clustered at economy level.

[86] See, for instance, Ianchovichina (2018) and Arampatzi et al. (2015).
[87] See Ward et al. (2025).

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05

Structural reform

This chapter presents the latest assessment of transition progress in the EBRD regions, looking at whether economies are competitive, well governed, green, inclusive, resilient and integrated. This year, the assessment includes Iraq for the first time. While Iraq's scores are lower, on average, than those of the other economies covered, it fares relatively well on the green and resilient qualities. This chapter also introduces the Bank's assessment of various subsectors within the integrated quality. While country scores for certain areas of integration tend to be closely aligned, this analysis reveals significant outliers, where the assessment of some areas of integration may be more positive or negative than the overall assessment of the integration quality would suggest.

AT A GLANCE

This chapter looks at whether economies are competitive, well governed, green, inclusive, resilient and integrated

When it comes to the individual qualities of a sustainable market economy, the gap between Iraq and other EBRD economies is larger for governance and competitiveness than for other transition qualities

Of the six transition qualities, Iraq's ATQ score for integration has improved most between 2016 and 2025

SSA economies' lower ATQ scores are generally consistent with their lower per capita income levels

The gap between the SSA economies and the rest of the EBRD regions is largest for economic integration

INTRODUCTION

This chapter presents the latest assessment of transition challenges in the EBRD regions and selected comparator economies, tracking progress in the area of structural reform. The assessment focuses on six key qualities of a sustainable market economy, looking at whether economies are competitive, well governed, green, inclusive, resilient and integrated. For each quality, progress is assessed on a scale of 1 to 10, where 1 denotes the worst possible performance and 10 corresponds to the standards of a sustainable market economy. These "assessment of transition qualities" (ATQ) scores are based on a wide range of external and internal data sources and calculated in accordance with a detailed methodology (see Tables 5.1 and 5.2 and Chart 5.1).[1]

The assessment focuses on

6

key qualities

of a sustainable market economy, looking at whether economies are **competitive**, **well governed**, **green**, **inclusive**, **resilient** and **integrated**

[1] For a detailed description of that methodology, see https://www.ebrd.com/content/dam/ebrd_dxp/assets/pdfs/office-of-the-chief-economist/transition-report-archive/transition-report-2025/chapters/tr-25-26-methodological-notes.pdf. For a comprehensive overview of structural reforms over the past 12 months, see https://www.ebrd.com/home/news-and-events/publications/economics/transition-reports/transition-report-2025-26/country-assessments.html.

TABLE 5.1. ATQ scores for six key qualities of a sustainable market economy: EBRD regions

	Competitive			Well governed			Green			Inclusive			Resilient			Integrated		
	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016
Central Europe and the Baltic states (CEB)																		
Croatia	**5.97**	5.96	5.98	**6.55**	6.55	6.35	**6.93**	6.93	6.01	**6.90**	6.88	6.90	**7.03**	7.02	6.38	**6.81**	6.71	6.17
Czechia	**6.67**	6.66	6.65	**7.58**	7.60	7.11	**7.19**	7.19	6.60	**7.20**	7.06	6.93	**7.82**	7.81	7.88	**7.66**	7.60	7.82
Estonia	**7.49**	7.47	7.81	**8.87**	8.87	8.62	**7.24**	7.22	6.23	**7.77**	7.78	7.28	**7.72**	7.77	7.64	**8.01**	8.10	7.58
Hungary	**6.13**	6.12	6.12	**6.01**	6.03	5.92	**6.90**	6.88	6.14	**6.27**	6.23	6.19	**7.29**	7.29	7.03	**7.14**	7.83	7.57
Latvia	**6.27**	6.26	6.28	**7.62**	7.62	6.96	**7.08**	7.08	6.30	**7.06**	7.09	6.75	**7.53**	7.55	7.36	**7.59**	7.50	7.33
Lithuania	**6.50**	6.48	6.39	**8.09**	8.03	7.39	**7.14**	7.15	6.51	**7.33**	7.37	7.03	**7.37**	7.37	7.04	**7.68**	7.67	6.94
Poland	**6.23**	6.23	6.42	**6.99**	6.90	7.48	**7.11**	7.10	6.56	**6.75**	6.76	6.95	**7.88**	7.87	7.65	**7.22**	7.16	6.78
Slovak Republic	**6.32**	6.32	6.17	**6.58**	6.65	6.35	**7.23**	7.23	6.76	**6.84**	6.81	6.59	**7.79**	7.78	7.73	**7.38**	7.28	7.34
Slovenia	**6.39**	6.39	6.33	**7.36**	7.29	7.30	**7.33**	7.32	6.84	**7.58**	7.57	7.24	**7.71**	7.74	7.47	**7.41**	7.33	6.64
South-eastern Europe (SEE)																		
Albania	**4.94**	4.93	4.79	**5.01**	4.95	5.45	**4.93**	4.90	4.84	**5.42**	5.41	5.02	**4.94**	4.90	4.60	**5.42**	5.40	5.27
Bosnia and Herzegovina	**4.69**	4.69	4.57	**4.44**	4.32	4.86	**5.41**	5.38	4.75	**5.47**	5.48	5.48	**5.36**	5.33	5.19	**5.15**	5.10	4.64
Bulgaria	**5.97**	5.95	5.58	**6.22**	6.24	5.99	**6.74**	6.73	5.55	**6.16**	6.17	5.82	**6.34**	6.31	6.12	**6.77**	6.71	6.75
Greece	**6.00**	5.99	6.05	**6.01**	5.98	5.86	**6.69**	6.69	5.98	**6.93**	6.94	6.71	**7.42**	7.42	6.95	**7.23**	7.13	5.81
Kosovo	**4.41**	4.39	4.15	**4.98**	5.04	5.11	**3.74**	3.68	3.54	**5.40**	5.43	5.29	**4.91**	4.89	4.49	**5.55**	5.43	4.82
Montenegro	**5.59**	5.59	5.19	**6.46**	6.50	6.09	**6.26**	6.20	5.47	**5.86**	5.87	5.50	**5.52**	5.52	5.30	**6.10**	6.09	5.57
North Macedonia	**5.24**	5.21	4.99	**5.53**	5.61	5.94	**6.06**	5.89	4.97	**5.63**	5.65	5.33	**5.52**	5.49	5.14	**6.37**	6.26	5.40
Romania	**6.21**	6.20	5.90	**6.55**	6.56	6.15	**6.73**	6.74	5.99	**6.02**	6.05	5.95	**6.99**	6.99	6.72	**6.76**	6.70	6.45
Serbia	**5.35**	5.35	5.24	**6.20**	6.13	5.88	**5.55**	5.49	5.00	**5.87**	5.97	5.65	**5.64**	5.64	5.46	**6.44**	6.40	5.74
Türkiye	**5.52**	5.58	5.55	**6.24**	6.17	6.15	**5.42**	5.41	4.93	**5.20**	5.23	5.33	**6.94**	6.94	6.82	**6.14**	6.04	6.00
Eastern Europe and the Caucasus (EEC)																		
Armenia	**4.76**	4.74	4.24	**6.71**	6.57	5.99	**5.96**	5.76	5.37	**5.22**	5.26	4.93	**6.12**	6.12	5.35	**5.79**	5.66	5.14
Azerbaijan	**4.23**	4.19	4.11	**5.81**	5.79	5.39	**5.22**	5.05	4.73	**5.70**	5.70	5.41	**3.60**	3.56	3.64	**5.13**	5.16	5.57
Georgia	**5.00**	4.96	4.62	**6.35**	6.41	6.61	**5.61**	5.53	5.03	**5.40**	5.39	5.22	**5.76**	5.79	4.74	**6.52**	6.51	6.05
Moldova	**4.65**	4.63	4.47	**5.44**	5.30	4.72	**4.69**	4.69	4.33	**5.63**	5.64	5.49	**5.16**	5.17	4.71	**5.18**	5.16	5.12
Ukraine	**4.89**	4.89	4.99	**4.73**	4.57	4.32	**5.53**	5.46	5.10	**5.88**	5.88	5.59	**4.81**	4.83	4.11	**5.24**	5.23	5.25
Central Asia																		
Kazakhstan	**5.02**	4.97	4.82	**6.39**	6.40	5.80	**5.11**	5.11	4.69	**5.46**	5.51	5.23	**5.77**	5.80	5.33	**5.15**	5.17	5.01
Kyrgyz Republic	**3.88**	3.89	3.66	**4.30**	4.38	4.46	**4.85**	4.85	4.49	**4.81**	4.80	4.73	**4.45**	4.57	4.52	**4.71**	4.58	4.29
Mongolia	**4.29**	4.28	4.24	**5.46**	5.41	5.50	**4.65**	4.65	4.78	**5.52**	5.49	5.17	**4.67**	4.67	4.48	**5.65**	5.60	4.73
Tajikistan	**3.52**	3.51	3.33	**4.63**	4.72	4.34	**5.41**	5.42	5.13	**3.97**	4.00	3.85	**3.66**	3.66	3.12	**4.06**	3.99	3.34
Turkmenistan	**3.33**	3.32	3.34	**2.82**	2.89	3.03	**4.74**	4.72	4.69	**4.47**	4.47	4.19	**3.63**	3.65	3.63	**4.21**	4.23	4.41
Uzbekistan	**3.74**	3.74	3.50	**5.05**	5.08	4.82	**5.48**	5.48	4.91	**4.76**	4.75	4.35	**4.10**	4.10	3.49	**5.19**	5.18	4.24
Southern and eastern Mediterranean (SEMED)																		
Egypt	**3.48**	3.48	3.49	**5.69**	5.69	4.97	**4.96**	4.96	4.52	**4.07**	4.08	4.05	**4.64**	4.64	3.91	**5.70**	5.63	4.67
Iraq	**2.16**	2.20	1.96	**2.60**	2.72	2.68	**3.80**	3.80	3.81	**3.37**	3.38	3.35	**3.63**	3.59	3.13	**3.41**	3.39	2.68
Jordan	**4.66**	4.67	4.44	**6.11**	6.18	6.11	**5.32**	5.31	5.61	**4.82**	4.71	4.23	**5.40**	5.41	4.94	**5.66**	5.60	5.85
Lebanon	**4.44**	4.43	4.36	**3.61**	3.68	4.13	**4.90**	4.86	4.89	**4.12**	4.12	4.40	**3.15**	3.15	4.22	**5.20**	5.13	5.03
Morocco	**3.83**	3.76	3.77	**5.97**	5.91	5.62	**5.28**	5.27	5.17	**4.38**	4.40	4.27	**4.85**	4.85	4.64	**5.32**	5.22	5.04
Tunisia	**4.18**	4.23	4.42	**4.86**	4.87	5.27	**4.79**	4.79	4.65	**4.88**	4.86	4.84	**4.60**	4.60	4.09	**4.92**	4.86	4.67
West Bank and Gaza	**3.24**	3.21	2.86	**3.42**	3.51	3.55	**4.15**	4.15	3.96	**3.39**	3.40	3.46	**3.96**	3.96	3.77	**4.44**	4.41	3.99
Sub-Saharan Africa (SSA)																		
Benin	**2.94**	2.94	2.63	**4.52**	4.28	3.81	**4.47**	4.46	4.36	**4.24**	4.23	4.12	**3.49**	3.47	2.81	**3.35**	3.33	3.14
Côte d'Ivoire	**3.29**	3.18	2.92	**4.16**	3.89	3.97	**4.57**	4.57	4.23	**4.24**	4.23	3.88	**3.62**	3.61	3.02	**3.72**	3.64	3.30
Ghana	**2.98**	2.96	3.01	**5.12**	4.83	4.92	**4.53**	4.53	4.44	**4.27**	4.27	4.30	**4.26**	4.26	3.21	**3.20**	3.20	3.30
Kenya	**3.17**	3.27	3.60	**4.55**	4.44	4.39	**4.85**	4.84	4.67	**4.27**	4.25	4.33	**3.95**	3.93	3.30	**3.59**	3.55	3.89
Nigeria	**2.75**	2.83	2.83	**3.42**	3.34	3.57	**4.09**	4.09	3.75	**4.31**	4.29	4.27	**4.11**	4.10	3.17	**3.00**	2.97	3.17
Senegal	**2.93**	2.93	3.05	**4.84**	4.53	4.45	**4.52**	4.52	4.40	**3.83**	3.83	3.62	**3.43**	3.42	3.19	**3.83**	3.70	3.00

Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of a sustainable market economy. All scores have been updated following methodological changes and may differ from previously published versions. Owing to lags in the availability of underlying data, ATQ scores for the last two years may not fully correspond to developments in those calendar years. Exceptionally, Chapter 5 treats Greece as part of the SEE region.

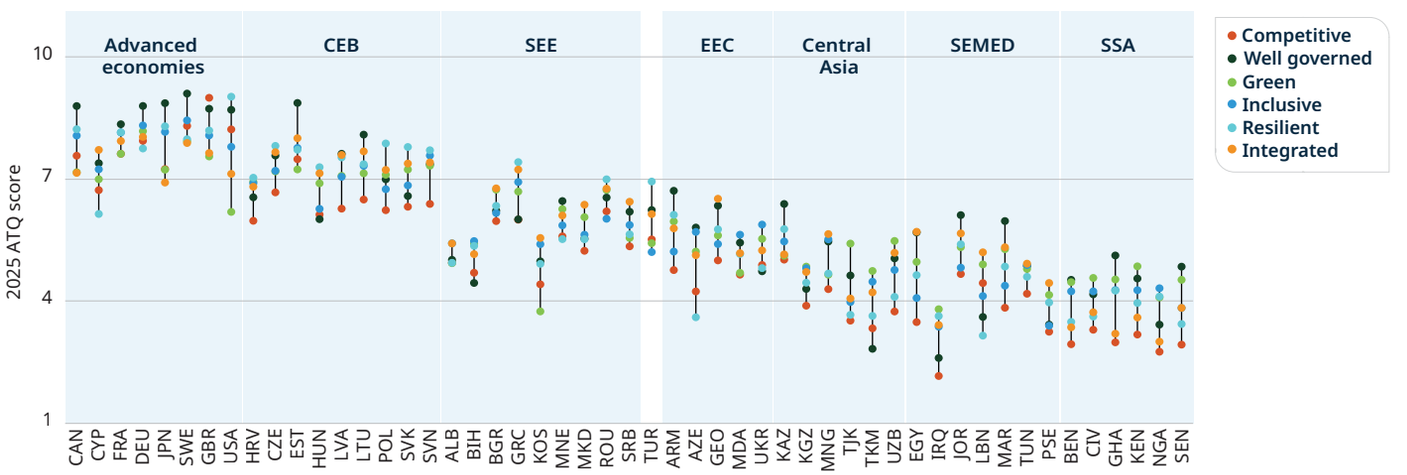
TABLE 5.2. ATQ scores for six key qualities of a sustainable market economy: comparators

	Competitive			Well governed			Green			Inclusive			Resilient			Integrated		
	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016	2025	2024	2016
Advanced economies																		
Canada	**7.57**	7.57	7.53	**8.80**	8.83	9.11	**7.17**	7.17	6.55	**8.07**	8.06	8.14	**8.23**	8.24	8.16	**7.15**	7.12	7.12
Cyprus	**6.73**	6.74	7.11	**7.39**	7.42	7.22	**6.99**	6.99	6.03	**7.24**	7.19	7.11	**6.14**	6.07	5.38	**7.72**	7.60	7.05
France	**7.62**	7.64	7.56	**8.35**	8.40	8.31	**7.62**	7.62	7.45	**8.14**	8.18	8.29	**8.15**	8.14	8.16	**7.94**	7.85	7.60
Germany	**7.94**	7.93	7.85	**8.80**	8.75	9.07	**8.18**	8.16	7.93	**8.32**	8.30	8.38	**7.75**	7.75	7.81	**8.04**	8.00	7.82
Japan	**7.25**	7.25	7.38	**8.87**	8.89	8.77	**7.23**	7.23	7.34	**8.16**	8.15	8.14	**8.30**	8.30	8.09	**6.91**	6.88	7.00
Sweden	**8.31**	8.30	8.05	**9.10**	9.12	9.33	**7.93**	7.93	7.73	**8.44**	8.47	8.57	**7.98**	8.06	7.92	**7.89**	7.76	7.71
United Kingdom	**9.00**	9.03	8.88	**8.73**	8.74	9.19	**7.56**	7.54	7.25	**8.07**	8.08	8.35	**8.19**	8.22	7.96	**7.64**	7.66	7.81
United States of America	**8.22**	8.22	8.26	**8.70**	8.80	8.85	**6.19**	6.19	6.76	**7.79**	7.77	7.79	**9.03**	9.03	8.87	**7.13**	7.28	7.16
Other comparators																		
Algeria	**2.37**	2.36	2.33	**3.50**	3.52	3.36	**3.27**	3.27	3.21	**4.06**	4.03	4.17	**3.81**	3.81	3.75	**3.36**	3.31	3.14
Bangladesh	**3.53**	3.53	3.43	**5.93**	5.89	5.76	**4.38**	4.38	4.13	**3.61**	3.60	3.61	**5.75**	5.75	5.31	**3.88**	3.86	4.26
Belarus	**4.98**	4.96	4.66	**4.54**	4.64	4.80	**5.50**	5.56	5.54	**5.48**	5.51	5.66	**3.81**	3.78	3.39	**6.20**	6.16	5.32
Brazil	**4.75**	4.77	4.49	**5.97**	5.98	6.06	**5.98**	5.98	5.85	**5.44**	5.44	5.37	**6.17**	6.19	5.70	**5.02**	4.95	4.89
Colombia	**4.41**	4.44	4.40	**6.51**	6.50	6.38	**5.81**	5.75	5.59	**4.91**	4.91	5.01	**5.90**	5.92	5.59	**5.58**	5.54	5.01
Libya	**2.12**	2.15	2.06	**2.35**	2.43	2.38	**3.04**	3.04	3.01	**3.43**	3.43	3.52	**3.56**	3.39	3.12	**3.50**	3.33	2.86
Mexico	**4.77**	4.83	4.79	**6.25**	6.34	6.38	**5.52**	5.51	5.43	**5.03**	5.04	4.91	**6.13**	6.17	5.66	**5.73**	5.73	5.50
Russia	**5.36**	5.34	5.41	**5.45**	5.52	5.58	**5.63**	5.63	5.11	**5.01**	5.03	4.92	**6.36**	6.36	5.72	**4.72**	4.73	5.33
South Africa	**5.70**	5.68	5.73	**7.52**	7.44	8.02	**4.61**	4.61	4.76	**4.82**	4.82	4.83	**5.56**	5.56	5.10	**5.83**	5.74	5.70
Thailand	**5.35**	5.40	5.30	**7.12**	7.16	6.75	**5.39**	5.39	5.16	**5.15**	5.12	4.91	**6.00**	5.98	5.62	**6.23**	6.10	5.57

Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of a sustainable market economy. All scores have been updated following methodological changes and may differ from previously published versions. Owing to lags in the availability of underlying data, ATQ scores for the last two years may not fully correspond to developments in those calendar years.

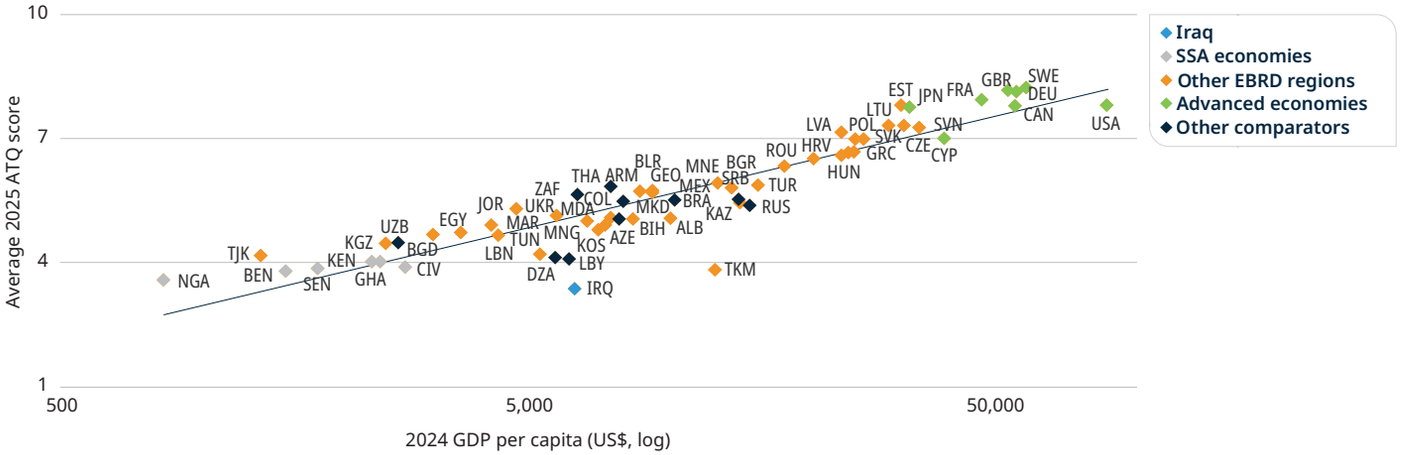
CHART 5.1. ATQ scores for six key qualities of a sustainable market economy



Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of a sustainable market economy.

CHART 5.2. **Iraq's ATQ scores tend to be lower than its income per capita would imply**



Source: EBRD, IMF data and authors' calculations.

Note: Simple average across six qualities for each economy. GDP per capita at market exchange rates (current prices in US dollars).

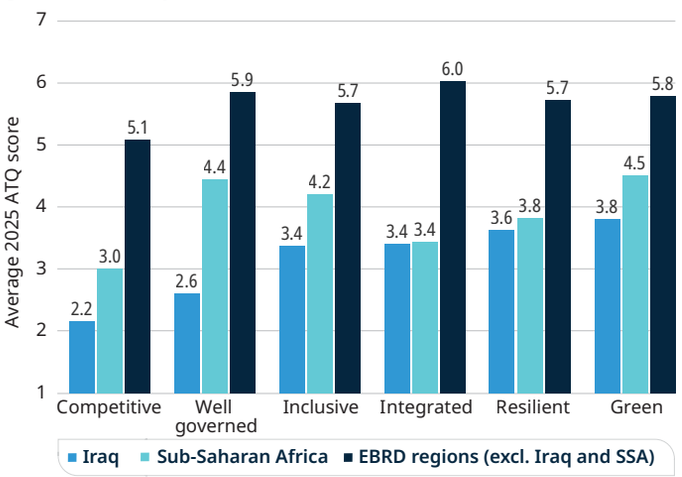
ASSESSMENT OF IRAQ

This year's assessment has been extended to incorporate Iraq (as well as Algeria and Libya as additional emerging-market comparators), following the inclusion of the EBRD's six SSA economies (Benin, Côte d'Ivoire, Ghana, Kenya, Nigeria and Senegal) in last year's assessment.

Overall, Iraq's scores tend to be lower, on average, than those of the other economies covered by this assessment, reflecting the general weakness of its economic and political institutions. The low scores contrast sharply with Iraq's income per capita (see Chart 5.2), whereas for most economies, ATQ scores and income per capita are closely aligned.[2] Indeed, the SSA economies' lower ATQ scores are generally consistent with their lower per capita income levels, as discussed in detail in the *Transition Report 2024-25*.[3] Underpinned by oil export revenues, Iraq's average per capita income is higher than that of many economies in Central Asia, the SEMED region and SSA.

When it comes to the individual qualities of a sustainable market economy, the gap between Iraq and other EBRD economies is larger for governance and competitiveness than for other transition qualities (see Chart 5.3). This largely reflects the low diversification and sophistication of the country's economy and the perceived weakness of its economic institutions. In contrast, the gap to the average for the EBRD regions is slightly smaller when it comes to the green economy and resilience. This is partly down to the relatively low waste intensity of Iraq's output, as well as its improved financial-sector stability, particularly with regard to lowering its non-performing loan (NPL) ratio.

CHART 5.3. **The gap between Iraq and the rest of the EBRD regions is largest for governance and smallest for the green economy**



Source: EBRD and authors' calculations.

Note: Simple averages of 2025 scores across all economies in each group.

[2] See Carruthers and Plekhanov (2023).
[3] See EBRD (2024).

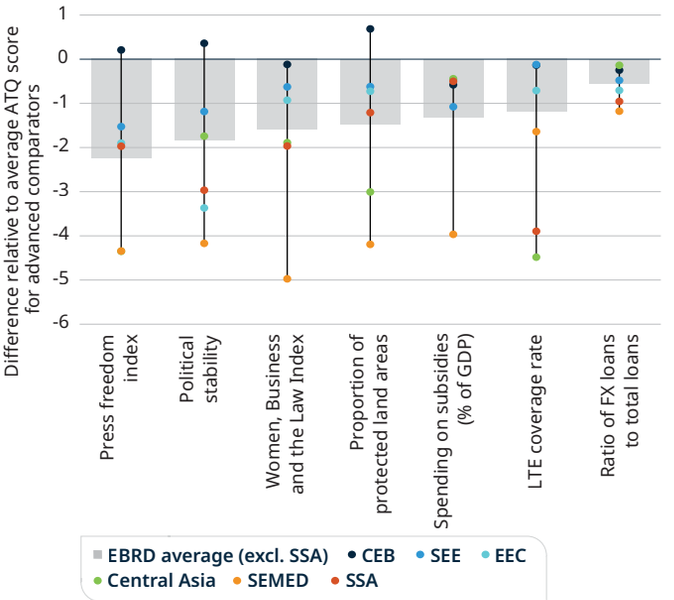
The gap between the SSA economies and the rest of the EBRD regions (excluding Iraq) is largest for economic integration

This pattern is different to that observed in the SSA economies, where the gap to the rest of the EBRD regions (excluding Iraq) is largest for economic integration.[4] Indeed, while the SSA economies score below the rest of the EBRD regions, on average, on a number of individual indicators, they outperform SEMED or other regions on others. Chart 5.4 presents several such examples. For instance, the SSA economies perform significantly better than SEMED, on the whole, when it comes to addressing legal barriers to the inclusion of women in the economy, as well as on measures of press freedom. They also tend to have comparable levels of spending on subsidies to other economies in the EBRD regions (expressed as a percentage of GDP), as well as similar ratios of foreign-denominated loans to total loans, and similar assessments for land conservation through the protection of terrestrial areas. In contrast, levels of broadband coverage in SSA are above those observed in Central Asia, but well below those of advanced economies and most other economies in the EBRD regions.

RECENT CHANGES IN SCORES

Since 2016, when the ATQ scores were first published, average scores for the EBRD regions have improved most in the areas of economic integration and the green economy, with least progress being observed in the areas of economic competitiveness and governance (see Chart 5.5). This picture is consistent with the earlier findings of the *Transition Report 2019-20*, which highlighted slow progress on governance improvements over the long term.[5]

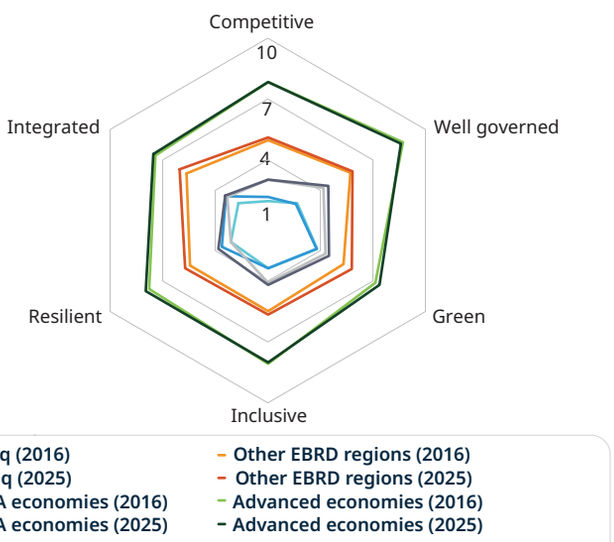
CHART 5.4. Gaps relative to advanced economies: selected indicators used in the ATQ scores



Source: EBRD and authors' calculations.

Note: Based on simple averages of 2025 scores across all economies in each group.

CHART 5.5. Since 2016, Iraq has made most progress in the areas of integration and resilience, with little progress in the areas of governance and the green economy



Source: EBRD and authors' calculations.

Note: Simple averages of 2025 and 2016 scores across all economies in each group.

[4] See EBRD (2024) and Chart 5.3.
[5] See EBRD (2019).

Of the six transition qualities, Iraq's ATQ score for integration has improved most between 2016 and 2025 (see Chart 5.5). This reflects the rollout of internet infrastructure and moderate enhancements to transport and trade infrastructure, with potential for further improvements in this area thanks to the advancement of the Development Road corridor – a project aimed at improving Europe-Asia connectivity by road and rail through Iraq. Notable improvements to ATQ scores have also been recorded in the area of resilience, primarily thanks to the greater stability of the banking sector, amid lower NPL ratios and higher levels of provisioning, as well as greater liquidity and the expansion of credit to the private sector. These improvements in ATQ scores are still modest, however, compared with the size of the gap to advanced economies or the average of economies in the EBRD regions.

In contrast, little progress has been observed since 2016 in the areas of competitiveness, inclusion and the green economy. Consequently, Iraq's ranking among the economies assessed has declined in the area of the green economy, and the country remains bottom of the list in the areas of competitiveness and inclusion.

CHANGES IN SCORES SINCE LAST YEAR

Changes to scores since the *Transition Report 2024-25* reflect the latest developments in the economies covered. The following analysis looks at differences between the updated scores for 2024 (as presented in Table 5.1, largely reflecting indicators for 2023) and the newly calculated scores for 2025 (which draw on the latest data available, often covering 2024).

Of the six transition qualities, Iraq's ATQ score for integration has improved most between 2016 and 2025

Across the six qualities of a sustainable market economy, ATQ score increases over the last year have been concentrated in the CEB and SEE regions and SSA, while declines have been observed primarily in SEMED and Central Asia, contributing to further divergence between the average scores across economies.

Across the EBRD regions, the largest improvements, on average, have been in the areas of integration, competitiveness and the green economy.

Integration scores have increased significantly in Armenia, Kosovo, the Kyrgyz Republic and Senegal, mainly driven by increased trade volumes (as a percentage of GDP) and higher net foreign direct investment (FDI) inflows. In the case of Kosovo and Senegal, the improvements also reflect greater affordability of broadband services. Lower scores in Hungary and Estonia, meanwhile, largely reflect declines in net FDI inflows as a percentage of GDP.

There have been notable increases in the competitiveness scores of Azerbaijan, Côte d'Ivoire, Georgia, Kazakhstan and Morocco, primarily as a result of lower import tariffs (with the exception of Georgia) – in contrast to the vast majority of economies in the EBRD regions, where average import tariff rates have increased, mirroring recent developments in the global economy.[6] The higher scores also reflect the expansion of domestic credit to the private sector and modest increases in average labour productivity.

On the green economy, Armenia, Azerbaijan and North Macedonia have seen considerable score increases

[6] See EBRD (2025).

following the introduction of new protected areas for the conservation of biodiversity, as well as moderate increases in electricity production from renewable sources.

At the same time, scores for economic inclusion and governance have continued to decline, on average, contributing to the large and persistent gap relative to advanced economies (see Chart 5.5).

Increases in economic inclusion scores in Czechia and Jordan reflect an increase in the number of firms saying they offer training to their employees, as well as a rise in labour productivity. Inclusion scores have declined in Kazakhstan and Serbia as a result of lower labour-force participation rates, as well as a reduction in the proportion of firms that say they provide training to employees.

In the area of economic governance, improvements, albeit from a low base, have been observed in Benin, Côte d'Ivoire, Ghana and Senegal as a result of greater perceived press freedom and advances when it comes to the perception of corruption and e-government participation. The decline in Iraq's economic governance score is down to a deterioration in perceived media freedom, while Tajikistan's lower sub-score for compliance with anti-money laundering and countering the financing of terrorism (AML/CFT) standards and its worsening perception-of-corruption score have weighed on its overall governance score.

Across the EBRD regions, the changes in average scores for resilience have been relatively minor and driven by shifts in financial-sector stability. Notable improvements in financial resilience scores have been observed in Albania, Azerbaijan and Iraq. In Albania and Azerbaijan, the increases reflect improvements in loan-to-deposit ratios, declines in foreign-denominated loans and better NPL provisioning. In Iraq, the improvements have mainly been down to a higher return on assets in the banking sector and a lower proportion of foreign-denominated loans. Resilience scores have declined in a number of Central Asian economies, most notably the Kyrgyz Republic, due to higher NPL ratios, reduced provisioning for NPLs and lower liquidity ratios.

FOCUS ON ECONOMIC INTEGRATION

The next section looks more closely at economic integration in nine distinct areas: road infrastructure, rail infrastructure, air transport, port operations, waste management, water and wastewater, energy, telecoms, and trade and investment. Tables 5.3 and 5.4 present the latest assessment for each of these areas, as well as the overall scores for economic integration.

For instance, the telecoms score is an average of indicators that take into account the penetration of fixed

TABLE 5.3. ATQ scores for integration in various areas: EBRD regions

	Road infrastructure	Rail infrastructure	Air transport	Port operations	Waste management	Water and wastewater	Energy	Telecoms	Trade and investment
Central Europe and the Baltic states									
Croatia	5.52	4.26	3.44	6.24	5.72	7.22	8.11	7.45	7.37
Czechia	6.12	6.54	3.71	5.09	7.42	8.30	8.81	7.67	7.69
Estonia	6.82	4.76	3.39	6.22	8.59	7.26	7.67	8.29	8.43
Hungary	6.46	5.54	3.89	5.51	7.21	8.82	8.49	7.96	7.36
Latvia	5.04	4.14	3.55	5.14	6.20	7.32	8.66	8.33	7.66
Lithuania	6.36	4.29	3.52	6.06	8.28	7.93	7.46	7.87	7.87
Poland	6.44	6.29	4.39	5.95	7.97	7.96	8.85	7.08	7.45
Slovak Republic	5.51	5.66	2.66	5.36	7.54	6.95	8.69	7.06	8.25
Slovenia	7.08	5.19	2.40	5.73	7.35	7.42	8.70	8.23	7.93
South-eastern Europe									
Albania	4.59	1.79	2.94	4.53	1.72	5.28	8.07	5.86	6.32
Bosnia and Herzegovina	3.62	4.28	2.31	4.13	2.01	4.77	7.86	5.60	5.95
Bulgaria	4.01	5.40	3.37	4.78	6.57	7.16	8.54	7.70	7.29
Greece	6.00	4.37	5.38	7.64	5.94	8.23	8.04	7.73	7.12
Kosovo	2.86	1.79	1.76	3.09	1.26	3.92	6.86	5.43	5.88
Montenegro	3.85	4.67	2.50	4.16	1.60	5.58	7.57	6.98	7.39
North Macedonia	4.41	3.32	2.73	3.09	4.24	4.96	7.55	7.17	7.47
Romania	3.70	4.50	3.60	5.43	5.76	6.27	8.53	7.20	6.93
Serbia	4.14	4.02	3.06	5.07	3.45	3.51	7.59	6.33	6.78
Türkiye	5.76	4.67	8.40	7.21	4.08	7.10	8.60	6.01	6.34
Eastern Europe and the Caucasus									
Armenia	2.68	4.65	2.16	2.20	2.14	3.80	8.22	5.41	6.24
Azerbaijan	4.29	4.59	3.49	6.12	2.54	5.01	7.94	5.69	5.12
Georgia	3.60	5.70	3.07	4.18	5.00	4.66	8.06	5.76	6.31
Moldova	3.07	4.19	2.36	3.53	2.46	3.72	7.45	6.18	5.96
Ukraine	3.59	4.15	2.79	3.60	2.77	5.56	7.10	5.32	6.38
Central Asia									
Kazakhstan	2.76	3.33	2.77	3.75	3.56	5.25	7.69	5.63	5.87
Kyrgyz Republic	2.27	1.55	1.43	1.67	1.58	5.26	6.79	5.04	6.17
Mongolia	2.12	2.14	1.69	1.87	1.54	4.86	6.79	5.03	6.94
Tajikistan	3.06	2.45	2.04	2.98	1.99	4.28	6.85	3.72	4.98
Turkmenistan	2.02	1.65	1.52	1.67	5.31	5.76	6.21	3.29	5.35
Uzbekistan	4.36	3.97	2.79	4.53	2.32	6.47	7.70	5.88	5.21
Southern and eastern Mediterranean									
Egypt	4.71	3.59	4.40	6.81	2.38	5.95	6.42	4.97	5.26
Iraq	2.06	1.92	1.70	3.57	1.30	5.11	5.26	4.84	4.36
Jordan	3.84	2.57	3.54	4.51	3.07	7.59	7.52	5.59	5.58
Lebanon	2.84	2.28	2.71	4.23	4.71	4.55	7.59	4.24	5.46
Morocco	3.49	4.24	2.98	5.73	2.85	6.23	7.39	5.19	5.72
Tunisia	2.96	2.32	1.89	3.74	3.56	7.59	6.24	4.90	5.93
West Bank and Gaza	2.06	1.92	1.70	4.49	1.30	4.80	5.69	4.11	5.42
Sub-Saharan Africa									
Benin	4.14	2.27	3.01	5.14	3.95	2.73	3.29	3.28	4.21
Côte d'Ivoire	4.18	2.90	3.12	4.46	2.04	3.08	4.27	3.92	4.67
Ghana	3.11	1.75	2.13	3.85	3.19	2.98	6.39	4.31	3.63
Kenya	3.67	2.92	3.19	4.20	3.44	3.70	4.05	3.71	2.91
Nigeria	2.56	2.03	2.16	3.28	2.79	2.95	3.43	3.80	2.63
Senegal	2.70	2.14	1.96	3.90	2.04	2.58	4.81	4.13	5.96

Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of an integrated market economy.

TABLE 5.4. ATQ scores for integration in various areas: comparators

	Road infrastructure	Rail infrastructure	Air transport	Port operations	Waste management	Water and wastewater	Energy	Telecoms	Trade and investment
Advanced economies									
Canada	6.46	6.23	7.32	6.90	5.71	7.66	8.57	8.73	5.16
Cyprus	6.08	5.72	3.37	4.76	5.01	7.76	9.86	8.92	8.37
France	7.95	6.64	7.71	7.88	8.42	8.36	9.15	8.69	6.63
Germany	8.01	7.17	8.89	7.86	8.33	8.84	9.61	8.37	6.72
Japan	9.69	7.74	9.78	8.72	8.75	8.05	9.54	7.79	5.09
Sweden	7.78	6.69	5.09	6.56	8.59	8.55	9.28	8.87	7.52
United Kingdom	7.45	5.99	7.15	8.17	8.45	8.30	9.33	8.42	6.94
United States	5.11	6.42	8.92	8.90	6.49	7.26	9.22	9.22	5.43
Other comparators									
Algeria	2.83	2.44	1.88	4.38	4.80	6.17	6.61	4.86	4.39
Bangladesh	5.83	2.79	2.63	3.99	5.08	3.24	7.41	4.48	3.07
Belarus	4.38	4.91	2.79	4.54	6.30	6.80	7.74	5.90	6.45
Brazil	5.11	2.78	5.62	5.07	3.61	5.72	6.88	6.89	4.10
Colombia	4.99	2.23	4.43	5.68	3.82	4.13	8.66	5.42	4.92
Libya	2.34	2.20	1.98	2.61	1.30	3.43	5.16	4.64	5.43
Mexico	5.23	2.84	5.00	5.37	3.75	5.91	8.08	5.75	5.49
Russia	3.21	4.14	3.89	3.75	1.74	5.98	6.97	5.84	5.56
South Africa	6.25	3.70	4.60	6.09	4.49	5.76	6.65	5.30	5.95
Thailand	6.72	3.49	5.52	6.95	4.20	3.57	7.76	6.86	6.05

Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of an integrated market economy.

broadband; the percentage of the population using the internet; the price of mobile data services; 4G and 5G data coverage (measured as a percentage of the population); the download speed of mobile and fixed broadband; and the number of data centres. The road infrastructure score, meanwhile, takes into account road network density; the prevalence of motorways/highways; the amount of road traffic; road safety; and the quality of transport infrastructure based on the Logistics Performance Index compiled by the World Bank.[7] A similar approach is followed to construct integration indicators in all other areas (see Table 5.5).

[7] See World Bank (n.d.).

TABLE 5.5. Assessment of economic integration in specific areas: indicators

Dimension	Indicators	Source
Road infrastructure	Quality of roads (1-7) Road density (km/surface area) Motorway/highway density (km/surface area) Road safety (number of road injuries and fatalities, per 100,000 individuals) Logistics Performance Index	WEF Travel and Tourism Development Index, 2024 International Road Federation World Road Statistics, 2023 OECD International Transport Forum, 2022 OECD International Transport Forum, 2022 World Bank, 2023
Rail infrastructure	Efficiency of train services (1-7) Railroad density (km/surface area) Share of electrified rail lines (proportion of total rail lines) Logistics Performance Index	WEF Travel and Tourism Development Index, 2024 WEF Travel and Tourism Development Index, 2024 OECD International Transport Forum, 2022 World Bank, 2023
Air transport	Airport connectivity Efficiency of air transport services (1-7) Air transport freight (million tonnes/km) Logistics Performance Index	WEF Travel and Tourism Development Index, 2024 WEF Travel and Tourism Development Index, 2024 World Bank, 2022 World Bank, 2023
Port operations	Efficiency of port operations (1-7) Port Connectivity Index Ability to arrange competitively priced shipments (1-5)	WEF Travel and Tourism Development Index, 2024 World Bank, 2024 World Bank, 2023
Waste management	Municipal waste generation per capita Waste recovery rate (% of total municipal waste) Hazardous waste control	Yale Environmental Performance Index, 2024 Yale Environmental Performance Index, 2024 Yale Environmental Performance Index, 2024
Water and wastewater	Wastewater generated per capita Wastewater collected (% of wastewater) Wastewater treated (% of wastewater) Wastewater reused (% of wastewater) Proportion of the population with access to drinking water Proportion of the population with access to sanitation	Yale Environmental Performance Index, 2024 Yale Environmental Performance Index, 2024 Yale Environmental Performance Index, 2024 Yale Environmental Performance Index, 2024 World Bank, 2023 World Bank, 2023
Energy	Access to electricity (proportion of rural population) Electricity power transmission and distribution losses (% of output) Energy intensity (MJ per 2017 USD PPP) Reliability of electricity supply	World Bank, 2023 World Bank, 2023 IEA, United Nations Statistics Division, 2022 World Bank B-READY, 2024
Telecoms	Mobile broadband basket price Fixed broadband subscriptions (per 100 inhabitants); fibre broadband subscriptions (per 100 inhabitants) Number of internet users (per 100 individuals) LTE coverate rate; 5G coverage rate Number of data centres (per 1 million individuals) Mobile broadband download speed; fixed broadband download speed	International Telecommunication Union, 2024 International Telecommunication Union, 2024 International Telecommunication Union, 2024 International Telecommunication Union, 2024 Data Centre Map, 2024 GSM Association, Ookla, 2024
Trade and investment	Trade volume (% of GDP) Number of regional trade agreements Number of non-tariff measures Binding overhang ratio FDI net inflows (% of GDP) Global Value Chain (GVC) Participation Index	World Bank, 2024 World Trade Organization, 2024 World Trade Organization, 2024 World Trade Organization, 2024 International Monetary Fund, 2024 UN Trade and Development, EBRD calculations, 2018

Source: EBRD.

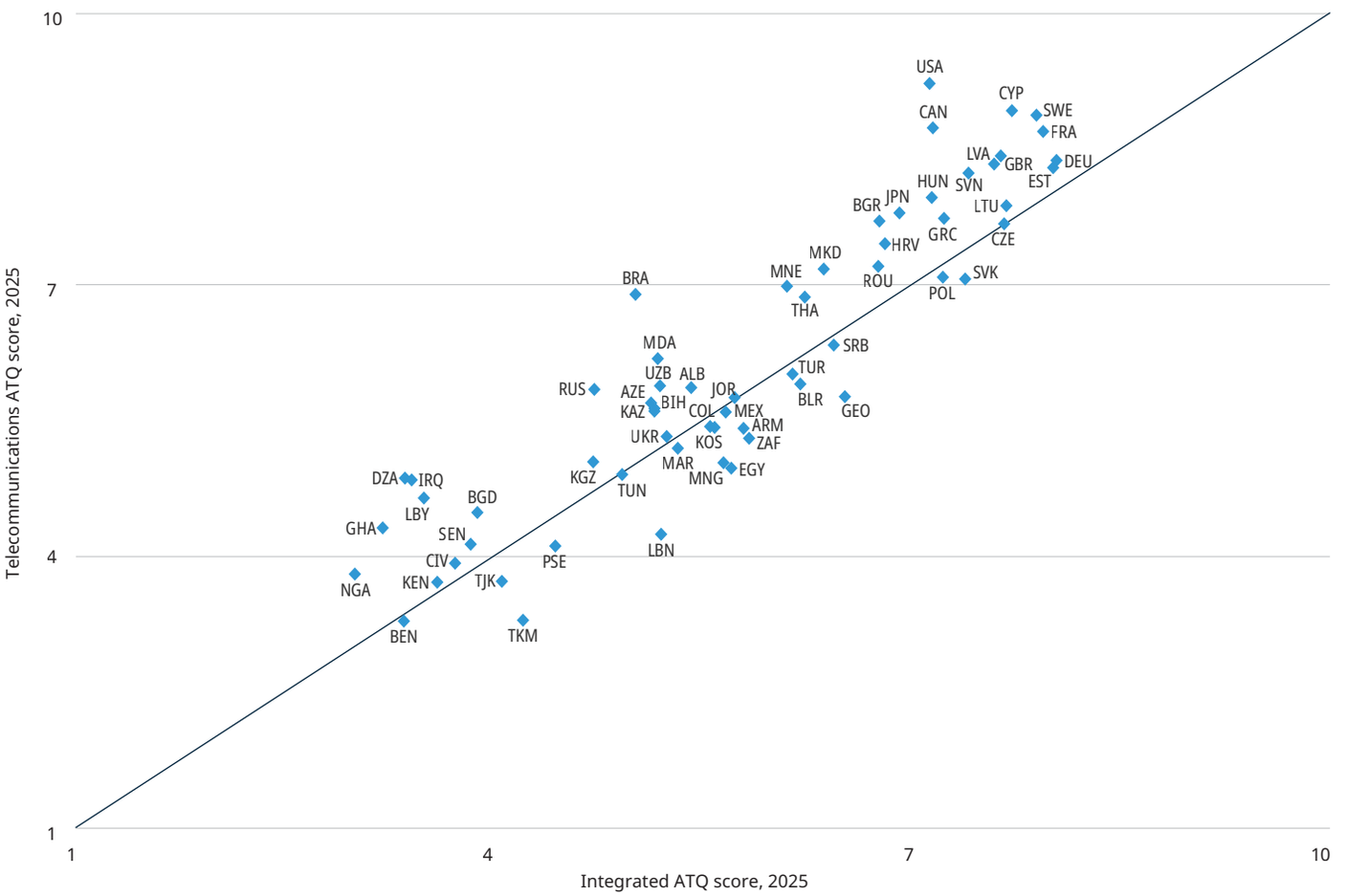
Note: All indicators are given equal weight.

Unsurprisingly, the integration indicators in the area of telecommunications are generally closely aligned with the overall integration score (so economies tend to be positioned close to the 45-degree line in Chart 5.6). A similar pattern holds for other areas of economic integration, including infrastructure and trade and investment.

At the same time, the analysis reveals some significant outliers that are more distant from the 45-degree line. For instance, telecoms integration is assessed as being more advanced in Brazil and the United States on account of the high speed and penetration of fibre to the home (so the corresponding dots lie above the 45-degree line). In contrast, telecoms integration scores are lower in Egypt, Georgia, Lebanon and Turkmenistan (so the corresponding dots lie below the 45-degree line), owing to the lack of 5G rollout, low mobile internet speeds and the low number of data centres. In Lebanon and Turkmenistan, the lower scores also reflect the low penetration of fixed broadband infrastructure.

Similarly, assessments in other areas of integration reveal occasional, but significant, deviations from a country's overall integration score. The largest deviations in all areas, both positive and negative, are summarised in Table 5.6.

CHART 5.6. **Telecommunications integration scores and overall integration scores are closely aligned**



Source: EBRD.

Note: 45-degree line shown.

TABLE 5.6. Largest deviations in integration ATQ sub-scores from overall integration ATQ scores

	Economy	Dimension	Deviation from overall integrated score		Economy	Dimension	Deviation from overall integrated score
	Positive deviations				Negative deviations		
1	Bangladesh	Energy	3.5	1	Montenegro	Air transport	-3.6
2	Algeria	Energy	3.2	2	Albania	Rail infrastructure	-3.6
3	Ghana	Energy	3.2	3	Armenia	Air transport	-3.6
4	Colombia	Energy	3.1	4	North Macedonia	Air transport	-3.6
5	Japan	Air transport	2.9	5	Armenia	Waste management	-3.7
6	Azerbaijan	Energy	2.8	6	Albania	Waste management	-3.7
7	Algeria	Water and wastewater	2.8	7	Kosovo	Rail infrastructure	-3.8
8	Tajikistan	Energy	2.8	8	Mongolia	Port operations	-3.8
9	Japan	Road infrastructure	2.8	9	Kosovo	Air transport	-3.8
10	Bosnia and Herz.	Energy	2.7	10	Czechia	Air transport	-3.9
11	Tunisia	Water and wastewater	2.7	11	Mongolia	Air transport	-4.0
12	Albania	Energy	2.6	12	Latvia	Air transport	-4.0
13	Japan	Energy	2.6	13	Mongolia	Waste management	-4.1
14	Kazakhstan	Energy	2.5	14	Lithuania	Air transport	-4.2
15	Uzbekistan	Energy	2.5	15	Kosovo	Waste management	-4.3
16	Türkiye	Energy	2.5	16	Cyprus	Air transport	-4.3
17	Armenia	Energy	2.4	17	Montenegro	Waste management	-4.5
18	Lebanon	Energy	2.4	18	Estonia	Air transport	-4.6
19	Mexico	Energy	2.3	19	Slovak Republic	Air transport	-4.7
20	Moldova	Energy	2.3	20	Slovenia	Air transport	-5.0

Source: EBRD.

Note: Scores are on a scale of 1 to 10, where 10 represents a synthetic frontier corresponding to the standards of an integrated market economy.

The largest outliers can be found in the areas of energy, air transport and waste management. The energy connectivity index, for instance, focuses on the quality and reliability of the electricity supply, the energy intensity of production and access to electricity in rural areas. Most economies in the EBRD regions (outside SSA) tend to score better on this dimension owing to their full electricity coverage in rural areas. Many economies in those regions lag, in contrast, when it comes to air connectivity and freight transport. In the area of waste management, economies in the EBRD regions tend to have lower waste recovery rates, but tend to score better in terms of waste generation per capita than advanced economy comparators.

Some deviations reflect an explicable lack of demand for certain types of connectivity. Small countries do not require as much domestic connectivity by air as large countries, for example, while landlocked countries with few (if any) navigable rivers, such as Mongolia, naturally have low scores in the area of port infrastructure development.

These distinctions highlight the value of a more granular analysis of economic integration that unpicks economies' relative strengths and weaknesses in certain areas, in addition to the overall integration score, which takes into account multiple components that may deviate from one another.

CONCLUSIONS

This chapter presents the EBRD's annual assessment of the six qualities of a sustainable market economy in its regions and a number of comparator economies. For the first time, it extends the calculations to Iraq, as well as Algeria and Libya as additional emerging-market comparators. These scores are likely to be updated further in the coming years, alongside the introduction of more detailed sectoral sub-scores for other qualities of a sustainable market economy, such as inclusion and governance.

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NOTES

ABBREVIATIONS

AI	artificial intelligence
AML/CFT	anti-money laundering and countering the financing of terrorism
ARDECO	Annual Regional Database of the European Commission
ART	assisted reproductive technology
ASPIRE	World Bank Atlas of Social Protection Indicators of Resilience and Equity
ATQ	assessment of transition qualities
CEB	central Europe and the Baltic states
CEO	chief executive officer
CV	curriculum vitae
EEA	European Economic Area
EEC	eastern Europe and the Caucasus
EIB	European Investment Bank
ESG	environmental, social and governance
ESS	European Social Survey
ESSPROS	European System of Integrated Social Protection Statistics
EU	European Union
EU LFS	EU Labour Force Survey
EVS	European Values Survey
FDI	foreign direct investment
FSP	financial service provider
GDP	gross domestic product
ICLS	International Conference of Labour Statisticians
IMF	International Monetary Fund
IMPIC	Immigration Policies in Comparison
ISCO	International Standard Classification of Occupations
ISSP	International Social Survey Programme
IT	information technology
LiTS	Life in Transition Survey
MERCOSUR	Southern Common Market
MPD	Manifesto Project Dataset
NEET	not in employment, education or training
NPL	non-performing loan
NUTS	Nomenclature of Territorial Units for Statistics
OCC1990	A modified version of the occupational classification scheme used for the 1990 US census
OECD	Organisation for Economic Co-operation and Development
OeNB	Austrian National Bank
OLS	ordinary least squares
R&D	research and development
RILE Index	Right-Left Index
SEE	south-eastern Europe
SEMED	southern and eastern Mediterranean
SMEs	small and medium-sized enterprises
SOC	Standard Occupational Classification
SSA	sub-Saharan Africa
STEM	science, technology, engineering and mathematics
TFP	total factor productivity
UK	United Kingdom
UNDESA	United Nations Department of Economic and Social Affairs
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF MICS	United Nations Children's Fund Multiple Indicator Cluster Surveys
UN WPP	United Nations World Population Prospects
US	United States
V-Dem	Varieties of Democracy
WIPO	World Intellectual Property Organization
WVS	World Values Survey

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