

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.

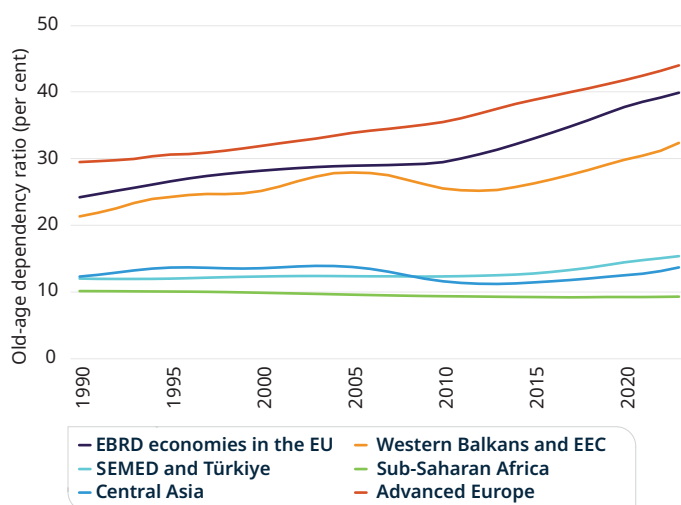
As the workforces of both advanced economies and many economies in the EBRD regions have grown older, employment has shifted towards age-friendlier jobs that have more flexible schedules and involve less physical effort. In EBRD economies in the EU, older workers, as well as highly educated women, have 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

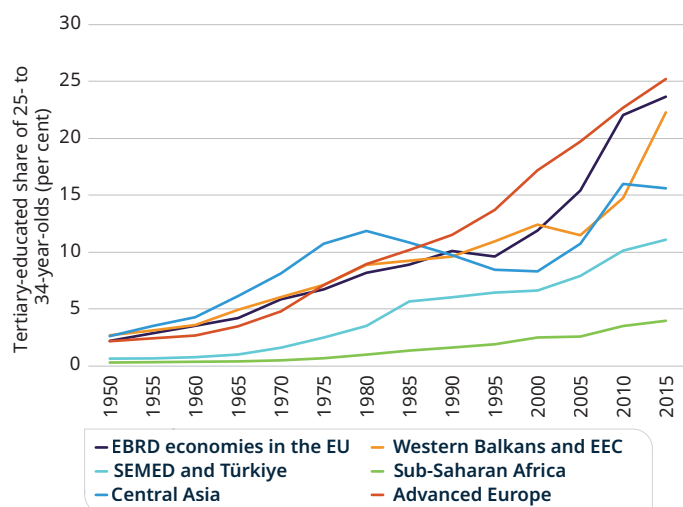
While demographic trends differ from economy to economy, younger cohorts everywhere have entered labour markets with more years of schooling and higher levels of tertiary education than previous generations (based on data from the Barro-Lee Educational Attainment dataset).¹ As stronger human capital 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).

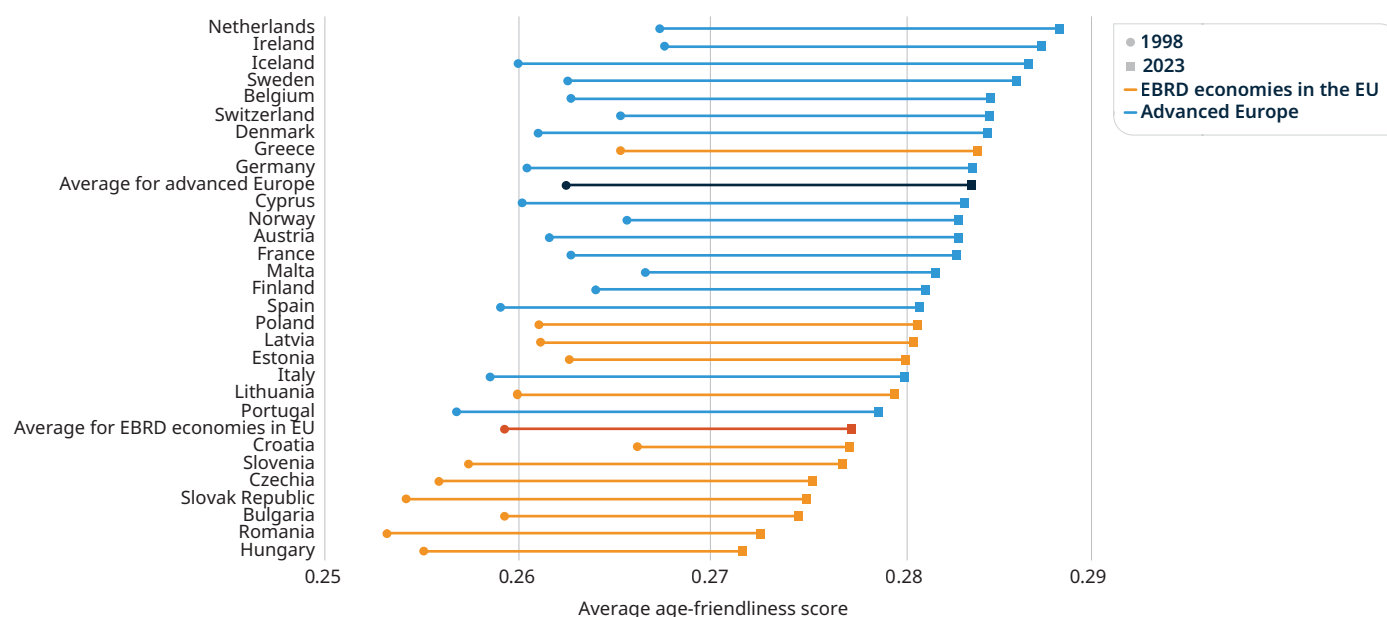
⁴ This analysis follows that of Acemoglu, Mühlbach and Scott (2022).

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.

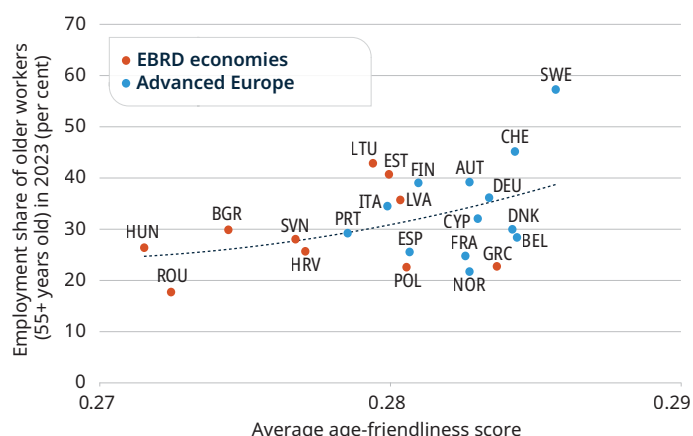
Note: Average scores are calculated for all workers aged 18-64 employed in occupations covered by the age-friendliness index, weighted by employment shares. See Box 3.1 for more details.

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

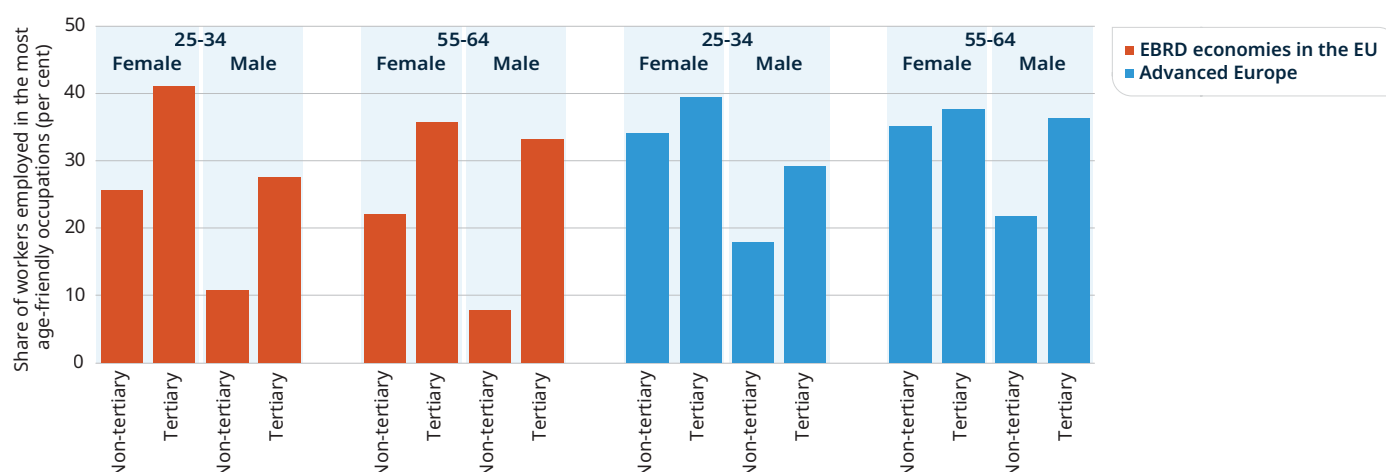
Source: Acemoglu, Mühlbach and Scott (2022), Eurostat (n.d.a) (2023 survey) and authors' calculations.

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).

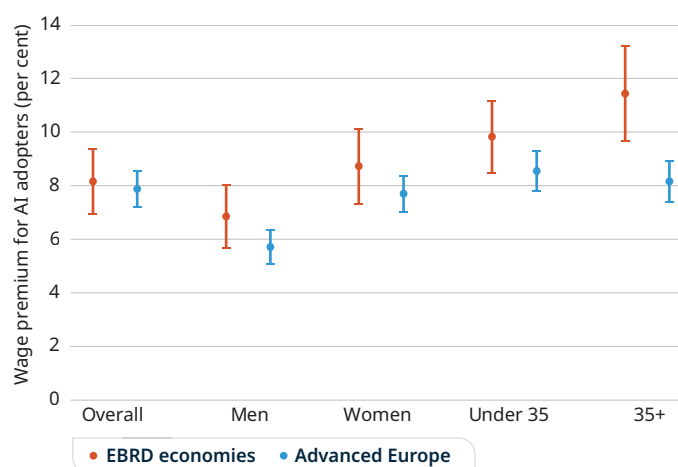
SKILLS AND THE ADOPTION OF ARTIFICIAL INTELLIGENCE

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

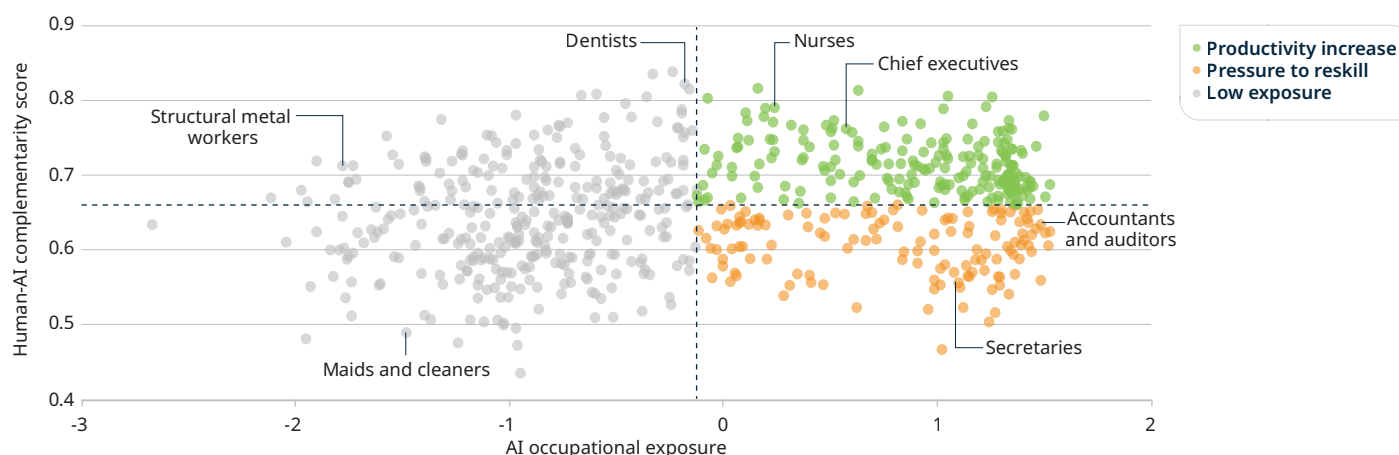
8%

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).

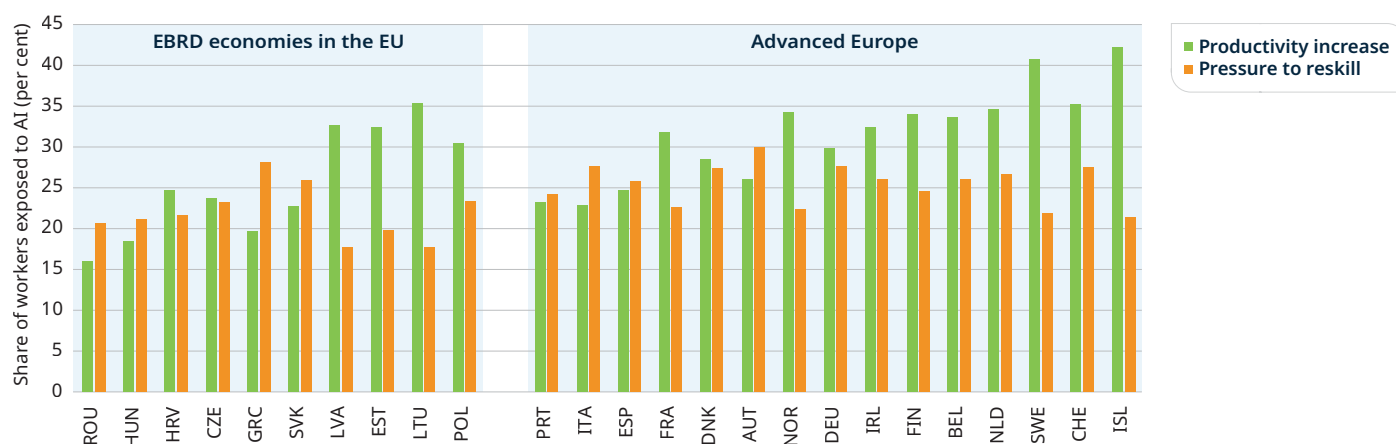
Occupations with high exposure to AI, but also high complementarity between AI and humans – such as managerial or medical roles – are best placed to experience productivity gains. By contrast, in high-exposure occupations with low expected

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

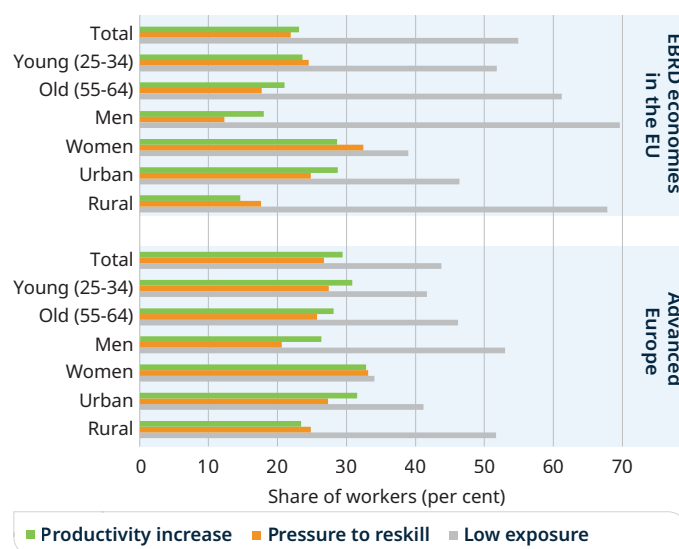


Source: Eurostat (n.d.a) (2023 survey), Felten, Raj and Seamans (2021), O*NET Database rev. 27 (see O*NET, n.d.) and authors' calculations.

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

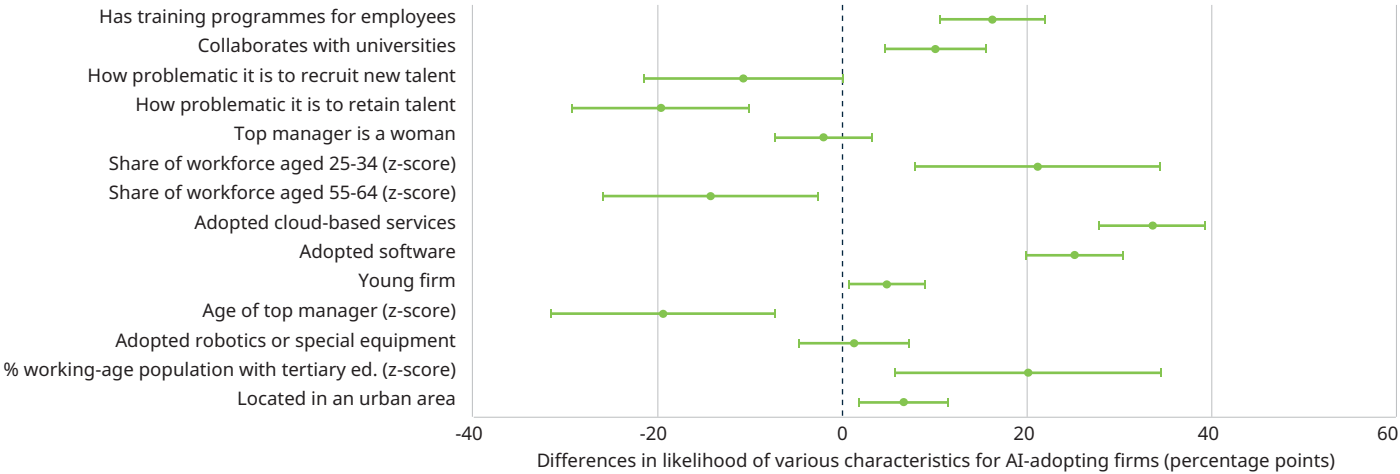
Companies’ use of AI is spreading rapidly around the world, though its adoption remains uneven. In the United States, rates of AI use are markedly higher than in Europe, while firms in EBRD economies in Europe have been slower to adopt AI than those in advanced European economies. These differentials 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).

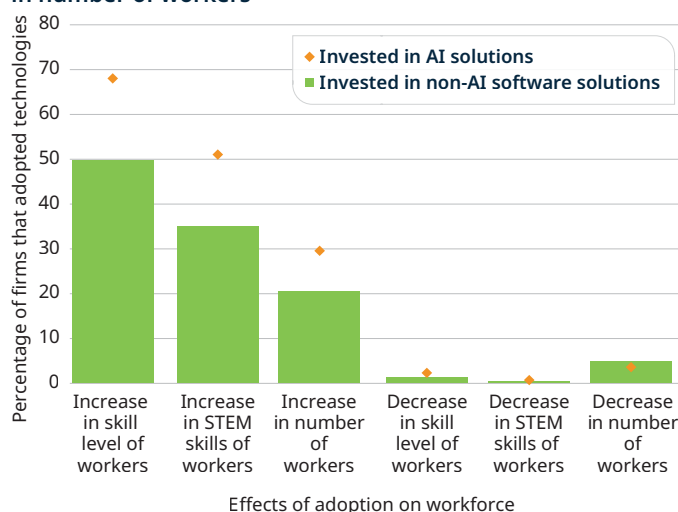
Medium-sized and large firms tend to use AI for workflow automation and decision support, while smaller firms focus on simpler tools, such as customer service chatbots. Advanced applications – for instance, using AI for the physical movement of machines – are virtually absent among small firms (see Chart 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

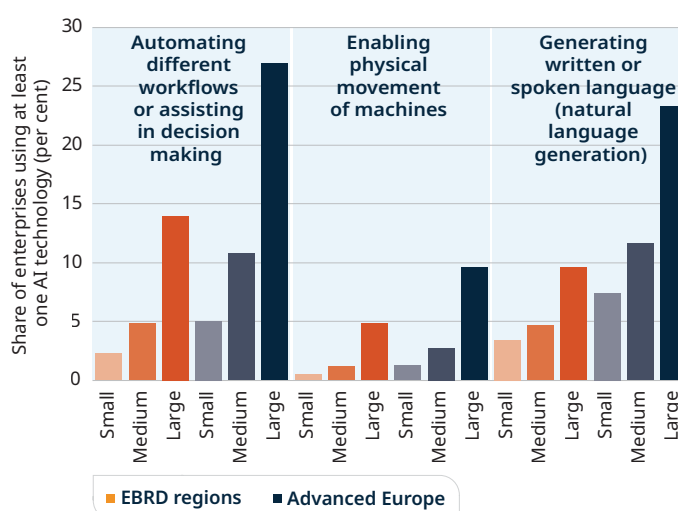
CHART 3.11. Two-thirds of firms adopting AI report an increase in worker skills, while 30 per cent report an increase in number of workers



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.).

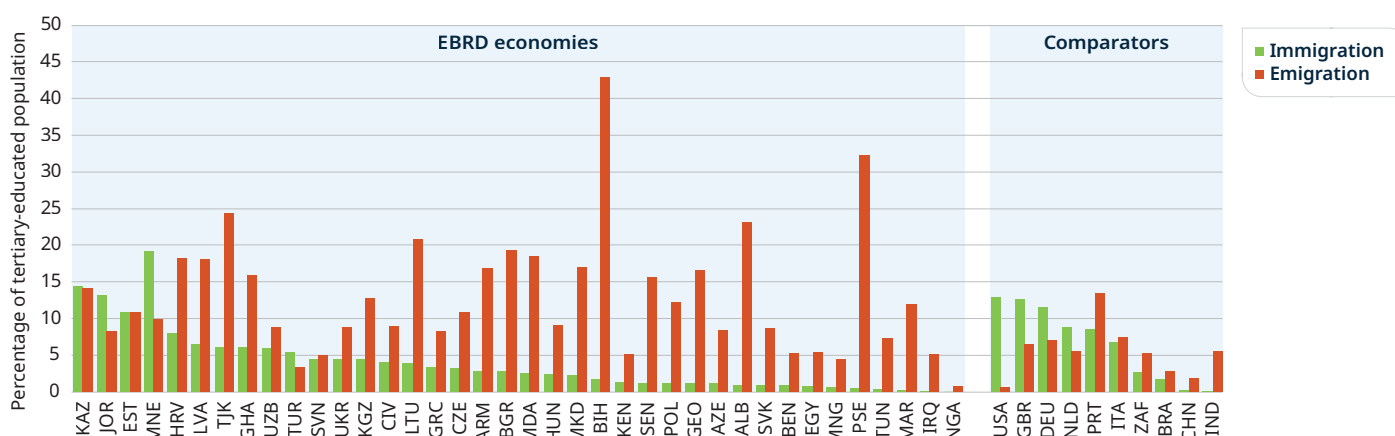
¹⁹ See EBRD (2018).

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

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.

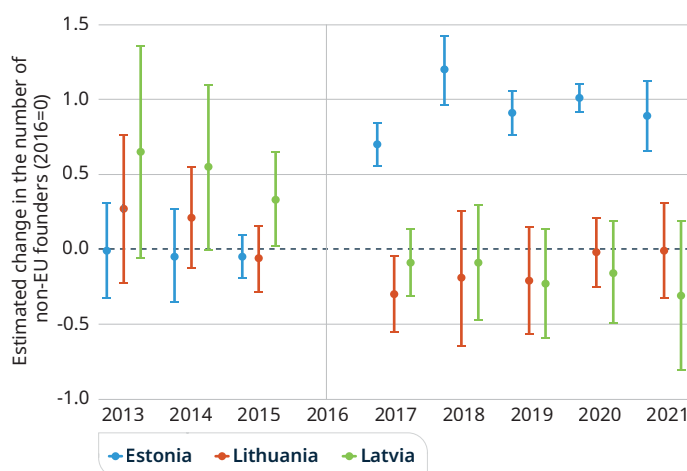
In contrast, Lithuania and Latvia saw no clear impact following the introduction of their programmes. Rather than attracting new entrepreneurs, their startup visas appear to have merely formalised existing migration flows.

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

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.

similar programmes underscore the importance of policy design and local conditions in determining policy success.²⁹

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).



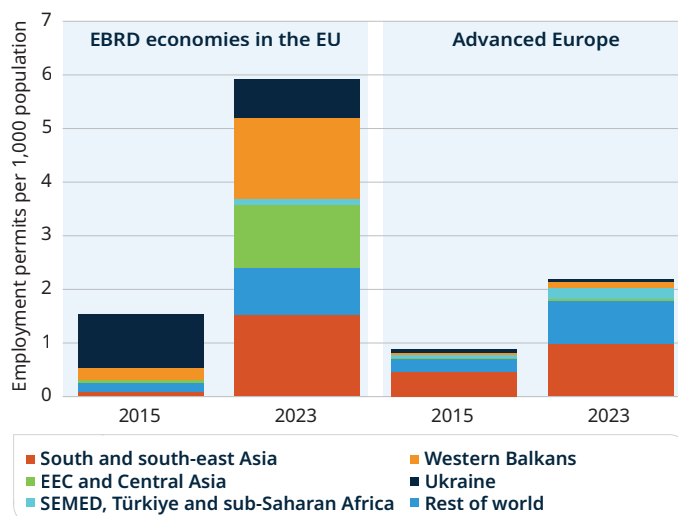
permits went to nationals of EBRD countries outside the EU, primarily Ukraine and countries in the Western Balkans. By 2023, this share had dropped to less than 60 per cent (see Chart 3.15). The gap was filled by workers from other regions, notably south and south-east Asian countries, especially Nepal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

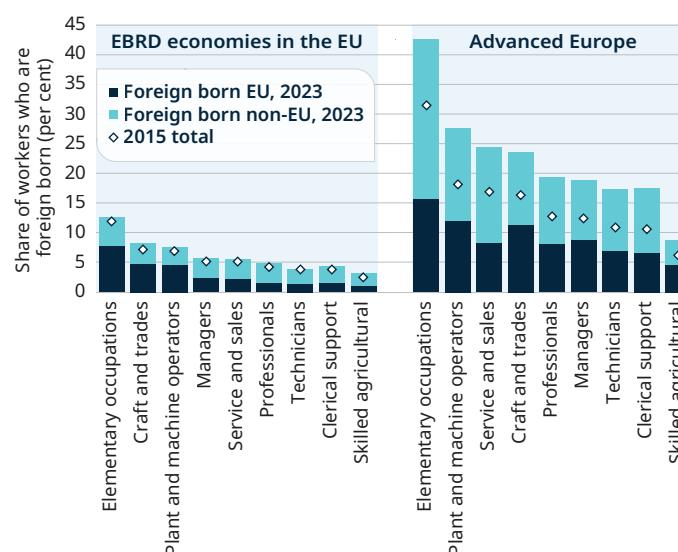
CHART 3.15. The composition of labour immigrants in EBRD economies in the EU is changing



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).

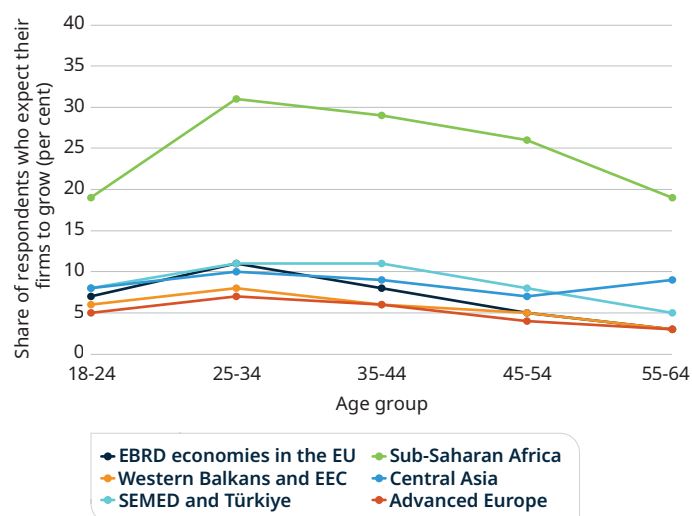
⁴³ See Global Entrepreneurship Research Association (n.d.).

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.

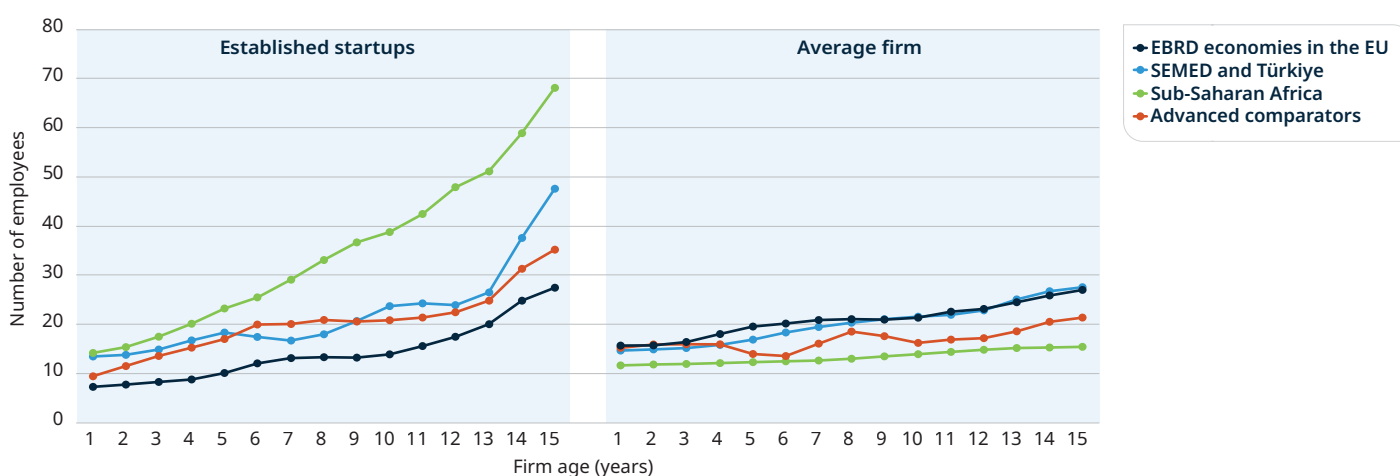
CHART 3.17. One in three people aged 25-34 in sub-Saharan Africa is a business owner with at least one employee and plans to grow in the next five years



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).

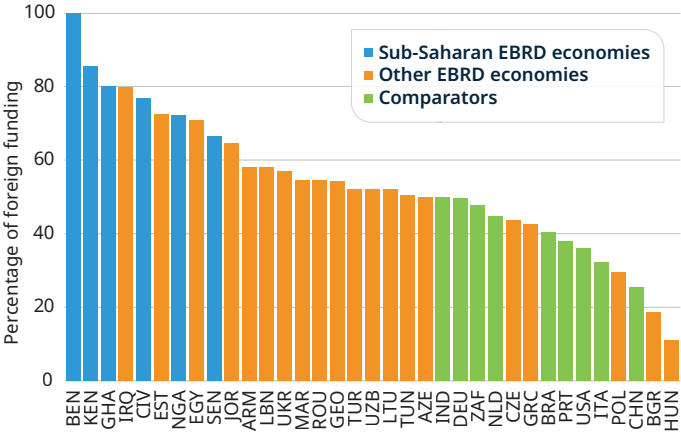
Note: This chart, reproduced from Colonnelli et al. (forthcoming), presents the average number of employees by firm age, using local polynomial smoothing. It incorporates data on established startups from the PitchBook dataset and the World Bank Enterprise Survey dataset. Established startups are defined 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

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

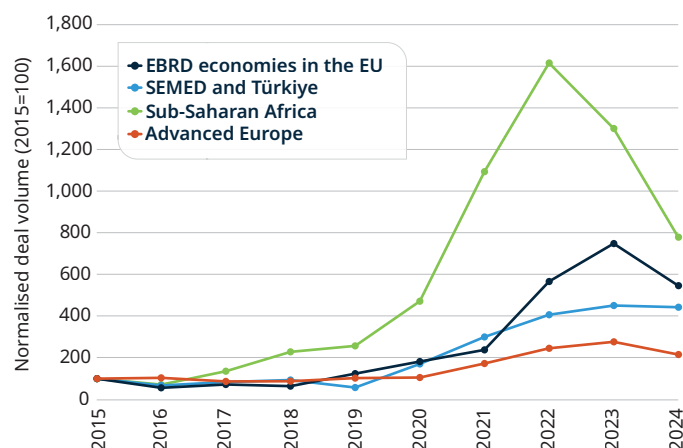
⁴⁷ See IMF (2024)

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.

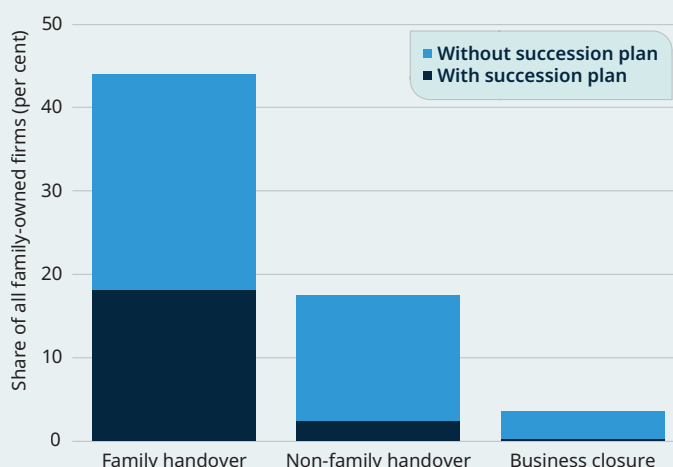
DEMOGRAPHIC CHANGES AND SUCCESSION INTENTIONS IN FAMILY-OWNED FIRMS

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

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.

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.

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.

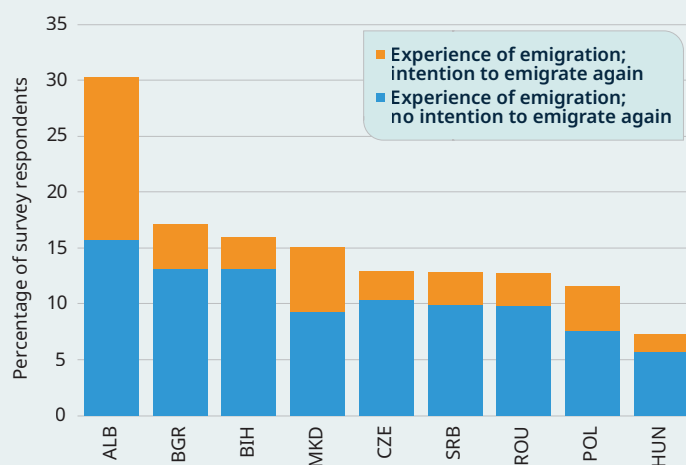
The 2024 wave of the Euro Survey conducted by the Austrian National Bank (OeNB) sheds light on patterns of repeated migration in Albania, Bosnia and Herzegovina, Bulgaria, Czechia, Hungary, North Macedonia, Poland, Romania and Serbia. On average, 15 per cent of respondents report having lived abroad, 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 Duszczuk 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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