

# Better Education for Stronger Growth

Europe and Central Asia Economic Update

Office of the Chief Economist

Fall 2024





WORLD BANK **ECA ECONOMIC UPDATE** FALL 2024

# Better Education for Stronger Growth

Office of the Chief Economist

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1818 H Street NW, Washington, DC 20433  
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ISBN (electronic): 978-1-4648-2185-1  
DOI: 10.1596/978-1-4648-2185-1

Cover design: Lauren Kaley Johnson, Veronica Elena Gadea

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# Acknowledgments

The bi-annual Europe and Central Asia (ECA) Economic Update is a product of ECA's Office of the Chief Economist led by Ivailo Izvorski. It is produced in collaboration with the Education; Macroeconomics, Trade and Investment; and the Poverty and Equity Global Practices, and the Development Economics Vice Presidency. Antonella Bassani, Carolina Sanchez-Paramo and the ECA regional leadership team have provided guidance and inputs during the preparation of the report.

Part 1 was prepared by Ivailo Izvorski and Sergiy Kasyanenko. The authors are grateful for insightful discussions, comments, and inputs to Cindy Audiguier, Florian Blum, Jasmin Chakeri, Andrei Silviu Dospinescu, Bakyt Dubashov, Josip Funda, Steve Loris Gui-Diby, Gohar Gyulumyan, Sandra Hlivnjak, Claire Honore Hollweg, David Stephen Knight, Milan Lakićević, Joana Madjoska, Sanja Madžarević-Sujster, Armineh Manookian, Miguel Eduardo Sanchez Martin, Desislava Enikova Nikolova, Antonio Nucifora, Mustafa Utku Özmen, Catalin Pauna, Nadir Ramazanov, Ilyas Sarsenov, Lazar Šestović, Tihomir Stučka, Eskender Trushin, Bakhrom Ziyaev.

Part 2 was prepared by Michael M. Lokshin and Iván Torre in collaboration with Rafael de Hoyos and Harry Patrinos from the Education Global Practice. Ivailo Izvorski and Rita Almeida provided useful guidance throughout. Useful comments and inputs were provided by Husein Abdul-Hamid, Enrique Alasino, Ciro Avitabile, Renata Freitas Lemos, Nathalie Lahire, Bojana Naceva, Angélica Rivera-Olvera, and Tigran Shmis.

Sandra Gain and Barbara Karni provided editorial support and Michael Alwan typeset the report. Indira Chand, Nicole Frost, Aaron Wesley Korenewsky, Christine Lynch, Marcelo Gonzales Montoya, and Amy Stilwell, provided communications and outreach support. Ekaterina Ushakova oversaw the layout and production of the report.

# Abbreviations

ECA	Europe and Central Asia
ECB	European Central Bank
ECE	early childhood education
EMDEs	emerging markets and developing economies
EU	European Union
FDI	foreign direct investment
GDP	gross domestic product
GVC	global value chain
HICs	high-income countries
MICs	middle-income countries
OECD	Organisation for Economic Co-operation and Development
PISA	Program for International Student Assessment
PPP	purchasing power parity
RRF	Recovery and Resilience Facility
VET	vocational education and training
VIX	Exchange Volatility Index

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# Country codes

Albania	ALB	Montenegro	MNE
Armenia	ARM	Poland	POL
Azerbaijan	AZE	Republic of North Macedonia	MKD
Belarus	BLR	Romania	ROU
Bosnia and Herzegovina	BIH	Russian Federation	RUS
Bulgaria	BGR	Serbia	SRB
Croatia	HRV	Tajikistan	TJK
Georgia	GEO	Türkiye	TUR
Kazakhstan	KAZ	Turkmenistan	TKM
Kosovo	XKX	Ukraine	UKR
Kyrgyz Republic	KGZ	Uzbekistan	UZB
Moldova	MDA		

# Regional classification used in this report

This report covers the emerging markets and developing economies (EMDEs) in Europe and Central Asia (ECA). These are divided into the following groups: Central Asia, Central Europe, Eastern Europe, the Russian Federation, the South Caucasus, Türkiye, and the Western Balkans.

**Central Asia:** Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan

**Central Europe:** Bulgaria, Croatia, Poland, Romania

**Eastern Europe:** Belarus, Moldova, Ukraine

**Russian Federation**

**South Caucasus:** Armenia, Azerbaijan, Georgia

**Türkiye**

**Western Balkans:** Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Republic of North Macedonia, Serbia

# Executive summary

Growth in Europe and Central Asia (ECA) is likely to moderate to 3.3 percent this year, from 3.5 percent in 2023. This level of growth is significantly weaker than the 4.1 percent average growth in 2000–19 and well below the level needed for the region’s middle-income countries to achieve their aspiration to reach high-income status.

Growth slowed this year in half of the ECA countries, including the region’s two largest economies, the Russian Federation and Türkiye. In contrast, growth in Poland, the region’s third largest economy, is projected to rebound to 3.2 percent in 2024, up from just 0.2 percent last year, driven by the strong recovery of household consumption.

Private consumption and supportive fiscal policies are the main drivers of growth across ECA. Private consumption has firmed because of rising real wages and social transfers and strong credit growth in many countries. By contrast, external demand remains less favorable amid weak economic growth in major trading partners, notably in the European Union.

Median annual headline inflation fell to 3.6 percent by August 2024, from 4.6 percent at the end of last year, but it is well above the 2.7 percent average in 2018–19. Goods inflation in most countries fell, while services inflation remained elevated, partly because of sharp increases in labor costs across ECA. Lower inflation prompted some central banks to begin reducing policy interest rates, but the cuts were modest, as policy caution prevailed.

Fiscal adjustment was delayed again in most of the ECA countries this year as spending increases more than offset higher revenues. Spending rose substantially because of large increases in public sector salaries and minimum wages, pensions, social benefits, and defense outlays.

Growth in ECA is likely to fall to 2.6 percent next year because of the sharp slowdown in growth in Russia. Excluding Russia, growth should remain broadly unchanged at 3.2 percent in 2025, before firming to 3.7 percent in 2026. Further declines in inflation, together with robust income growth and a gradual economic rebound in key trading partners, are likely to support recovery across the region.

Substantial downside risks to the outlook persist, however. They include a further escalation of global and regional geopolitical tensions, a slower return of inflation to central bank targets, and weaker growth in the European Union and Russia.

Diminished growth expectations for ECA imply slower income convergence with high-income economies. The misallocation and shortage of talent are becoming an increasingly binding constraint, limiting many firms’ ability to invest; bring in modern technologies, capital, and expertise from abroad; and innovate. Well-educated and productive workers are essential for convergence to high-income status, an ambition of most of the countries in the region.

Part II of this update focuses on talent and human capital. It outlines reforms and policies that can help to unlock the enormous creative power of the region’s people, which is critical to spurring economic growth and development.

The countries of ECA are rightfully proud of their educational accomplishments. The region has made considerable progress in ensuring broad access to schooling, with children attending school for an average of 12.6 years—surpassing many other developing regions. Enrollment in higher education is also high, and the average gross graduation rate for tertiary education (40 percent) exceeds the world average (31 percent).

The main challenge that most of the ECA countries face is not enrollment but the quality of education, which has fallen in recent years. Test scores on the Program for International Student Assessment, which is administered to 15-year-old high school students, have declined over the past decade, particularly after the COVID-19 pandemic. In many countries in the region, the number of instructional hours per year is significantly below that of Organisation for Economic Co-operation and Development countries. Gaps in the quality of basic (primary and secondary) education are particularly large for students from disadvantaged backgrounds. Many students are tracked into vocational education systems that do not provide foundational skills or prepare them for entry into the labor market.

Higher education is underperforming even more than basic education. Countries in other developing regions with a similar quality of basic education or a similar per capita income level have much better universities. Only nine institutions in ECA appear in the list of the world's top 500 Times Higher Education ranking of world universities. "Academic capture," poor management, outdated curricula, lack of funding, and poor infrastructure underpin the low quality of higher education. Inadequate management of large public universities often caters to a shrinking student pool. Many higher education systems are underfunded and lack proper infrastructure, such as research labs and adequate classrooms.

The skills mismatch between higher education and the needs of the labor market is also a reflection of poor educational quality. Employers often report that graduates lack essential soft skills, such as teamwork and communication, as well as technical skills specific to their industries. The mismatch between education and the needs of the labor market results in a significant waste of human potential in ECA and is partly behind the brain drain affecting many of the region's countries.

To reverse the decline in educational quality, countries need to focus on improving teacher training; providing accurate academic information to teachers, principals, and families; updating curricula; and investing in educational infrastructure. At the higher education level, consolidating the university system could improve quality, reduce expenses, and facilitate adjustment to demographic changes. Integrating research centers into the higher education system could improve its innovation capacity. Young people who are not in education, employment, or training need to be engaged in productive or educational activities. By prioritizing high-quality education and supporting lifelong learning, ECA countries can reduce talent misallocation and waste and drive sustainable economic growth and development.

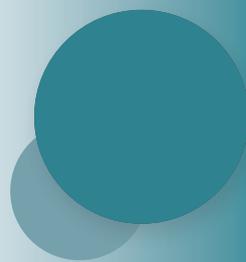
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PART

# Recent Developments, Policies, and Outlook







## Recent economic developments

### Growth is stabilizing at a modest pace

Economic growth in Europe and Central Asia (ECA) is likely to moderate to 3.3 percent in 2024, below the 3.5 percent in 2023 (table 1.1). The current forecast for 2024 is 0.3 percentage point higher than the June projection, owing to firmer domestic demand in many countries. Nonetheless, it remains well below the 4.1 percent average annual growth in 2000–19 and weaker than what is needed for faster convergence to high income across the middle-income countries of ECA.

Excluding Poland, the Russian Federation, and Türkiye, the three largest countries in the region, which account for three-fourths of regional gross domestic product (GDP), ECA's growth is set to moderate to 3.4 percent in 2024, from 3.7 percent in 2023.

Stronger private consumption and supportive fiscal policies are the main drivers of growth across ECA. Private consumption has firmed because of the higher real wages, robust social transfers, and strong credit growth in many countries. Government spending was boosted by hikes in public sector wages and transfers to households and higher public investment and defense outlays. External drivers of growth remain less favorable amid weak economic expansion in major trading partners, notably in the European Union (box 1.1). The recovery in goods exports has weakened, especially in countries that rely on European automobile chains, such as those in Central Europe and the Western Balkans.

On the production side, growth has been bolstered by a continued strong expansion of tourism. Across ECA, the number of international tourist arrivals surpassed pre-pandemic levels in 2023 and rose further in 2024. Türkiye saw almost 30 percent more tourists arriving during the first half of this year, compared to the same period in 2018–19 on average. In Central Europe and the Western Balkans, the number of tourists is higher than the 2018–19 levels as well, for example, over 80 percent higher in Albania and 15 percent higher in Bulgaria.



**TABLE 1.1. Europe and Central Asia economic growth summary, by subregion, 2021–26***(Real GDP growth at market prices in percent, unless indicated otherwise<sup>a</sup>)*

	2021	2022	2023	2024 <sup>e</sup>	2025 <sup>f</sup>	2026 <sup>f</sup>	Percentage point difference from June 2024 projection		
							2024 <sup>e</sup>	2025 <sup>f</sup>	2026 <sup>f</sup>
<b>ECA</b>	<b>7.3</b>	<b>1.6</b>	<b>3.5</b>	<b>3.3</b>	<b>2.6</b>	<b>2.7</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>
ECA excl. the Russian Federation	<b>8.3</b>	<b>3.4</b>	<b>3.4</b>	<b>3.3</b>	<b>3.2</b>	<b>3.7</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>
ECA excl. Poland, the Russian Federation, and Türkiye	6.1	0.0	3.7	3.4	3.5	3.8	0.1	0.0	0.0
Central Europe <sup>b</sup>	7.1	5.3	0.9	2.9	3.4	3.3	-0.1	-0.1	0.0
Western Balkans <sup>c</sup>	7.9	3.4	2.6	3.3	3.7	3.8	0.1	0.2	0.0
Eastern Europe <sup>d</sup>	3.6	-20.0	4.5	3.5	1.8	4.6	1.1	-2.4	1.2
South Caucasus <sup>e</sup>	6.7	7.3	3.7	4.6	3.7	3.4	1.1	0.2	0.0
Central Asia <sup>f</sup>	5.4	4.3	5.6	4.3	5.0	4.2	0.2	0.1	0.0
Russian Federation	5.9	-1.2	3.6	3.2	1.6	1.1	0.3	0.2	0.0
Türkiye	11.4	5.5	5.1	3.2	2.6	3.8	0.2	-1.0	-0.5
Poland	6.9	5.6	0.2	3.2	3.7	3.4	0.2	0.3	0.2
Ukraine	3.4	-28.8	5.3	3.2	2.0	7.0	0.0	-4.5	1.9

Source: World Bank.

Note: e = estimate; ECA = Europe and Central Asia; f = forecast; GDP = gross domestic product.

a. Aggregates are calculated using GDP measured in average 2010–19 prices and market exchange rates.

b. Includes Bulgaria, Croatia, Poland, and Romania.

c. Includes Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia.

d. Includes Belarus, Moldova, and Ukraine.

e. Includes Armenia, Azerbaijan, and Georgia.

f. Includes Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan.

In Russia, tighter monetary policy and increasingly binding constraints on production capacity and labor resources are expected to slow growth to 3.2 percent in 2024, from 3.6 percent in 2023 (table 1.2). Growth remains well above potential because of buoyant consumer sentiment, higher real incomes, and substantial increases in government spending, including on defense and infrastructure.

The normalization of monetary and fiscal policies in Türkiye is helping to restore macroeconomic stability as inflation pressures gradually ease, domestic demand cools, and external vulnerabilities lessen. Growth is set to slow to 3.2 percent in 2024, from 5.1 percent in 2023, as the economy rebalances from the consumption-led expansion. Growth of retail sales has already slowed to single digits, while expansion of industrial production has weakened further amid weaker domestic demand and slowing exports (figure 1.1).

In Poland, growth is expected to jump to 3.2 percent in 2024, from just 0.2 percent last year. Rising real incomes and large increases in public sector wages and social benefits supported a rapid recovery of household consumption, which is projected to grow by almost 5 percent this year, following a 1 percent drop in 2023. Government spending boosted growth as well amid record high defense outlays and the utilization of previously frozen EU funds.

## BOX 1.1 Global growth: Resilient but modest

Global growth is stabilizing after a series of overlapping crises. Compared to the decade before the COVID-19 pandemic, however, growth this year is projected to be half a percentage point lower. This reflects lackluster recovery of global trade and investment and headwinds from the expected tightening of fiscal policies. Investment growth is likely to remain weak because of high borrowing costs, elevated policy uncertainty, and rising geopolitical risks. As labor markets cool, growth of consumption is likely to moderate. The subdued global outlook also reflects slowing potential growth in many economies amid the enduring impacts of past shocks.

The Consensus forecast points to global growth of 2.7 percent in 2024. Growth projections for the United States for 2024 were raised to 2.5 percent. Growth in the euro area is expected to remain weak at 0.7 percent. The economic expansion in emerging markets and developing economies (EMDEs) is likely to remain broadly unchanged (table B1.1.1).

Major central banks have started cutting policy interest rates as inflation has declined substantially (figure B1.1.1). Despite the decline, inflation is still above target in many economies. Moderating supply chain disruptions, falling global commodity prices, and continued cooling of labor markets should help to support disinflation this year and next and bring inflation back to targets. By the end of 2026, global inflation is projected to fall to an average rate of 2.8 percent.

Global growth is expected to remain little changed next year, at 2.6 percent, with slowing growth in China offsetting stronger recoveries in other EMDEs. Growth in the euro area is forecast to improve to 1.3 percent in 2025.

Risks to global growth are broadly balanced. On the downside, elevated geopolitical uncertainty, wars, and conflict dominate. Further escalation of trade fragmentation and the spread of inward-looking policies could lead to more disruptions to trade and global supply chains.

**TABLE B1.1.1. Consensus growth forecasts**

	September 2024 survey		Difference from the June survey	
	2024	2025	2024	2025
World	2.7	2.6	0.1	-0.1
EMDEs	4.2	4.1	0.0	0.0
EMDEs excl. China	3.6	3.9	0.1	-0.1
China	4.8	4.4	-0.2	0.0
High-income economies	1.6	1.6	0.1	0.0
United States	2.5	1.7	0.2	-0.1
Euro area	0.7	1.3	0.0	-0.1
Germany	0.1	0.8	-0.2	-0.4

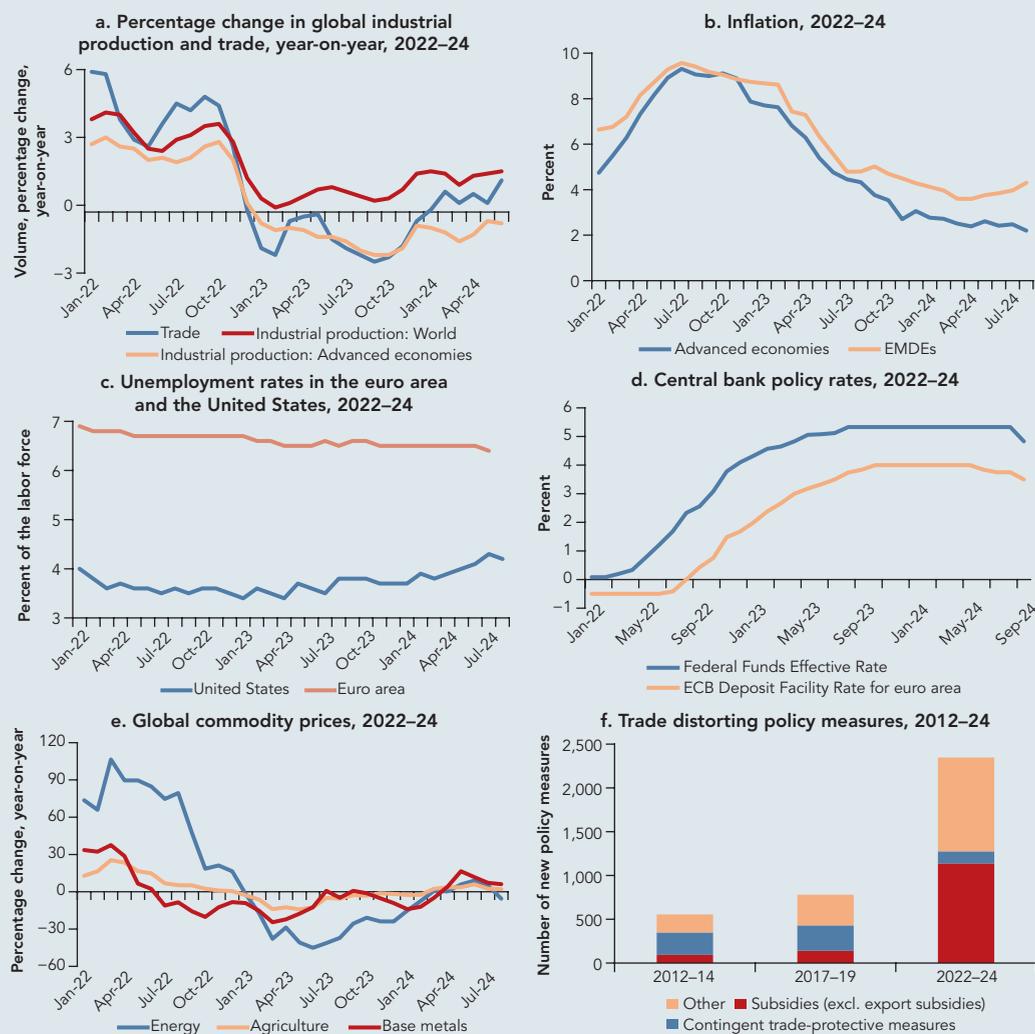
Sources: Consensus Economics; World Bank.

Note: Forecasts are from the Consensus Forecast survey. The sample includes 88 economies. Aggregates are calculated using real US dollar gross domestic product weights at average 2015 prices and market exchange rates. The last observation is September 2024. EMDEs = emerging markets and developing economies.

(continued next page)

## BOX 1.1 (continued)

FIGURE B1.1.1. Global outlook



Sources: CPB Netherlands Bureau for Economic Policy Analysis; European Central Bank; Eurostat; Global Trade Alert, database; Haver Analytics; Federal Reserve; US Bureau of Labor Statistics; World Bank.

Note: ECB = European Central Bank; EMDEs = emerging markets and developing economies.

a. Three-month moving averages. The last observation is June 2024.

b, c, e. The last observation is August 2024.

b. The aggregates are medians. The sample includes 32 high-income economies and 103 EMDEs. The sample is smaller for the most recent observations.

d. The last observation is September 2024.

f. The bars show implemented interventions that discriminate against foreign commercial interests. Contingent trade-protective measures include trade defense instruments, such as safeguard investigations and anti-circumvention, antidumping, and countervailing measures. Subsidies cover state loans, financial grants, loan guarantees, production subsidies, and other forms of state support, excluding export subsidies.

**TABLE 1.2. Europe and Central Asia economic growth summary, by country, 2021–26***(Real GDP growth at market prices in percent, unless indicated otherwise)*

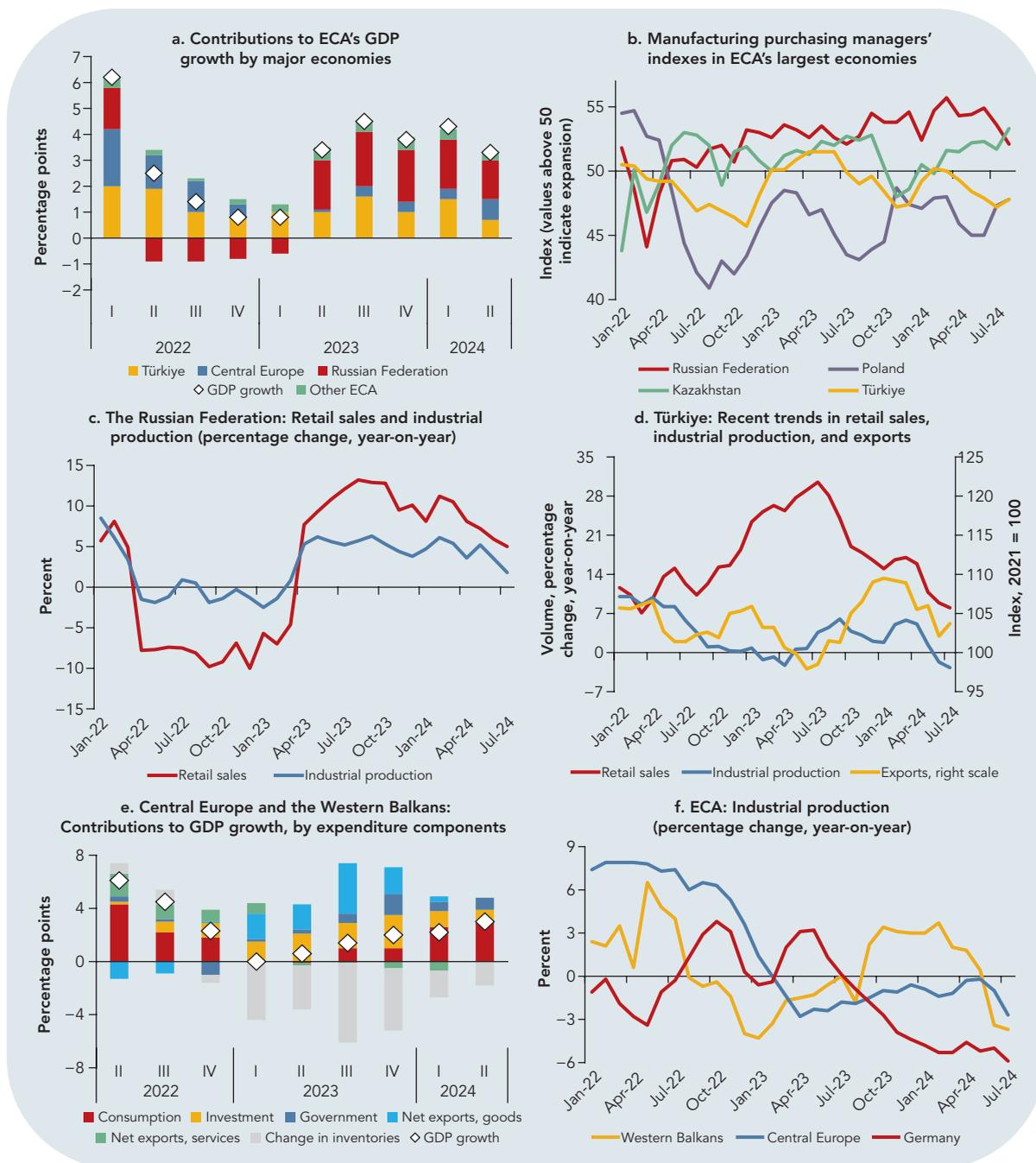
Country	2021	2022	2023	2024 <sup>e</sup>	2025 <sup>f</sup>	2026 <sup>f</sup>	Percentage point difference from June 2024 projection		
							2024 <sup>e</sup>	2025 <sup>f</sup>	2026 <sup>f</sup>
Albania	8.9	4.9	3.4	3.3	3.4	3.4	0.0	0.0	-0.1
Armenia	5.8	12.6	8.3	5.5	5.0	4.6	0.0	0.1	0.1
Azerbaijan	5.6	4.6	1.1	3.2	2.7	2.4	0.9	0.3	0.0
Belarus	2.4	-4.7	3.9	4.0	1.2	0.8	2.8	0.5	0.3
Bosnia and Herzegovina	7.3	3.8	1.6	2.8	3.2	3.9	0.2	-0.1	-0.1
Bulgaria	7.7	3.9	1.8	2.2	2.8	2.7	0.1	-0.3	0.0
Croatia	13.0	7.0	3.1	3.5	3.0	2.8	0.5	0.2	0.1
Georgia	10.6	11.0	7.5	7.5	5.2	5.0	2.3	0.2	0.0
Kazakhstan	4.3	3.2	5.1	3.4	4.7	3.5	0.0	0.0	-0.1
Kosovo	10.7	4.3	3.3	3.8	3.9	4.0	0.1	0.0	0.1
Kyrgyz Republic	5.5	9.0	6.2	5.8	4.5	4.5	1.3	0.3	0.5
Moldova	13.9	-4.6	0.7	2.8	3.9	4.5	0.6	0.0	0.0
Montenegro	13.0	6.4	6.3	3.4	3.5	3.2	0.0	0.7	0.2
North Macedonia	4.5	2.2	1.0	1.8	2.5	3.0	-0.7	-0.4	0.0
Poland	6.9	5.6	0.2	3.2	3.7	3.4	0.2	0.3	0.2
Romania	5.7	4.1	2.1	2.0	2.7	3.5	-1.3	-1.1	-0.3
Russian Federation	5.9	-1.2	3.6	3.2	1.6	1.1	0.3	0.2	0.0
Serbia	7.7	2.5	2.5	3.8	4.2	4.0	0.3	0.4	0.0
Tajikistan	9.4	8.0	8.3	7.2	5.5	5.0	0.7	1.0	0.5
Türkiye	11.4	5.5	5.1	3.2	2.6	3.8	0.2	-1.0	-0.5
Ukraine	3.4	-28.8	5.3	3.2	2.0	7.0	0.0	-4.5	1.9
Uzbekistan	8.0	6.0	6.3	6.0	5.8	5.9	0.7	0.3	0.2

Source: World Bank.

Note: e = estimate; f = forecast; GDP = gross domestic product.

In the South Caucasus, growth is estimated at 4.6 percent in 2024, the fastest pace of expansion among all ECA subregions, with a 1.1 percentage point improvement from the June forecast. In Azerbaijan, growth is likely to be substantially stronger than in 2023 because of large public investment. In Armenia and Georgia, growth is expected to remain well above the potential level, driven by household consumption, investment, and government spending. However, in Armenia, growth is expected to ease to 5.5 percent this year, from 8.3 percent in 2023, partly because of the normalization of migration, tourist arrivals, and remittance inflows from the Russian Federation.

Central Asia is projected to grow by 4.3 percent in 2024, down from 5.6 percent a year ago. Growth in Kazakhstan is expected to slow to 3.4 percent in 2024, from 5.1 percent in 2023, amid the delayed expansion of the Tengiz oil field and a tighter fiscal stance. Elsewhere in Central Asia, growth estimates were revised upward by almost 1 percentage point on average, reflecting firming

**FIGURE 1.1. Recent developments: GDP growth, 2022–24**

Sources: Eurostat; Haver Analytics; National Statistical Offices; World Bank.

Note: ECA = Europe and Central Asia; GDP = gross domestic product.

a, e. Aggregates are calculated using GDP measured in average 2010–19 prices and market exchange rates. The last observation is Q2 2024.

a. Sample includes 15 countries representing over 92 percent of the aggregate regional GDP.

b. The last observation is August 2024.

c. Real retail sales are calculated as nominal retail sales adjusted by the Consumer Price Index. The last observation is July 2024.

d. Retail sales and industrial production are three-month moving averages; exports are six-month moving averages. The last observation is July 2024.

f. Central Europe includes Bulgaria, Croatia, Poland, and Romania; the Western Balkans include Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia. The values are three-month moving averages. The last observation is July 2024.

consumption, higher government spending, as well as continued support from remittances and trade with Russia. Despite these upgrades, per capita growth in Central Asia is projected at only 2.7 percent this year—the slowest rate of growth of all the ECA subregions other than Türkiye.

A consumption-led recovery is taking hold across Central Europe and the Western Balkans, buoyed by stronger real incomes and increased government spending on public salaries, pensions, and social benefits. Compared to 2023, growth in Central Europe is up by 2 percentage points in 2024, to 2.9 percent, and by 0.7 percentage point in the Western Balkans to 3.3 percent. Resilient domestic services and construction more than offset the sluggish performance of export-dependent manufacturing. However, growth eased in a few countries. In Romania, growth this year is projected at 2 percent, or half the rate in 2000–19 on average, because of the slow absorption of EU funds, cost pressures in manufacturing, as well the impact of severe droughts. Growth in Montenegro almost halved in 2024, to 3.4 percent, reflecting weaker exports, including tourism, as well as slowing remittance inflows.

In Ukraine, substantial damage from Russia’s invasion and extensive electricity disruptions are likely to slow growth to 3.2 percent in 2024, from 5.3 percent in 2023.

## Consumption leads the economic expansion

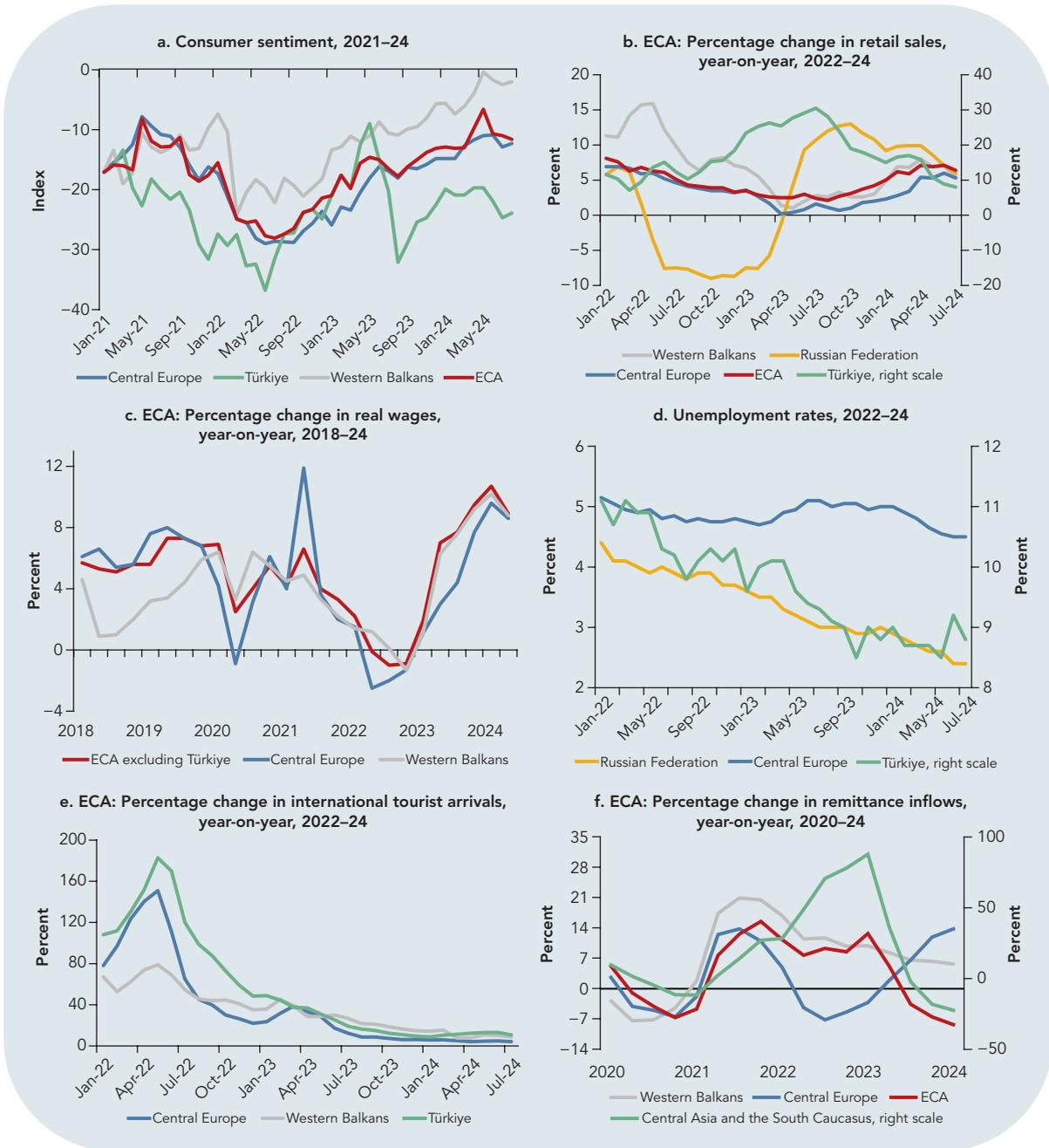
Consumption growth in ECA is likely to remain broadly unchanged at 4.6 percent this year, but up from the 3.2 percent expansion projected in June. For most countries, the projections for consumption growth are higher than they were in June. In Central Europe, in particular, consumption growth is projected to rebound to 4.6 percent on average, up from 2.6 percent in 2023.

Rising real wages and robust government transfers to households are sustaining consumption in ECA. Median real wages grew by over 9 percent on average during the first half of 2024, compared to a decline of almost 1 percent in 2022, the year of the cost-of-living crisis. Increased government social benefits, public sector salaries, and hikes in minimum wages reflected electoral spending surges in many countries.

Remittance inflows are above pre-pandemic levels, and they continue to contribute to resilient consumption and growth in many countries. In the first quarter of this year, remittances to ECA, excluding Russia and Ukraine, grew by about 7 percent, compared to the same quarter a year ago, to nearly US\$15 billion. However, the growth of remittances has slowed recently, especially in Central Asia, the South Caucasus, and the Western Balkans.

Robust growth of consumer credit is sustaining household consumption as well (figure 1.3). Most banks in ECA have ample liquidity, and consumer confidence has improved. Subsidized lending in some countries has also supported credit growth. Meanwhile, in Türkiye, tighter monetary policy is beginning to curb demand for credit, with mortgage-financed home sales falling by more than 50 percent during the first seven months of this year compared to January–July 2023. In Russia, the end of the mortgage subsidy in July cooled mortgage lending as well.

**FIGURE 1.2. Recent developments: Consumption**



Sources: European Commission; Eurostat; Haver Analytics; International Monetary Fund; National Statistical Offices; World Bank.

Note: ECA = Europe and Central Asia.

a. The aggregates are medians. The last observation is August 2024.

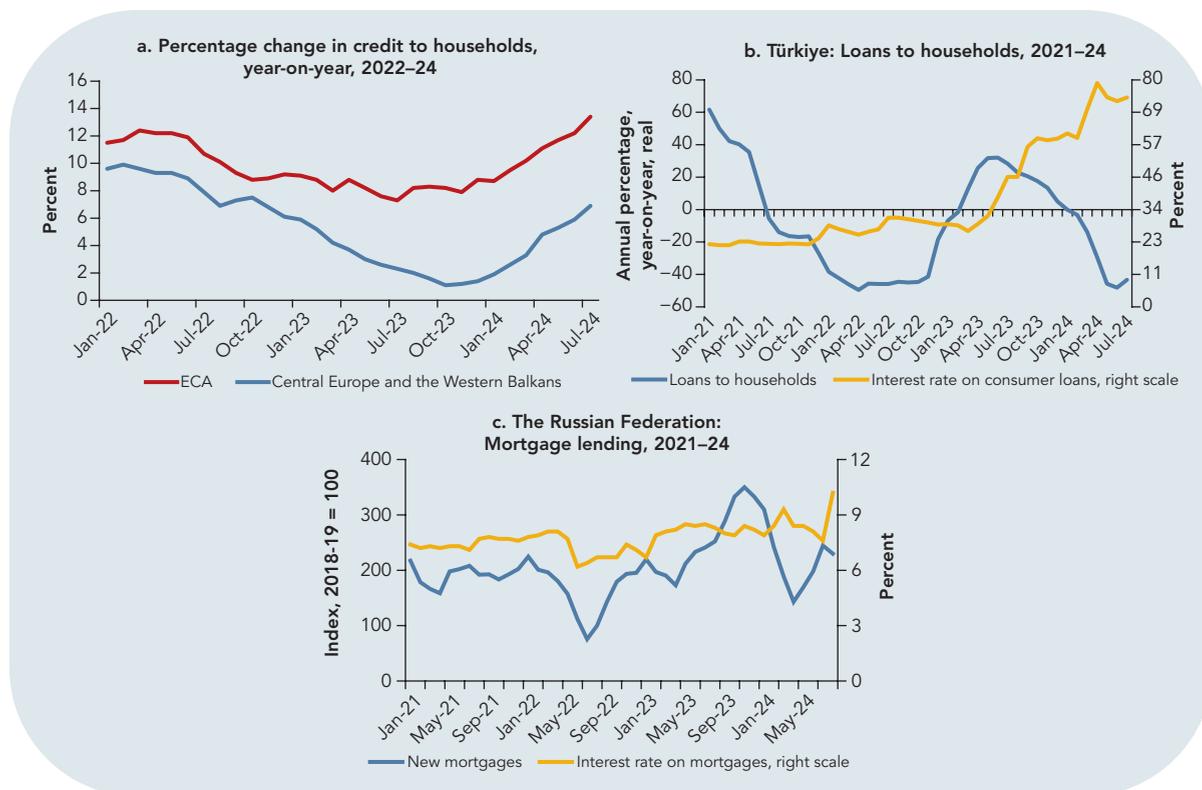
b. Three-month moving averages. The aggregates are medians. Central Europe includes Bulgaria, Croatia, Poland, and Romania; the Western Balkans include Montenegro and Serbia. For Central Europe and the Western Balkans retail sales exclude car sales. Real retail sales in the Russian Federation are calculated as nominal retail sales adjusted by the Consumer Price Index. The last observation is July 2024.

c. The aggregates are medians. Real percentage annual change is nominal growth of wages minus the inflation rate. The last observation is Q2 2024.

d. The aggregate for Central Europe is the median of Bulgaria, Croatia, Poland, and Romania. The last observation is July 2024.

e. The aggregates are medians. Values are the annual percentage change in the rolling six-month total arrivals of international tourists. The last observation is July 2024.

f. Annual percentage change in the rolling four-quarter total of gross remittance inflows. Remittance inflows are the sum of personal transfers and compensation of employees. The sample includes 18 ECA countries. The last observation is Q1 2024.

**FIGURE 1.3.** Recent developments: Consumer loans

Sources: Haver Analytics; national central banks; World Bank.

Note: ECA = Europe and Central Asia.

a. The aggregates are medians. The sample includes eight ECA countries. Central Europe and the Western Balkans include Albania, Montenegro, Poland, Romania, and Serbia. The last observation is July 2024.

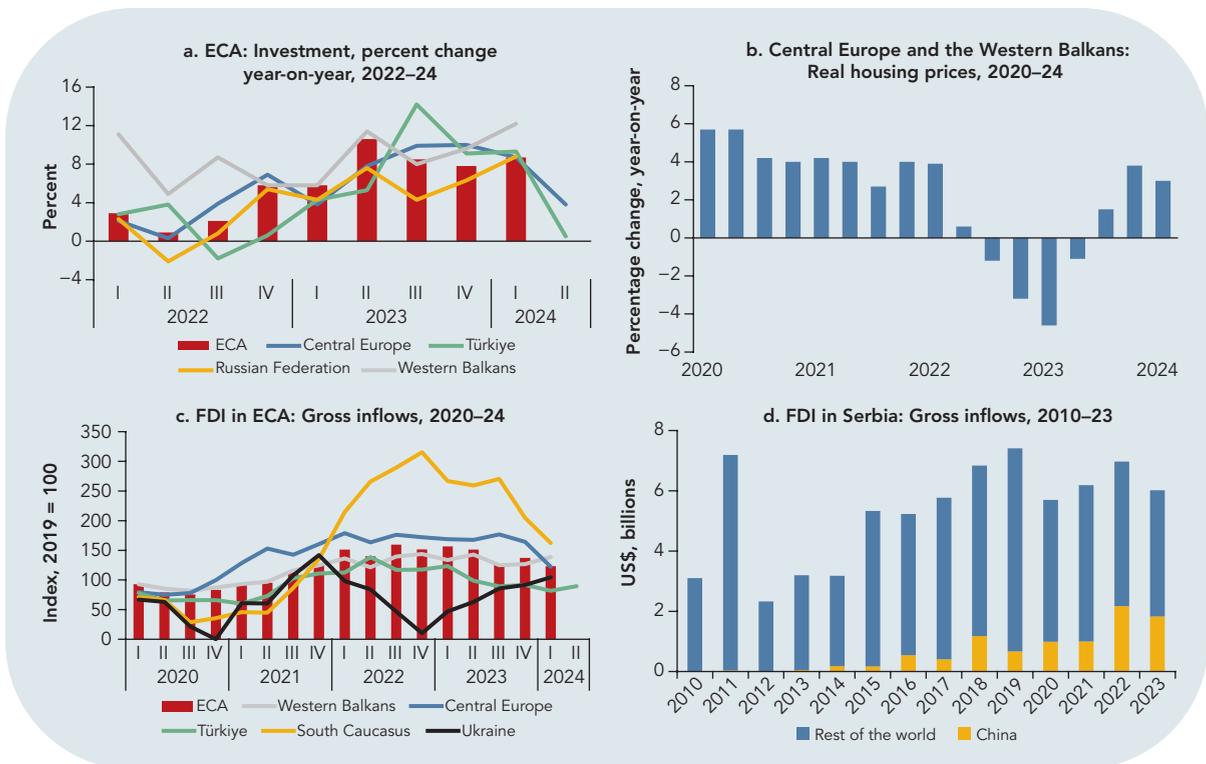
b. Real percentage annual change is nominal growth of credit to households minus the inflation rate. The last observation is July 2024.

c. New mortgages are three-month moving averages. The last observation is August 2024.

## Investment spending is slowing

After a strong pickup in 2023, real growth of fixed investment has moderated this year (figure 1.4). Gross fixed capital formation in ECA, excluding war-hit Ukraine, is projected to grow by 7 percent in 2024 on average, down from about 12 percent a year ago. Investment growth is set to weaken in more than half the countries in the region. Investment growth also slowed sharply in Türkiye because of high borrowing costs, cuts to public investment, and further cooling of construction activity.

In Central Europe, last year's high growth rates in civil construction have slowed in 2024, reflecting lower absorption of EU funds and project delays. However, in Croatia, which has the second highest ratio of EU funding to GDP, investment growth strengthened as progress in achieving EU targets unlocked access to more financing. Meanwhile, in Bulgaria, investment growth may turn negative this year as slow progress on reforms has delayed access to EU funds, and the government may need to curb public investment spending to keep the deficit within 3 percent of GDP. By contrast, investment growth across the Western Balkans is expected to strengthen to about 6.5 percent on average, from 2.7 percent in 2023.

**FIGURE 1.4. Recent developments: Investment**

Sources: Eurostat; Federal Reserve Bank of St. Louis; International Monetary Fund; National Bank of Serbia; World Bank.

Note: ECA = Europe and Central Asia; FDI = foreign direct investment.

a. The aggregates are medians. Investment refers to gross fixed capital formation. The last observation is Q2 2024.

b. Median for Bulgaria, Croatia, North Macedonia, Poland, Romania, and Serbia. The last observation is Q1 2024.

c. Rolling four-quarter gross FDI inflows. The aggregates are medians. ECA excludes the South Caucasus. The last observation is Q2 2024.

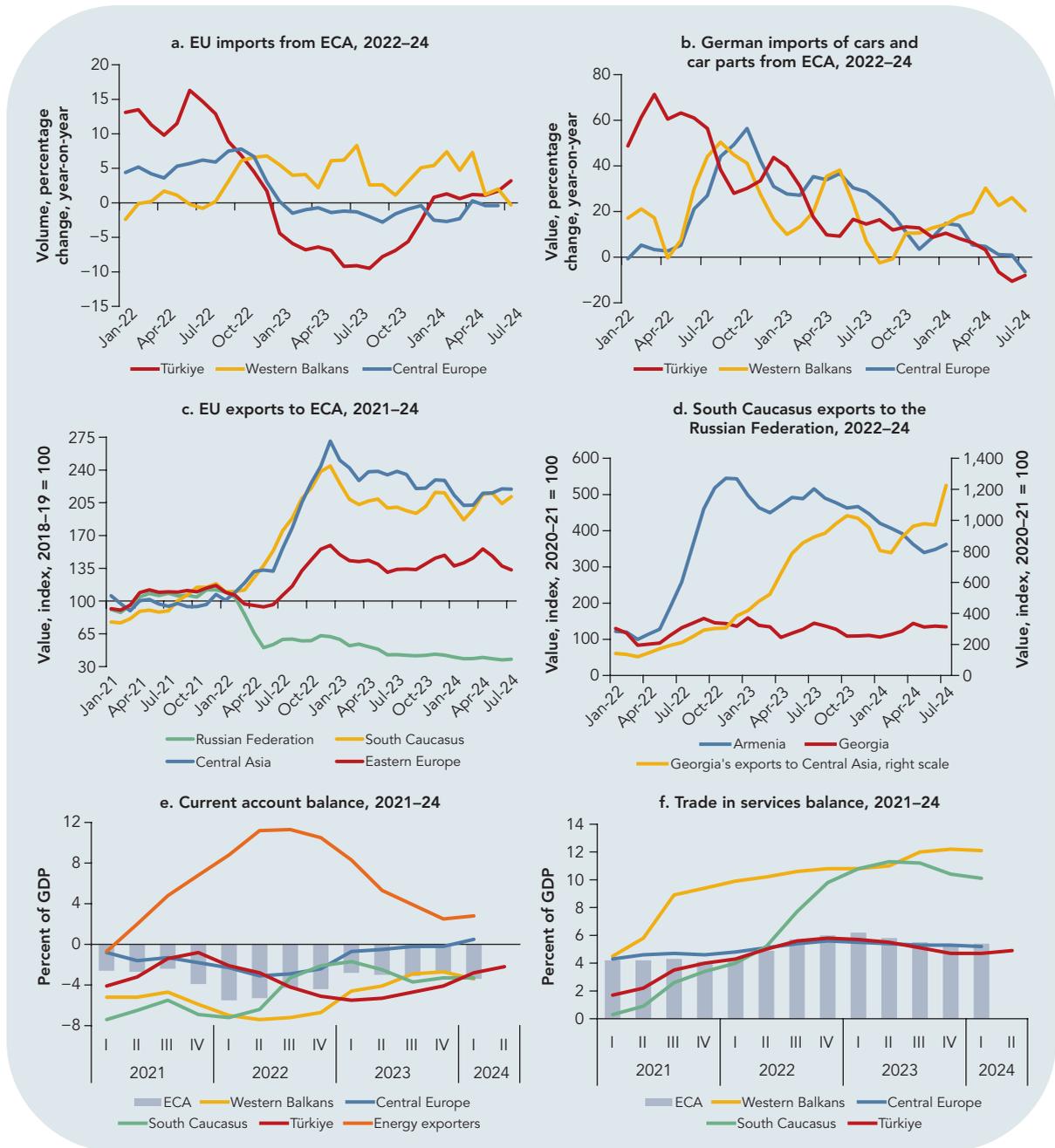
Rising public capital expenditure, subsidized loans, and targeted lending by state-owned banks in some countries have supported investment activity in Central Asia, Eastern Europe, and the South Caucasus.

Inflows of foreign direct investment (FDI) have remained subdued in ECA this year amid weak investor sentiment, geopolitical tensions, and sluggish export-dependent manufacturing. There are some bright spots, with FDI inflows to the Western Balkans up by over 30 percent in the first quarter of this year, reaching a record high US\$3 billion. China is emerging as a major foreign investor in the Western Balkans, financing projects in mining and infrastructure. In Serbia, China is the largest foreign investor, accounting for over 30 percent of all FDI inflows since 2022, twice its share during 2018–21.

### Exports have been subdued

Weak demand in key trading partners, particularly in the European Union, has continued to weigh on export recoveries in Central Europe and the Western Balkans. Developments in the German car industry together with rising labor costs, especially in Central Europe, are creating headwinds for ECA car exporters (figure 1.5).

**FIGURE 1.5. Recent developments: External sector**



Sources: Eurostat; Federal Statistical Office of Germany; International Monetary Fund; National Statistics Office of Georgia; Statistical Committee, Republic of Armenia; World Bank.

Note: ECA = Europe and Central Asia; EU = European Union.

a, b, c, d. The aggregates are medians. Three-month moving averages. The last observation is July 2024.

c. Eastern Europe excludes Ukraine.

e. Rolling four-quarter current account balances. The aggregates are medians. Energy exporters include Azerbaijan, Kazakhstan, and the Russian Federation. The last observation is Q2 2024.

f. Rolling four-quarter trade in services balances. The aggregates are medians. The last observation is Q2 2024.

While exports contributed strongly to growth in Türkiye earlier this year, partly driven by robust demand from non-euro area countries and large currency depreciation, their growth has slowed sharply. Exports remained little changed in the second quarter of 2024. From January to July, the value of exports of clothing and footwear—accounting for more than 7 percent of all exports from Türkiye—fell by almost 8 percent from a year earlier. The value of exports of machinery and equipment, by contrast, grew by 4 percent because of exports of cars and transportation equipment. In Armenia, the robust growth of exports during January to July was primarily driven by re-exports of gold and jewelry.

Export revenues weakened in some ECA commodity producers as downward pressures on many commodity prices have reemerged, especially prices of industrial metals, with global growth struggling to gain momentum. Volatility of global oil prices also picked up substantially in 2024, owing to increased geopolitical tensions in the Middle East.

The median current account deficit in ECA, excluding the energy exporters and Türkiye, is set to widened slightly this year amid weaker recoveries of exports, a consumption-driven pickup in imports, higher interest payments on external debt in some countries, and slower growth of remittances and tourism revenues. In Armenia and Georgia, most countries in the Western Balkans, as well as Moldova and Ukraine, trade deficits relative to GDP remain in double digits.<sup>1</sup>

The current account deficit in Türkiye improved substantially from January to July 2024 and is likely to narrow to 1.7 percent of GDP for the full year, from 4 percent in 2023. Much of this is driven by the substantial compression of goods imports, which fell by 10 percent during the first seven months of the year. However, interest payments jumped by more than 35 percent from January to July 2024, to almost 0.6 percent of the full year's GDP.

In Russia, the current account surplus rose almost 70 percent from a year earlier, to US\$40 billion in January-July 2024, as imports, outward remittances, and dividends to foreign investors fell. In the other ECA energy exporters, current account surpluses improved modestly, but they are well below their 2022 record highs because of lower oil prices and the moderating growth of energy exports.

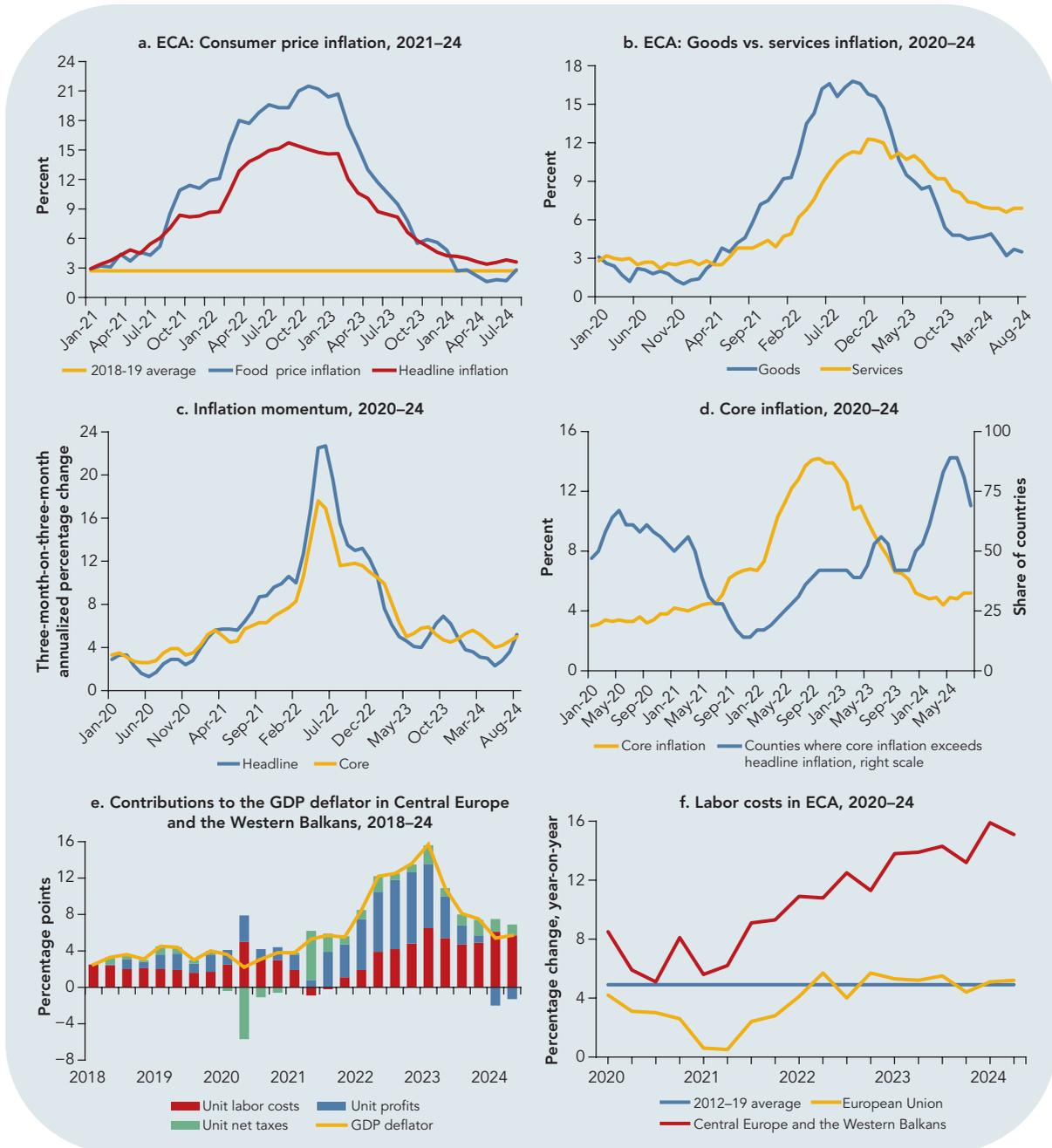
### **Inflation is slowing but price pressures remain**

Median headline inflation fell by half from a year earlier, to 3.6 percent year-on-year by August 2024 (figure 1.6). Despite the decline, inflation remains above the 2.7 percent average during 2018–19. In most countries, disinflation has been driven largely by external factors, such as slower growth of prices for energy and food, and by rapidly diminishing pressures from earlier supply chain disruptions. Currency appreciations in some countries have also contributed. Among the components of inflation, the median 12-month increase in food prices slowed sharply to 2.8 percent by August 2024, from more than 21 percent at the end of 2022.

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1. The Kyrgyz Republic continued to record a large current account deficit and a very high level of errors and omissions, which is likely driven by under-recording of imports for re-exports.

**FIGURE 1.6. Recent developments: Inflation**



Sources: Eurostat; Haver Analytics; World Bank.

Note: ECA = Europe and Central Asia; GDP = gross domestic product.

a. The aggregates are medians. The last observation is August 2024.

b. The aggregates are medians. The sample includes 11 countries. The last observation is August 2024.

c. Inflation momentum is calculated as three-month-on-three-month annualized percentage change, seasonally adjusted data, medians, three-month moving averages. The last observation is August 2024.

d. Core inflation is the median for the sample of 12 countries. The share of countries where the core inflation exceeds headline inflation is a three-month moving average. The last observation is August 2024.

e. Average for Bulgaria, Croatia, Poland, Romania, and Serbia. Unit labor costs, unit profits, and unit net taxes are calculated by dividing nominal aggregate labor income, gross operating margin, and net taxes by real GDP. The last observation is Q2 2024.

f. Median for Bulgaria, Croatia, Poland, Romania, and Serbia. The last observation is Q2 2024.

Median consumer price inflation remained the lowest in the South Caucasus, at 1.5 percent year-on-year in August 2024. By contrast, at 6.1 percent, median headline inflation remained the highest in Central Asia, reflecting the 10 percent inflation rate in Uzbekistan due to the removal of energy subsidies in May 2024. In Central Europe, higher excise taxes and a partial lifting of energy price freezes for households moved inflation to 3.3 percent by August, from less than 3 percent on average in the preceding three months. Hikes to administered prices and tariffs, for example, electricity and fuel prices that have been frozen to curb growth in consumer prices, pushed median headline inflation in Eastern Europe to 6.3 percent by July, from 4.7 percent at the start of the year.

In Russia, annual consumer price inflation more than doubled compared to a year ago, surpassing 9 percent by August 2024. In Türkiye, growth of consumer prices slowed sharply in September to 4.9 percent, its slowest rate in over a year.

Tight labor markets and labor costs rising as much as three times faster than in the pre-pandemic period are sustaining strong core price pressures across the region. Persistent core inflation remains the main obstacle to achieving a sustainable return of inflation to central bank targets in most countries in ECA.

## Economic Policies

### Cautious cuts in policy interest rates

Lower inflation has prompted some central banks to start cutting policy rates this year. Policy caution prevails, nonetheless, amid concerns about persistent price pressure. From June to August, seven central banks in the region cut rates by a cumulative 325 basis points. On average, the reductions amounted to a quarter of a percentage point, or only half as the amount as those implemented in the first half of 2024. With interest rate reductions lower than the decline in inflation, average real policy rates are still higher than they were before the pandemic (figure 1.7).

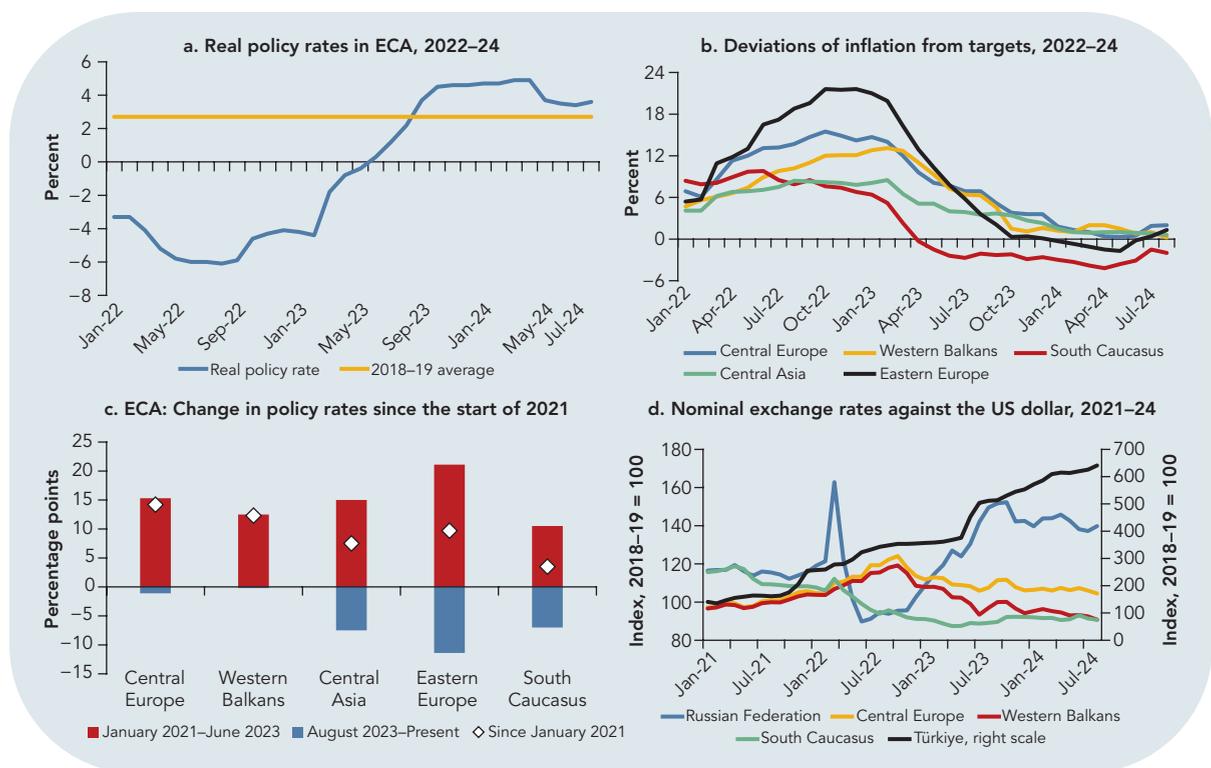
Monetary policies in Russia and Türkiye stand out from those in the rest of the region. Headline annual inflation in Russia has been above the 4 percent inflation target since June 2023, prompting the central bank to hike its policy rate to 19 percent, the highest level in over 20 years. While on a downtrend, inflation in Türkiye is well above the central bank's target and more than three times higher compared to what the central bank expects inflation to be at the end of 2025. The policy rate in Türkiye reached a record high of 50 percent in 2024.

ECA currencies with flexible exchange rates strengthened slightly against the US dollar this year. The Turkish lira lost almost 16 percent against the US dollar.

### Fiscal consolidation delayed again

Fiscal policies have remained expansionary in most ECA countries this year, with higher increases in spending than in revenues. Excluding Ukraine, the median fiscal deficit is projected to widen to 2.8 percent of GDP in 2024, from 1.9 percent in 2023 (figure 1.8). In about a half of the ECA economies, fiscal deficits are expected to be wider than they were before the COVID-19 pandemic.

**FIGURE 1.7. Economic policies: Monetary**



Sources: Eurostat; Haver Analytics; World Bank.

Note: ECA = Europe and Central Asia.

a, b, d. The aggregates are medians. The last observation is August 2024.

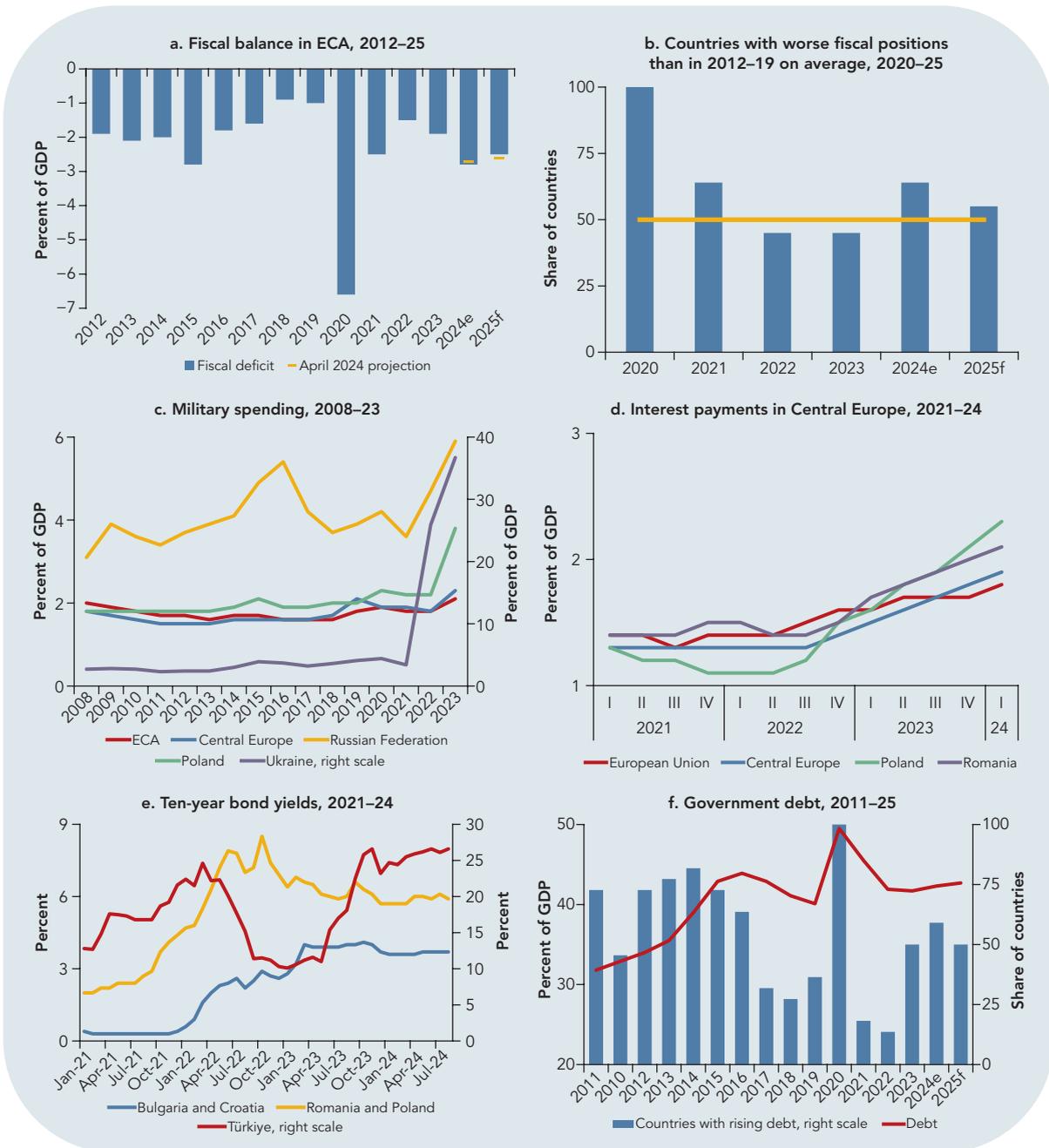
a. Real policy rates are calculated as nominal policy rates minus inflation.

c. Cumulative change in policy rates during each period. The last observation is August 2024.

Robust consumption-led growth and, in some ECA countries, increased foreign trade have boosted proceeds from value-added taxes and excises. Higher wages have resulted in better income tax receipts as well. For example, in Central Europe, government revenues rose by more than 19 percent in nominal terms in the first quarter of 2024, compared to a year earlier. Last year, first-quarter government revenues increased by 14 percent even with higher inflation. With lower inflation, government revenues are starting to grow in real terms as well. In Serbia, revenues grew by 9 percent in real terms year-on-year from January to June 2024, after contracting 3 percent in the first half of 2023.

Spending pressures have remained elevated owing to large increases in public sector salaries and minimum wages, pensions, social benefits, defense outlays, and debt service costs. Expenditure growth has continued at double-digit rates and well above inflation rates. In the first quarter of 2024, budget expenditures in Central Europe grew on average by about 19 percent from a year earlier as public wage outlays jumped by more than 20 percent. Defense spending has increased sharply over the past couple of years in several countries. Spending on interest is close to or exceeds 2 percent of GDP in Armenia, Poland, Romania, Serbia, and Türkiye.

**FIGURE 1.8. Economic policies: Fiscal**



Sources: Eurostat; Haver Analytics; national statistical offices; Stockholm International Peace Research Institute; World Bank.  
 Note: e = estimate; ECA = Europe and Central Asia; f = forecast.  
 a. The aggregates are medians. The sample excludes Ukraine. April 2024 projections are from the April 2024 edition of the Macro Poverty Outlooks.  
 b. Bars show the share of countries where the fiscal deficit (surplus) was higher (lower) than in 2012-19 on average. The sample excludes Ukraine.  
 c. The aggregates are medians. ECA excludes the Russian Federation and Ukraine.  
 d. Central Europe is a median for Bulgaria, Croatia, Poland, and Romania. The last observation is Q1 2024.  
 e. Averages. The last observation is August 2024.  
 f. The line shows the average level of debt for the sample of 22 countries. The bars show the share of countries where debt is increasing.

In most countries in the Western Balkans, large increases in government social spending and higher investment outlays have more than offset improved revenue collection, leading to wider fiscal deficits. In North Macedonia, the government deficit is set to increase to 4.9 percent of GDP this year, from the initially planned 3.4 percent. In Serbia, the government delayed the implementation of new fiscal rules by four years on account of substantial spending needs related to Expo 2027, which is to be held in Belgrade.

The federal budget deficit narrowed to about 0.2 percent of GDP in January–August in Russia, from 1.5 percent a year earlier, amid large increases in oil and gas revenues and robust tax revenues from the non-oil economy. In Türkiye, where government wage outlays exceeded 30 percent of all non-interest expenditure this year, the fiscal deficit remained close to 5 percent of GDP, reflecting a 49 percent hike in the minimum wage, rising interest payments, and large spending related to last year's earthquakes.

Next year, the median fiscal deficit in ECA is expected to narrow to 2.5 percent of GDP. Fiscal balances are likely to improve in half of the ECA non-oil exporting countries. In Bosnia and Herzegovina, Romania, and Uzbekistan, the fiscal adjustment is projected to exceed 0.5 percentage points of GDP. Fiscal consolidation plans are more ambitious in Türkiye. The government intends to reduce the deficit to 3.1 percent of GDP in 2025 and 2.7 percent on average in 2026–27, although some of that would be due to the declining reconstruction spending related to the 2023 earthquakes. The fiscal deficits in Poland and Romania are expected to surpass 5 percent of GDP next year, amid continued spending pressures and a modest revenue-based consolidation.

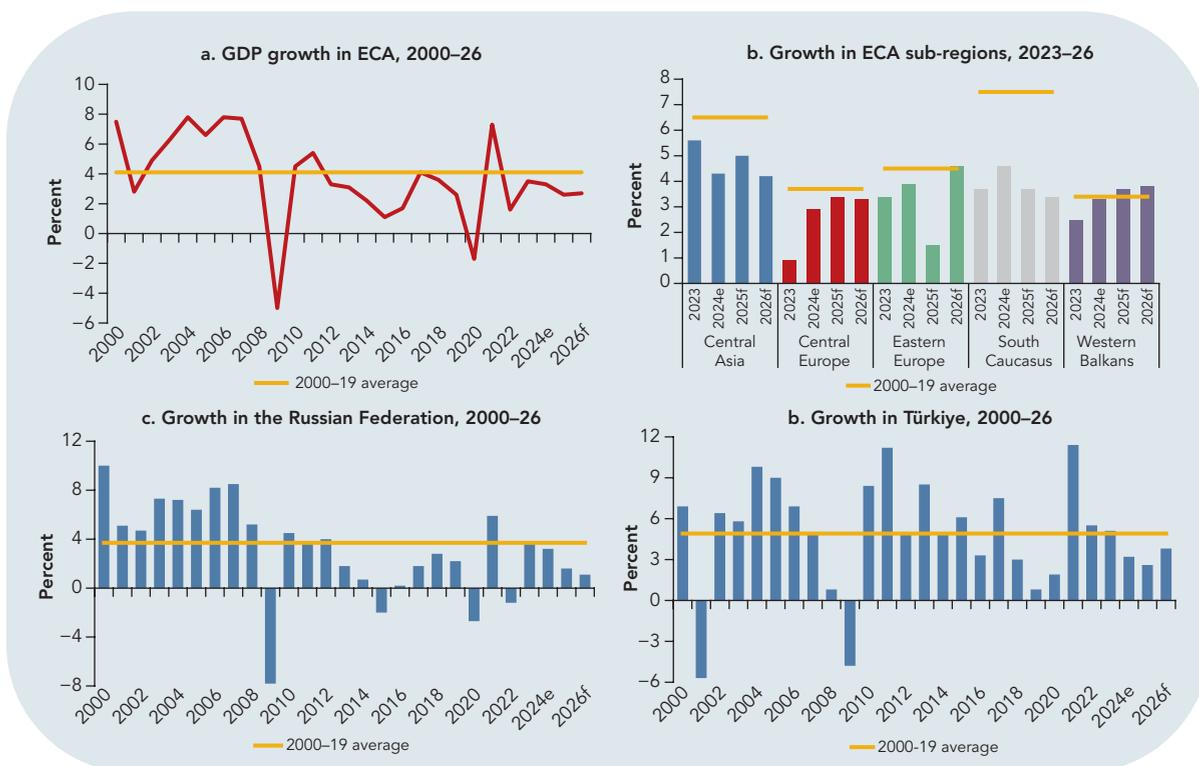
Government debt is projected to remain broadly unchanged at 42 percent of GDP on average this year. Within the average, debt levels are set to increase in nearly 60 percent of the countries. In most economies in Central Europe, the Western Balkans, Armenia, and Ukraine, government debt is projected to exceed 50 percent of GDP this year. Elsewhere in the region, improved government finances have earned some countries rating upgrades. For example, all the major credit rating agencies have upgraded Türkiye's credit rating because of the ongoing policy normalization, low public debt, and narrowing external imbalances. Credit ratings were also upgraded for Kazakhstan, Montenegro, and Tajikistan. Meanwhile, Croatia joined the club of low credit risk countries after S&P upgraded its sovereign debt rating in September.

## Outlook

### Modest growth persists

The expected sharp slowdown of growth in Russia in 2025 is likely to result in a slower pace of economic expansion for the region as a whole to 2.6 percent in 2025, from 3.3 percent in 2024. Excluding Russia, growth is likely to remain broadly unchanged at 3.2 percent in 2025, before strengthening to 3.7 percent in 2026 (figure 1.9).

FIGURE 1.9. Outlook



Source: World Bank.

Note: Aggregates are calculated using GDP measured in average 2010–19 prices and market exchange rates. e = estimate; ECA = Europe and Central Asia; f = forecast; GDP = gross domestic product.

b. Central Europe includes Bulgaria, Croatia, Poland, and Romania; Western Balkans include Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia; Eastern Europe includes Belarus, Moldova, and Ukraine; South Caucasus includes Armenia, Azerbaijan, and Georgia; Central Asia includes Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan.

Further declines in inflation together with robust income growth should continue to support consumption-driven recoveries, while a gradual economic rebound in key trading partners, especially in the euro area, is expected to bolster exports. Lower borrowing costs and, in Central Europe, improved absorption of EU funds are anticipated to lift investment.

In Central Europe and the Western Balkans, growth is expected to strengthen to 3.4 percent and 3.7 percent, respectively, in 2025. Consumption recovery is likely to continue to drive growth, although delays in infrastructure projects in some countries have led to moderate growth downgrades relative to the June projections. Firmer growth in the European Union is expected to support recoveries as well. Growth is also anticipated to be supported by continued FDI inflows, especially in the Western Balkans. For example, the growth outlook for Serbia has improved amid sustained inflows of FDI and, most importantly, the start of production of hybrid vehicles at the Stellantis plant, which is expected to have broader positive spillovers for manufacturing.

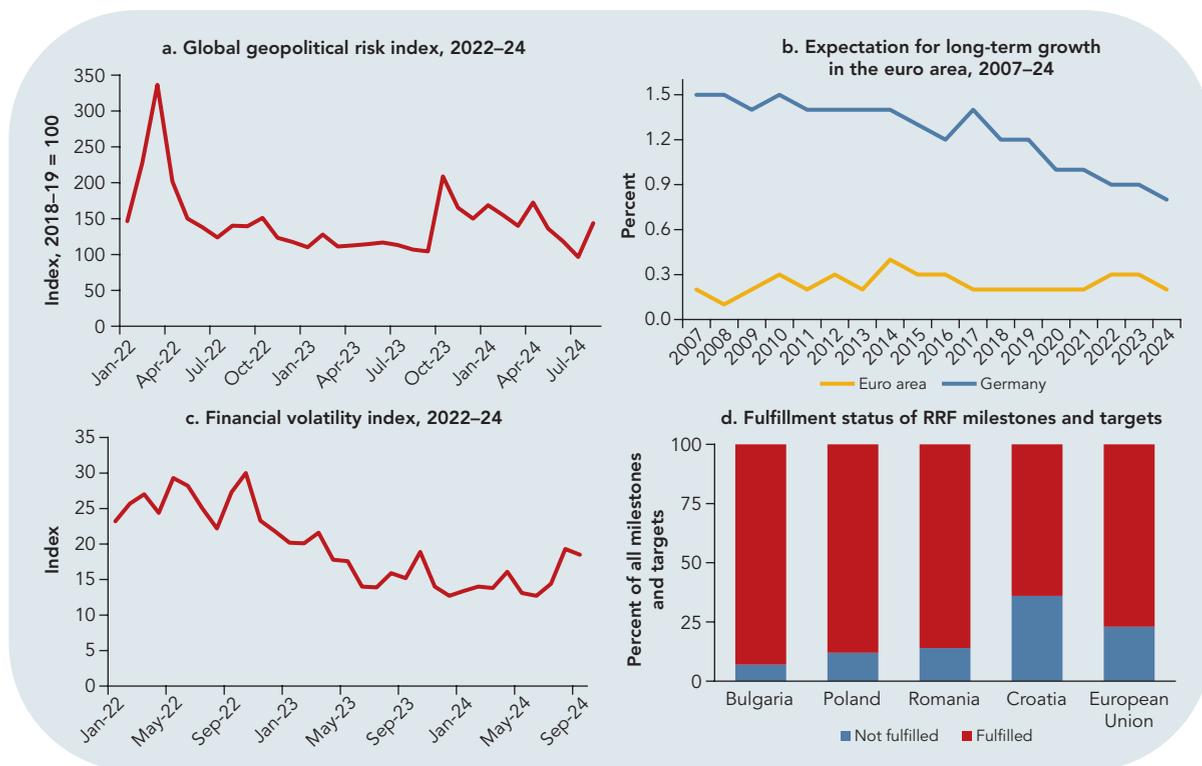
A return of capital, trade, and tourism flows to the levels before Russia's invasion of Ukraine is expected to weigh on growth in some countries in Central Asia and the South Caucasus. In the South Caucasus, the pace of economic expansion is likely

to slow to 3.7 percent in 2025, from 4.6 percent this year, as the growth rates of consumption and investment moderate to their trend levels. With 5 percent growth, Central Asia is expected to be the fastest growing ECA subregion in 2025, driven by the strong rebound of growth in Kazakhstan amid resumed expansion of crude oil production. However, growth is expected to slow in the rest of Central Asia, reflecting the normalization of trade and remittance flows with Russia.

The 2025 growth projection for Ukraine is downgraded by 4.5 percentage points, to 2 percent, reflecting the assumption of continued military hostilities. Russia is expected to grow 1.6 percent in 2025, half as fast as this year, as it will be restrained by tighter policies and capacity constraints. In Türkiye, growth is downgraded by 1 percentage point, to 2.6 percent, the slowest pace since 2020. This reflects weaker consumption as monetary policy remains tight and fiscal policy becomes less supportive.

The downside risks are substantial. They include further escalation of geopolitical tensions and negative spillovers from increased global commodity price volatility, which could be triggered by the deteriorating security situation in the Middle East (figure 1.10). Global investment and trade networks, which are already burdened by the high level of trade restrictions, could fracture further.

**FIGURE 1.10. Risks**



Sources: D. Caldara and M. Iacoviello, “Measuring Geopolitical Risk,” *American Economic Review*, 112 (2022): 1194–1225; Consensus Economics; European Commission; Federal Reserve Bank of St. Louis; World Bank.

Note: RRF = Recovery and Resilience Facility.

a. The last observation is August 2024.

b. The lines show five-year-ahead average GDP growth forecasts from end-of-the-year surveys. The last observation is July 2024.

c. The line shows the Chicago Board Options Exchange Volatility Index (VIX). A higher VIX value indicates greater anticipated volatility and market uncertainty. Values are monthly averages. The last observation is September 20, 2024.

d. Bars show the share of satisfactorily fulfilled milestones and targets for the RRF. The last observation is September 2024.

A resurgence of global financial volatility and heightened global risk aversion could reignite depreciation pressures in ECA and trigger capital outflows. Large recent increases in labor costs could significantly erode the competitiveness of ECA exporters if productivity growth fails to pick up.

Weaker growth in key trading partners, especially in the euro area, poses substantial risks, more so for the countries with strong links to the EU supply chains in car manufacturing and electronics. More sluggish growth in Russia would have sizable negative effects on Central Asia and the South Caucasus through trade and remittance channels.

If the disinflation progress were to slow, policy interest rates could stay higher for longer. Slower than anticipated fiscal consolidation could keep inflationary pressures elevated. Slower than anticipated progress on structural reforms and unexpected increases in political instability could hamper the absorption of EU funds in Central Europe and delay EU accession prospects for the current wave of EU candidate countries.

ECA also remains highly vulnerable to the risks of climate change–related adverse weather events. Persistent droughts and water shortages as well as more frequent floods, triggered, for example, by a record heavy rainfall in Central Europe in September 2024, have devastated local communities and added to fiscal pressure due to high reconstruction costs.

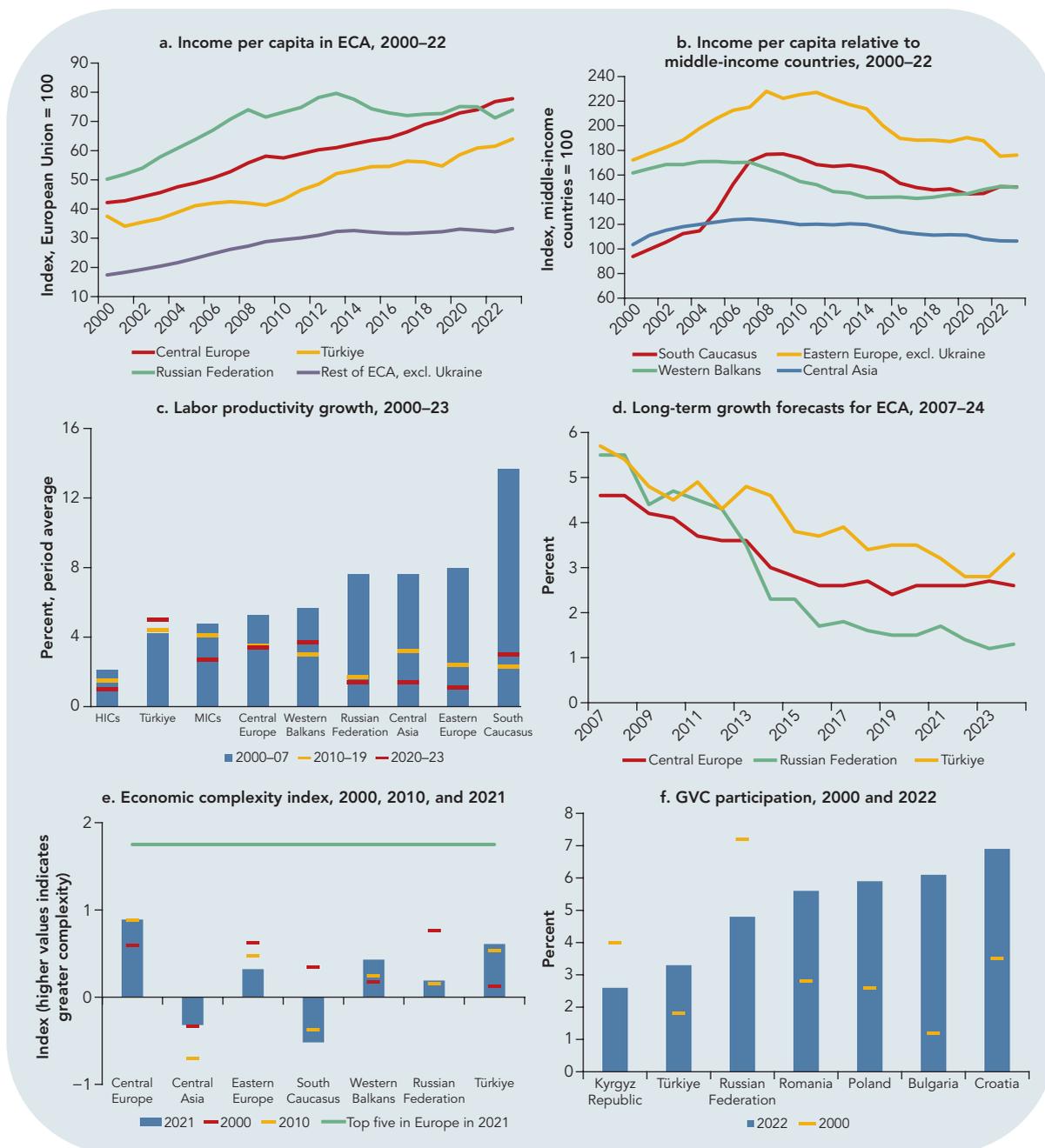
### Reviving convergence: The crucial role of talent

Over the past two decades, ECA has seen a remarkable convergence to the income and productivity levels of high-income economies. This progress in catching up was strikingly rapid in Central Europe, which includes four high-income countries. In Central Europe in 2023, GDP per capita amounted to about 80 percent of the EU average (in purchasing power parity), double the level in 2000 (figure 1.11). Elsewhere in the region, progress along the convergence path has been more modest. Moreover, convergence has slowed across the region since the 2008 global financial crisis, with income per capita in many economies growing more slowly than in ECA's middle-income peers across the world. Whereas slower growth of income and productivity has been a salient feature of the global economy for much of the post–global financial crisis period, this slowdown has been even more pronounced in ECA.

Initially, at the start of the transition from plan to market, much of the ECA success story was like the typical fast convergence episode experienced by other countries. Large-scale reforms set in motion the reallocation of resources to more productive sectors and firms. In addition, in ECA sustained growth of productivity, rising investment, integration into European supply chains, shrinking state involvement in the economy, and rapid financial deepening helped to offset the effects of the declining size of the labor force. Many of these drivers of growth are now diminished.

Can ECA return to the fast convergence path? Yes, if regional economies foster renewed investment, innovation, and progress improving education. To achieve faster and more sustainable rates of economic growth, ECA countries need to develop more human capital and allocate existing talent better. Firms cannot

**FIGURE 1.11. Slowing convergence and productivity growth**



Sources: Consensus Economics; The Growth Lab at Harvard University; World Bank.

Note: ECA = Europe and Central Asia; GDP = gross domestic product; GVC = global value chains; HICs = high-income countries; MICs = middle-income countries; PPP = purchasing power parity.

a, b. GDP per capita in constant 2021 international \$ at PPP.

c. Labor productivity is measured as output per person employed in constant 2021 \$ at PPP. Eastern Europe excludes Ukraine.

d. The lines show five-year-ahead average GDP growth forecasts. The aggregate for Central Europe is calculated using GDP measured in average 2010–19 prices and market exchange rates.

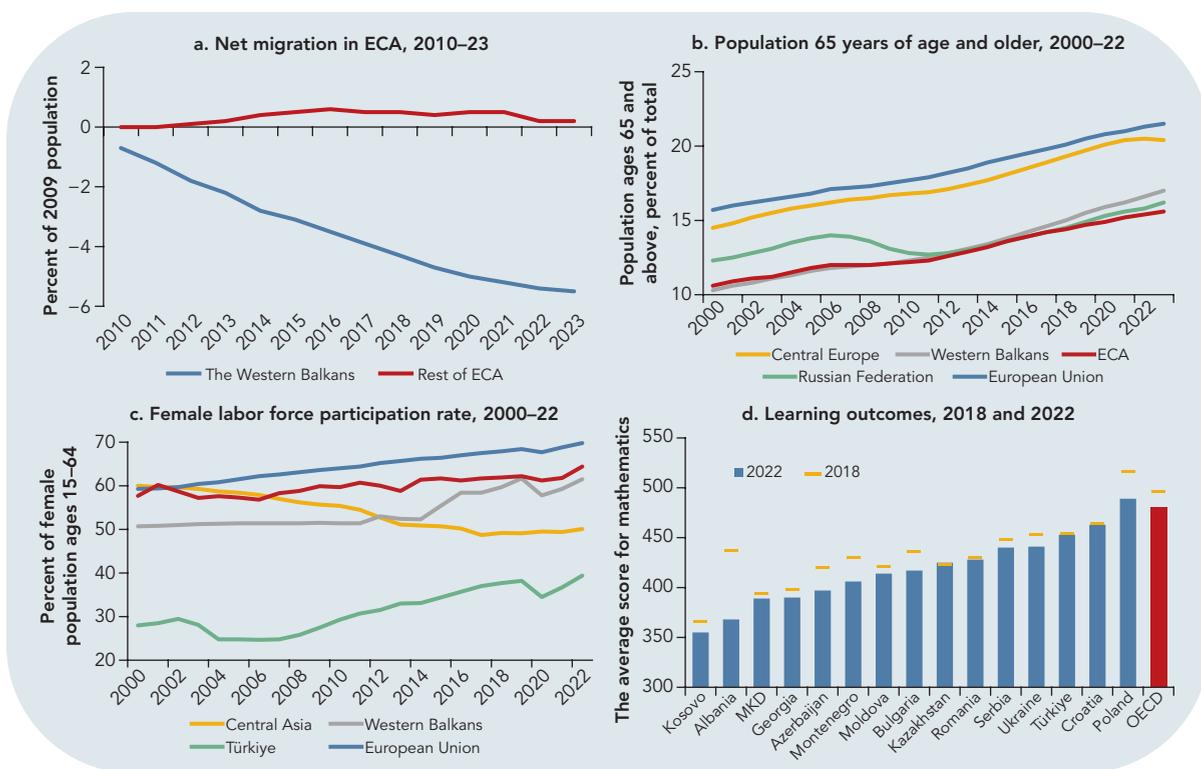
e. The Economic Complexity Index measures how diversified and complex countries' exports are. The top five countries in 2021 were Switzerland, Germany, Czechia, Austria, and the United Kingdom.

f. The bars show pure forward GVC participation rates—the percentage of domestic output exported to other countries for further processing.

invest, infuse new technologies, and innovate if they lack access to well-educated and productive workers. Misallocation and lack of talent are among the most pressing issues facing the countries in ECA today. Many countries in ECA already face substantial demographic and human capital challenges (figure 1.12). The population is aging rapidly in many countries. Labor force participation remains low, and even more so among women. Educational outcomes stagnated before the pandemic and have weakened due to the learning losses caused by school closures.

As a result, firms in ECA, where shortages of skilled workers already constrain productivity gains, are set to confront even more difficulties in recruiting talent in the future. Meanwhile, education systems in ECA urgently need to reform teaching amid the growing demand for skills related to the green transition and digital technologies. Many countries in ECA must accelerate curriculum reforms, especially in science, technology, engineering, and math subjects; improve the quality of higher education; and enlist more and better teachers to boost human capital creation and sustain the pace of growth needed to ensure income convergence. Part II of this update focuses on talent and human capital in the region and outlines reforms and policies that can help to unlock the enormous creative potential of the ECA people.

**FIGURE 1.12. Demographic and human capital challenges in ECA**



Sources: Organisation for Economic Cooperation and Development; World Bank.  
 Note: ECA = Europe and Central Asia; MKD = North Macedonia; OECD = Organisation for Economic Co-operation and Development.  
 b, c. The aggregates are medians.  
 d. Programme for International Student Assessment scores.

## Annex 1A. Data and Forecast Conventions

The macroeconomic forecasts presented in this update are the result of an iterative process involving staff from the World Bank Prospects Group in the Equitable Growth, Finance, and Institutions Vice-Presidency; country teams; regional and country offices; and the Europe and Central Asia Chief Economist's Office. This process incorporates data, macroeconometric models, and judgment.

### Data

The data used to prepare the country forecasts come from a variety of sources. National income accounts, balance of payments, and fiscal data are from Haver Analytics; the World Bank's World Development Indicators; and the International Monetary Fund's (IMF's) World Economic Outlook, Balance of Payments Statistics, and International Financial Statistics. Population data and forecasts are from the United Nations' World Population Prospects. Country and lending group classifications are from the World Bank. In-house databases include commodity prices, data on previous forecast vintages, and country classifications. Other internal databases include high-frequency indicators—such as industrial production, Consumer Price Indexes, housing prices, exchange rates, exports, imports, and stock market indexes—based on data from Bloomberg, Haver Analytics, the Organisation for Economic Co-operation and Development's analytical housing price indicators, the IMF's Balance of Payments Statistics, and the IMF's International Financial Statistics. Aggregate growth for the world and all subgroups of countries (such as regions and income groups) is calculated as the gross domestic product-weighted average (in average 2010–19 prices) of country-specific growth rates. Income groups are defined as in the World Bank's classification of country groups.

### Forecast process

The process starts with initial assumptions about advanced economy growth and commodity price forecasts. These assumptions are used as conditions for the first set of growth forecasts for emerging markets and developing economies, which are produced using macroeconometric models, accounting frameworks to ensure national accounts identities and global consistency, estimates of spillovers from major economies, and high-frequency indicators. These forecasts are then evaluated to ensure consistency of treatment across similar economies. This process is followed by extensive discussions with World Bank country teams, which conduct continuous macroeconomic monitoring and dialogue with country authorities. Throughout the forecasting process, staff use macroeconometric models that allow the combination of judgment and consistency with model-based insights.



PART



# Better Education for Stronger Growth





## Introduction

While facing multiple challenges like adverse demographics, climate change and geopolitical tensions, the greatest scope for boosting growth in ECA lies in raising the quality of education, especially at the higher education level. Unless it creates the conditions for its people's talents to flourish, the region will not reach its growth potential.

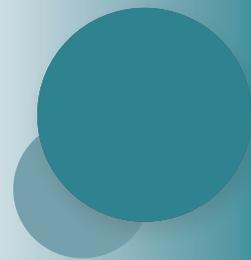
An educated population is critical to innovation and economic development. Indeed, as much as 30 percent of cross-country differences in GDP per capita can be attributed to differences in human capital (Hsieh and Klenow 2010), and differences in primary school enrollment in 1900 account for most of the difference in GDP per capita in 2000 (Glaeser and others 2004).

The shift to an innovation-led growth model requires a highly skilled population, especially people with tertiary degrees. A person with a PhD is 10 times more likely to produce a patent than a person with an undergraduate degree and more than 30 times more likely than a person with only a high school degree (Akcigit, Pearce, and Prato 2024).

The countries of Europe and Central Asia (ECA) deservedly take pride in their educational accomplishments, with widespread recognition among citizens and governments of the importance of education for economic development. ECA has made significant progress in ensuring broad access to schooling across the region, with children attending school for an average of 12.6 years—surpassing many other developing regions. Enrollment in higher education is also very high, and the average gross graduation rate for tertiary degrees exceeds the world average.

The main challenge is not enrollment; it is the quality of education, which has fallen in recent years. Test scores on the Program for International Student Assessment (PISA), which is administered to 15-year old high school students, declined over the last decade, particularly after the COVID-19 pandemic. Even top performers in the European Union, such as Finland, saw decreases in the quality of learning equivalent to more than two full years of schooling over the last several years.

Gaps in the quality of basic (primary and secondary) education are particularly large for students from disadvantaged backgrounds. Across ECA, these students are overwhelmingly tracked into the vocational education system, which fails to provide foundational skills and does not prepare students for entry into the labor market. Leaving students from disadvantaged backgrounds behind has consequences for innovation and growth (European Commission 2024).



Higher education is underperforming even more than basic education. Countries in other developing regions with a similar quality of basic education or a similar income level have much better universities. In all of ECA, there are only 9 institutions in the top 500 Times Higher Education ranking of world universities. “Academic capture,”<sup>1</sup> poor management, outdated curricula, lack of funding, and poor infrastructure underpin the low quality of higher education. Inadequate management of large public universities often caters to a shrinking student pool. Many higher education systems are underfunded and lack proper infrastructure, such as research labs and adequate classrooms.

The skills mismatch between higher education and the needs of the labor market is also a reflection of poor educational quality. Employers frequently report that graduates lack essential soft skills, such as the ability to communicate and work in teams, as well as technical skills specific to their industries. The mismatch between education and the needs of the labor market results in a significant waste of human potential in ECA.

The poor quality of higher education drives some students to pursue university degrees abroad. About 17 percent of people aged 20–24 who migrated to the European Union from ECA countries in 2022 did so for educational reasons. This exodus of skilled individuals exacerbates the region’s challenges by depleting the talent pool available to drive local innovation and growth (Docquier and Rapoport 2012).

High-quality tertiary education that is inclusive and accessible for all is critical for nurturing and developing talent. Talent is often seen as an intrinsic quality—a set of abilities individuals are born with. But realizing this potential depends, to a large degree, on external factors, particularly the quality of education. High-quality education does more than impart knowledge; it nurtures critical thinking, creativity, and problem-solving skills, which are essential for the productive application of talent in various fields (OECD 2018). Without a good foundational education, innate abilities can remain underdeveloped and underutilized. People are also more productive when they are surrounded by other educated and talented individuals. Graduates often find themselves ill-prepared for the demands of the labor market, leading to overqualification and underemployment. Lacking a robust higher education system also stifles innovation and entrepreneurship—crucial drivers of economic growth and development (Apostu and others 2022).

Despite the declining quality of education, returns to education have remained high in most countries, suggesting a strong demand for skilled workers. The education systems of ECA still deliver a sufficient level of skills to the workforce, which translate into better earnings and lower unemployment rates for the more educated. The challenge is that ongoing technological change, as well as the structural change to a more knowledge-dependent and service-based economy, are shifting the composition of jobs in ECA toward those that are intensive in nonroutine cognitive and social tasks, for which higher education is often necessary (Dalvit and others 2023).

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1. *Academic capture* refers to existence of close relationships between educational institutions and political or business elites, which often erodes academic integrity, allowing decisions to be made based on personal or political interests rather than educational merit.

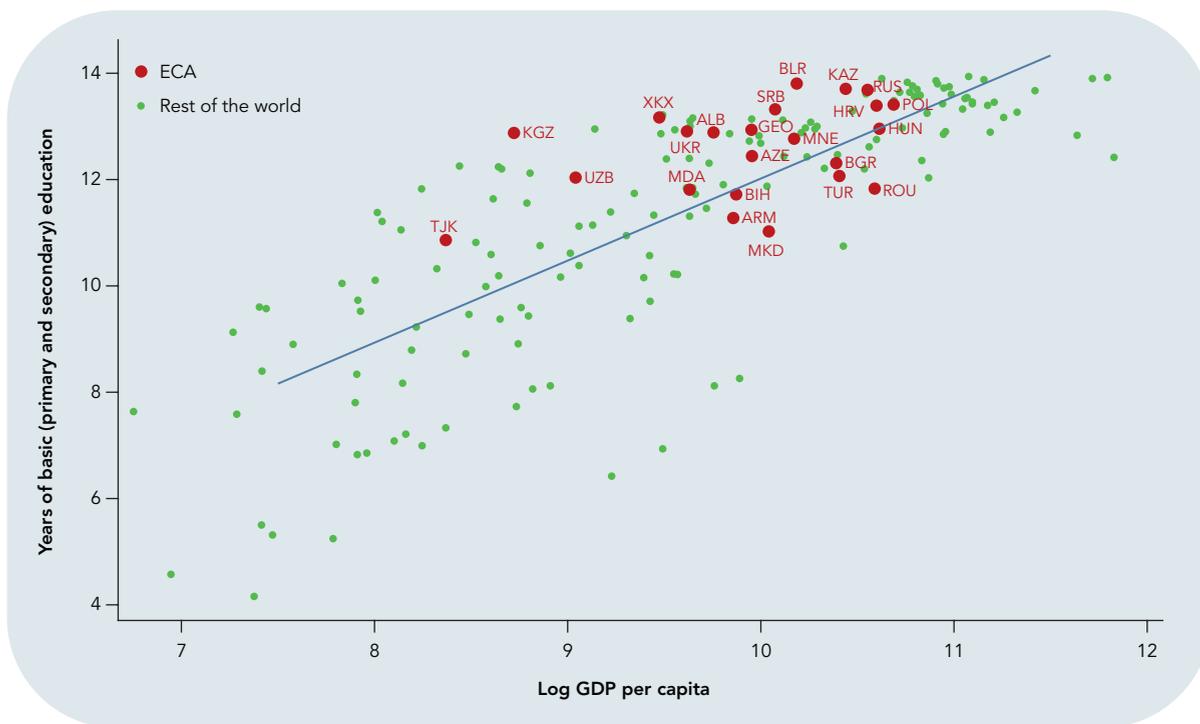
The deterioration in education quality comes at a critical point when many ECA countries aspire to reach high-income status within the next generation or two. Economic growth for many countries in ECA, however, has fallen substantially from the higher of the 2000s, making such an aspiration more demanding. To achieve faster and more sustainable rates of economic growth, ECA countries need to both develop more human capital and better allocate existing talent. Achieving these goals will be challenging unless major policy interventions are implemented. Priorities for these countries to reverse the decline in education quality, especially in tertiary education, are improving teacher training, updating curricula, and investing in educational resources and infrastructure. Female labor force participation should also be increased, particularly in Central Asia, to fully utilize the region's human capital. Young people who are not in education, employment, or training (NEET) need to be engaged in productive or education activities. By prioritizing high-quality education, promoting innovation, and supporting lifelong learning, countries can harness their human capital, reduce talent waste, and drive sustainable economic growth and development.

## **Educational enrollment and attainment are high in most countries in the region**

The number of years children spend in schools in ECA is high: on average, students complete about 12.6 years of education—just 1.4 years short of the theoretical maximum of 14 years of basic education (2 years of pre-primary education plus 12 years of primary and secondary education). The lowest number of years of basic education are in Tajikistan (10.8) and North Macedonia (11.0); the highest are in Belarus (13.8), Kazakhstan (13.7), and the Russian Federation (13.7). These levels of educational attainment are consistent with the income levels of ECA countries (figure 2.1). They underscore the fact that, in general, enrollment in basic education is not a bottleneck in the region.

Access to and enrollment in early childhood education (ECE) remain challenging, particularly for disadvantaged communities (box 2.1). In the Western Balkans, access to ECE and childcare is particularly low among the Roma. It is also low in Central Asia, although it has been increasing in some countries.

Tertiary education attainment is high in ECA, exceeding what would be expected given the region's income levels. The gross graduation rate for higher education (defined as the ratio between higher education graduates and the population in the theoretical age range of the most common first tertiary degree program) is about 40 percent in ECA—well above the world average of 31 percent. Tertiary attainment in most ECA countries is above the expected values for their income levels (figure 2.2). For instance, the gross graduation rate for higher education in Moldova is 50 percent, about twice the level of countries with a similar per capita GDP. Some countries in the region may have reached enrollment levels beyond which there is limited room for increase.

**FIGURE 2.1.** ECA citizens attain a high level of basic (primary and secondary) education

Source: Human Capital Index database (World Bank 2024b).

Note: This graph plots the years of basic education per country in ECA (orange markers) and in the rest of the world (green markers). Years of basic education are based on average enrollment in all three levels (pre-primary, primary, and secondary). See Kraay (2019) for details. Values correspond to 2023 or the latest year available.

### BOX 2.1 Improving access to early childhood education in Uzbekistan

High-quality ECE improves children's cognitive, social, and emotional development; enhances school readiness; and can lead to better educational outcomes throughout a child's academic career (Heckman 2011). It is also associated with greater female labor force participation (Morrissey 2017).

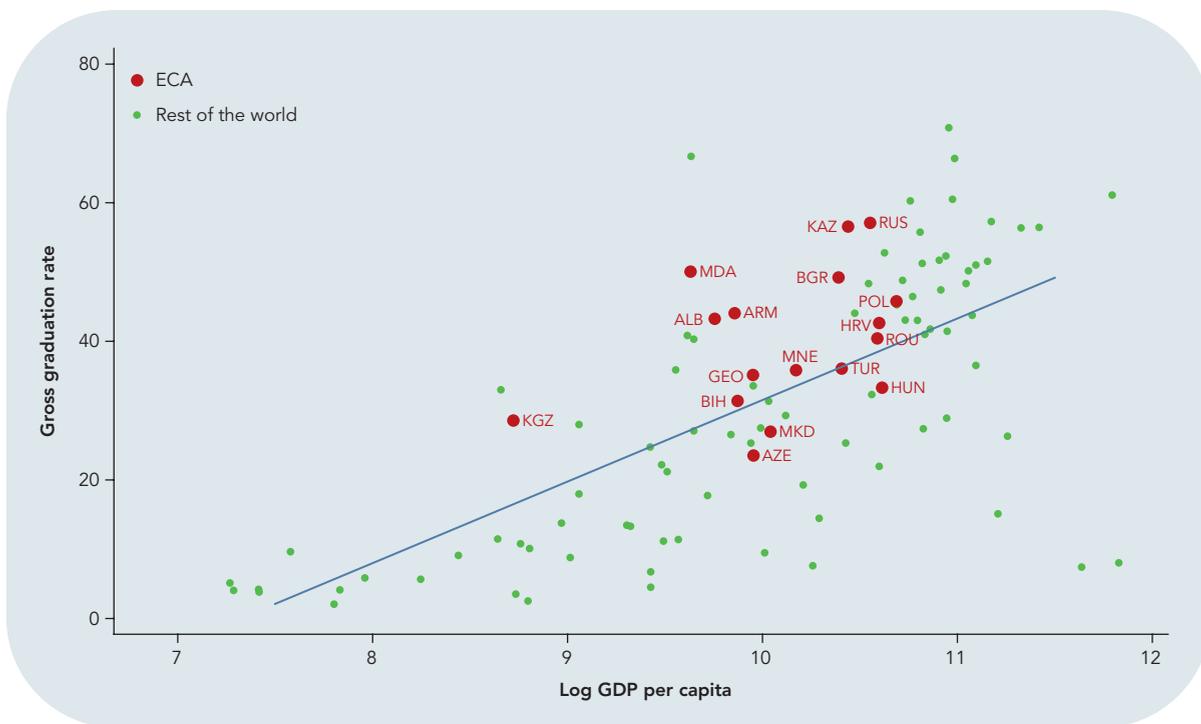
ECE is low in some ECA countries: the share of children between the ages of three and five that took part in an ECE program was just 13 percent in Bosnia and Herzegovina and 16 percent in Kosovo, according to the latest data from UNICEF (2024)

These figures are well below the OECD average (87 percent) and the averages in Albania (73 percent), Romania (77 percent), and Georgia (78 percent).

In Uzbekistan, the enrollment of children age between the ages of three and six rose from 29 percent in 2017 to 63 percent in 2022. It offers an example of how to expand enrollment in ECE.

The process was started by establishing the Ministry of Preschool Education in 2017. It approved a national program for improving the preschool education system from 2017 to 2021 (UNDP 2024).

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**FIGURE 2.2.** Tertiary gross graduation rates are substantially high in Europe and Central Asia

Source: UIS Statistics (UNESCO 2024).

Note: This graph plots the gross graduation rate for tertiary education per country in ECA (orange markers) and in the rest of the world (green markers). The gross graduation rate is the ratio between the annual number of graduates from first-degree tertiary programs (ISCED 6 [bachelor's degree] and ISCED 7 [master's degree]) and the population in the theoretical age of the most common first-degree program. Values correspond to 2023 or the latest year available.

### BOX 2.1 (continued)

The expansion plans included a two-pronged approach in which services are provided by the state in rural areas and by public-private partnerships in urban areas. This strategy aims to leverage private sector investment while ensuring access for underserved populations. The government is also exploring innovative financing mechanisms such as social impact bonds to attract private capital for preschool expansion (UNDP 2024). The World Bank's Promoting Early Childhood Development Project is supporting expanded enrollment and the increased availability of preschools in remote areas

in Uzbekistan by, among other activities, converting old buses into well-equipped mobile classrooms.

ECE expansion efforts face challenges. Rapidly increasing access must be balanced with maintaining and improving quality. Survey data show that parents emphasize teacher qualifications, compliance with health and safety standards, and food quality in preschools (UNDP Uzbekistan 2024). To maximize the positive impacts of ECE expansion, policy makers must maintain a sharp focus on quality, including by investing in teacher training and facilities.

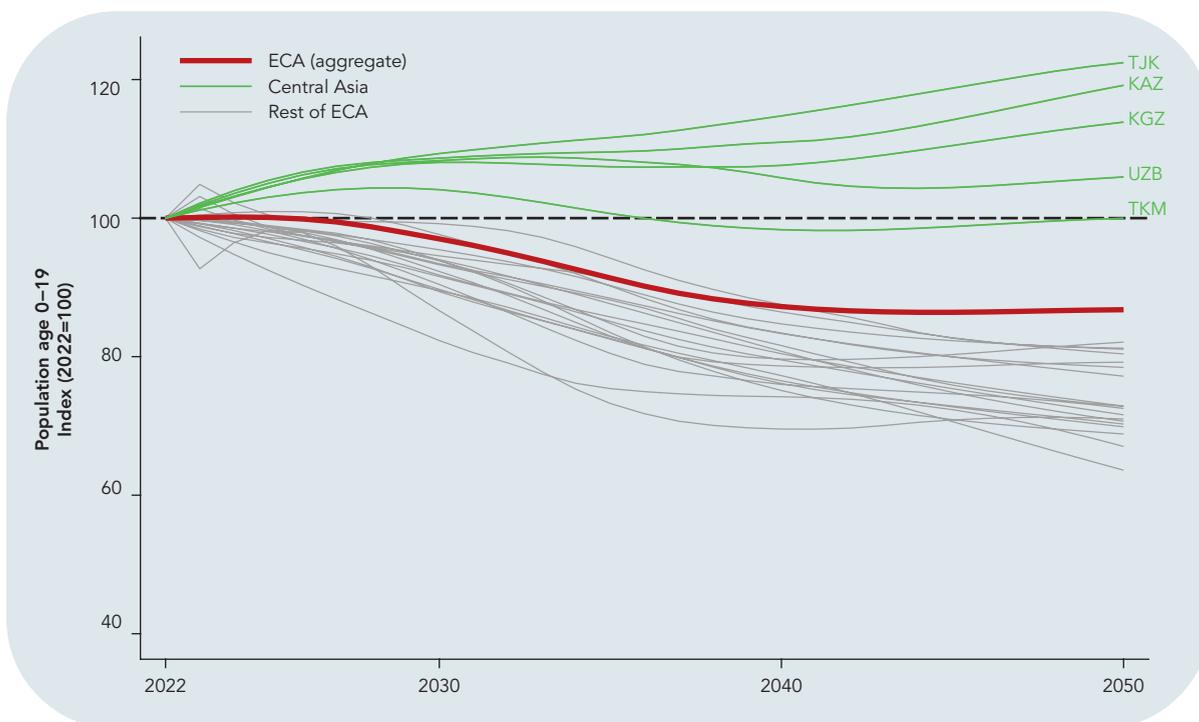
Source: Authors' elaboration based on UNDP Uzbekistan (2024) and World Bank (2019a).

The size of student cohorts in ECA will decline over time. In 2022, there were about 122 million people under the age of 20 in the region. This number is projected to decline to just below 119 million by 2030 and to 106 million by 2050, a 14 percent decrease by 2050. The average figures hide substantial heterogeneity across the region. Countries in Central Asia will see an increase in the school-age population by 2050 (figure 2.3); the rest of the region will see large declines. By 2050, the school-age population will be at least 30 percent smaller than it was in 2022 in Albania, Armenia, Bulgaria, and Kosovo and at least 25 percent smaller in Azerbaijan, Bosnia and Herzegovina, Croatia, North Macedonia, Poland, Serbia, and Ukraine. The decline will lead to vacant infrastructure and excessively low student-teacher ratios.

### The quality of primary and secondary education has been declining

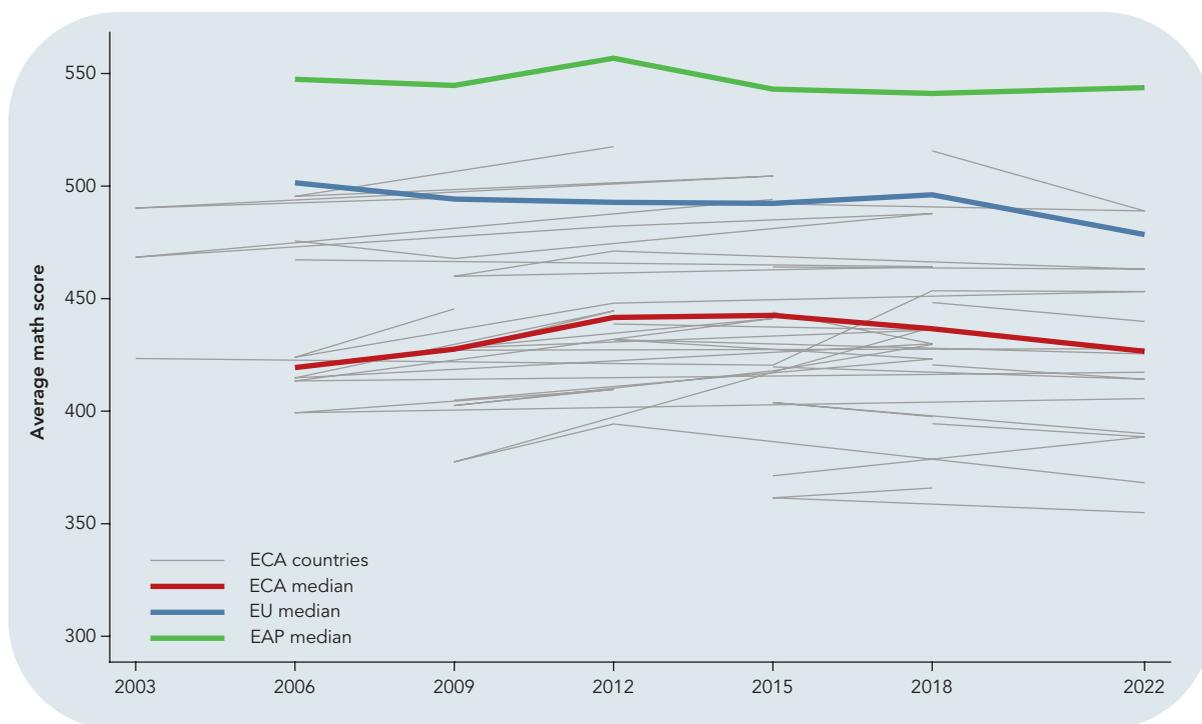
It is the quality of education that is a challenge: with some exceptions, the quality of education in ECA has declined for a decade. The region's median reading score on the Progress in International Reading Literacy Study (PIRLS), which is given to fourth graders, decreased from 547 points in 2006 to 518 points in 2021

**FIGURE 2.3.** The population under 20 years of age will shrink in most of Europe and Central Asia by 2050



Source: UN 2022.

Note: This graph plots the size of the population age 0 to 19 in ECA (red line), in Central Asian countries (green lines), and in the rest of the ECA countries (grey lines) between 2022 and 2050. The size is expressed as an index with respect to the value for 2022. Values correspond to the medium-variant projection of the 2022 revision of the UN Population Prospects.

**FIGURE 2.4.** PISA math scores have declined in the last years in Europe and Central Asia

Source: OECD (2024).

Note: This graph plots the average score in math in PISA among 15 years old students in ECA countries (thin grey lines), the ECA median (based on eight countries: Albania, Bulgaria, Croatia, Kazakhstan, Montenegro, Poland, Romania, and Türkiye) (red line), the median of the European Union (blue line), and the EAP median (based on the best performers in East Asia: Hong Kong SAR (China), the Republic of Korea, Japan, Macao SAR (China), Singapore, and Taiwan (China)) (green line).

in the ECA countries in which it is administered (Azerbaijan, Bulgaria, North Macedonia, Poland, Russian Federation, and Türkiye). This decline is slightly larger than the decline in EU countries, where the average fell from 542 to 526 points over the same period. The median math score on the PISA, which is administered to 15-year-olds decreased from 441 to 427 points in ECA between 2012 and 2022.<sup>2</sup> This decline is comparable to that in EU countries, where average PISA scores fell from 490 to 475 points (figure 2.4). Top EU performers, such as Finland or Poland, lost close to 30 points in this period—the equivalent of losing one to two years of schooling (Avvisati and Givord 2021). The education quality gap in math PISA scores between ECA and the best performers in East Asia widened slightly, from 114 points in 2012 to 117 points in 2022—a difference of about four and a half years of schooling.<sup>3</sup> Student performance in ECA declined markedly after the COVID-19 pandemic, even among the region’s top performers.

2. Albania, Bulgaria, Croatia, Kazakhstan, Montenegro, Poland, Romania, and Türkiye have participated in all PISA rounds since 2006. Other ECA countries are present in only a subset of these surveys.

3. East Asia includes Hong Kong SAR (China), the Republic of Korea, Japan, Macao SAR (China), Singapore, and Taiwan (China).

Lack of investment in educational infrastructure and teacher training reduces the quality of education. Many educators in the region have not received adequate professional development to update their teaching methods. As a result, they continue to employ traditional lecture-based teaching styles that do not engage students or encourage interactive learning. Schools and universities often lack technological resources, such as modern laboratories and digital learning tools, to support advanced education (Sondergaard and Murthi 2012).

The quality of basic education of students from disadvantaged backgrounds is poor, and these students are disproportionately tracked into vocational education, with negative consequences for their acquisition of foundational skills and future employability and earnings. Several arguments have been put forward in favor of increasing the proportion of students in vocational education programs. They include promoting youth employment, instilling technological knowledge, equipping less able students with marketable skills, and producing midlevel technicians. These goals are legitimate, but vocational education does not necessarily lead to the desired labor market outcomes (box 2.2).

## BOX 2.2 Is vocational education and training in Europe and Central Asia helping graduates?

Vocational education and training (VET) systems are very popular among policy makers across the world (Crawford and others 2021), including in ECA. On average, 45 percent of upper-secondary students in ECA are enrolled in vocational programs—more than twice the 22 percent average in the rest of the world. In some ECA countries, VET enrollment exceeds 70 percent (figure B2.2.1).

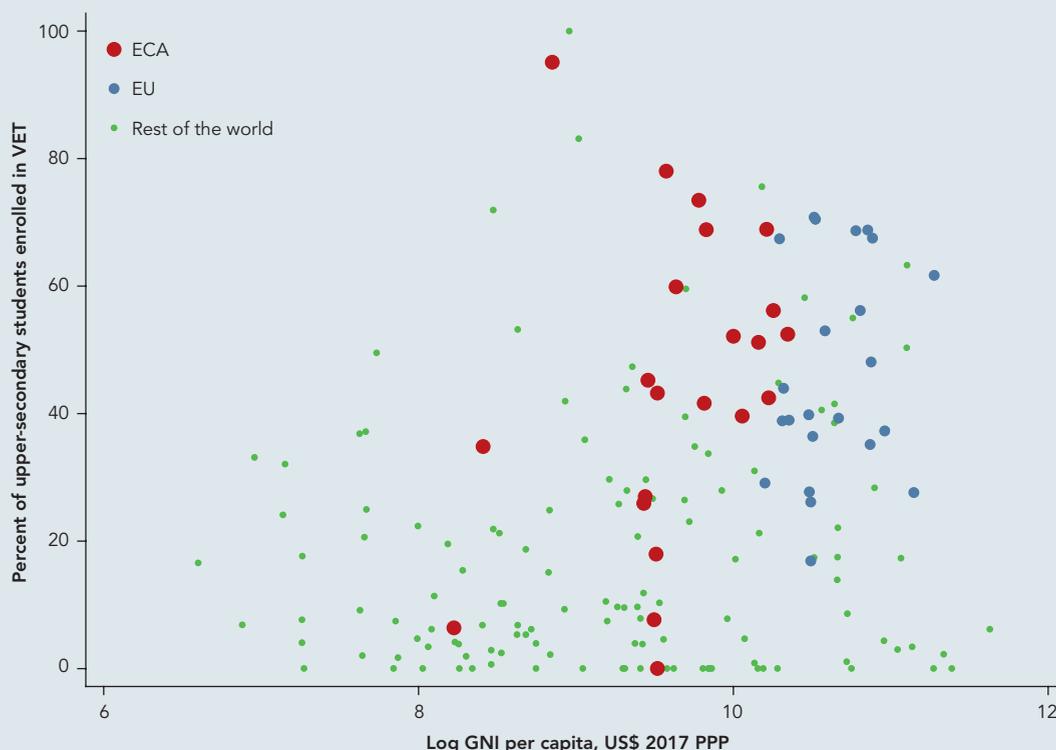
The popularity of VET systems stems from the belief that they improve employment outcomes, particularly among youth and disadvantaged groups. The evidence is mixed, however, and depends on the level of training. Post-secondary VET courses appear to have positive effects, although the mechanisms differ across country income levels and design characteristics matter (Stöterau, Kemper, and Ghisletta 2022). In contrast, secondary VET systems are struggling to keep up with evolving labor market demands. Secondary school VET graduates who pursue no further education perform the same type of jobs that they did

two decades ago; for the rest of the labor force, the nature of jobs has changed significantly. The average job in Europe has become more intensive in social and nonroutine cognitive tasks. In contrast, the average job held by secondary VET graduates has remained as intensive in manual and routine tasks as it was 20 years ago (Dalvit and others 2023).

Secondary VET can be classroom or workplace based. Vocational graduates perform slightly better in countries where the VET system is mostly work based (Dalvit and others 2023). This type of system involves private firms (both large firms and small- and medium-size enterprises) in the provision of education. The best examples are in Austria, Germany, and Switzerland, which have centuries-old traditions of apprenticeship. This tradition did not exist in most European countries, where vocational schools were created by the government without a strong link to private sector firms. In countries once under a communist regime, the vocational education system was expanded within the framework of

*(Continued next page)*

## BOX 2.2 (continued)

**FIGURE B2.2.1.** Enrollment in vocational education among upper-secondary students is particularly high in Europe and Central Asia

Source: UIS Statistics (UNESCO 2024).

Note: This graph plots the enrollment in VET among upper-secondary students. The sample is restricted to countries with the latest data from 2011 onward.

a planned economy. In these countries, vocational education systems are mostly classroom-based (Cedefop 2004).

When vocational education systems do not heavily involve private sector firms in the provision of professional skills or teach foundational skills, the labor market outcomes of VET graduates tend to be weak (World Bank, UNESCO, and ILO 2023). Classroom-based VET can be useful if foundational skills are taught, however. In Finland—one of the countries in Europe with the highest PISA scores—vocational education is mostly classroom-based

and entry happens late (at age 16 or 17). Finnish vocational track graduates do well in the labor market when compared to their academic track peers in the labor market (Silliman and Virtanen 2022).

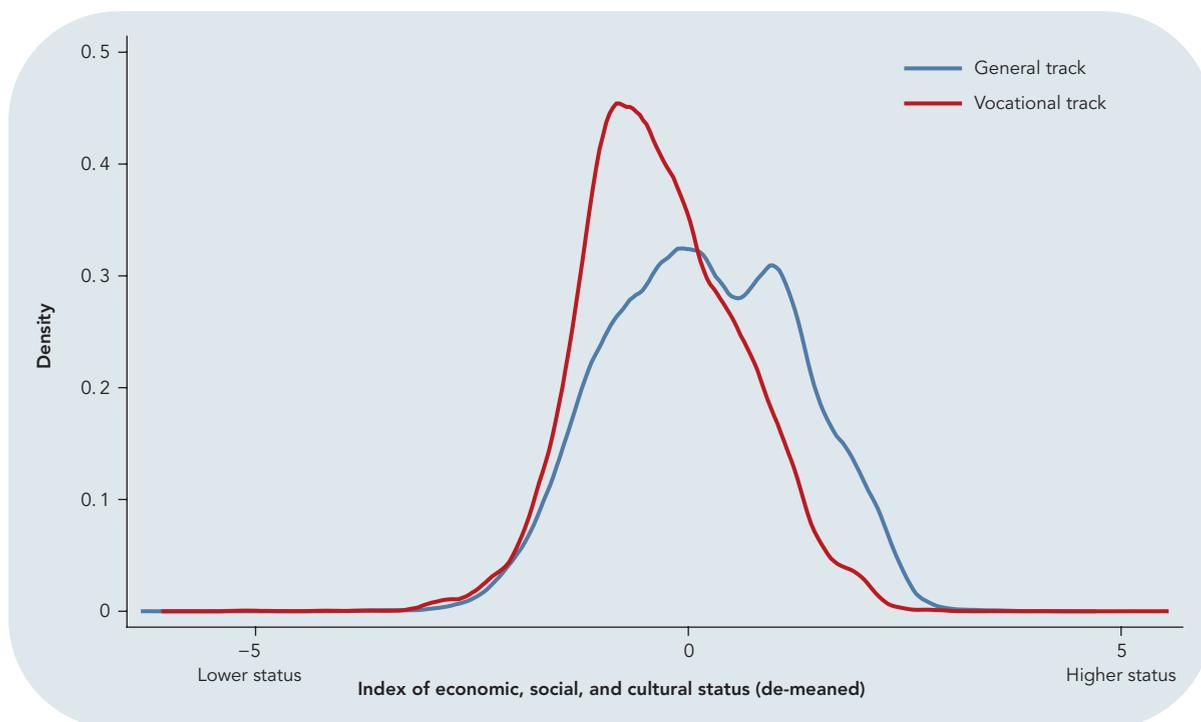
As they stand, the VET systems of many countries in ECA are contributing to the loss and misallocation of talent. Unless countries can reproduce the successful cases of apprenticeship-type systems in the German-speaking countries, with heavy involvement of private firms and a strong base of foundational skills, the rationale for investing in VET systems will remain weak.

Source: Authors' elaboration based on Dalvit and others (2023).

Students enrolled in VET, who come overwhelmingly from disadvantaged backgrounds (figure 2.5), perform poorly in basic subjects such as reading and math—precisely the skills employers demand (figure 2.6). The labor market advantage that vocational education graduates have at the beginning of their professional lives quickly dissipates, as the professional skills these students acquire become obsolete because of technological change (Dalvit and others 2023; Hanushek and others 2017).

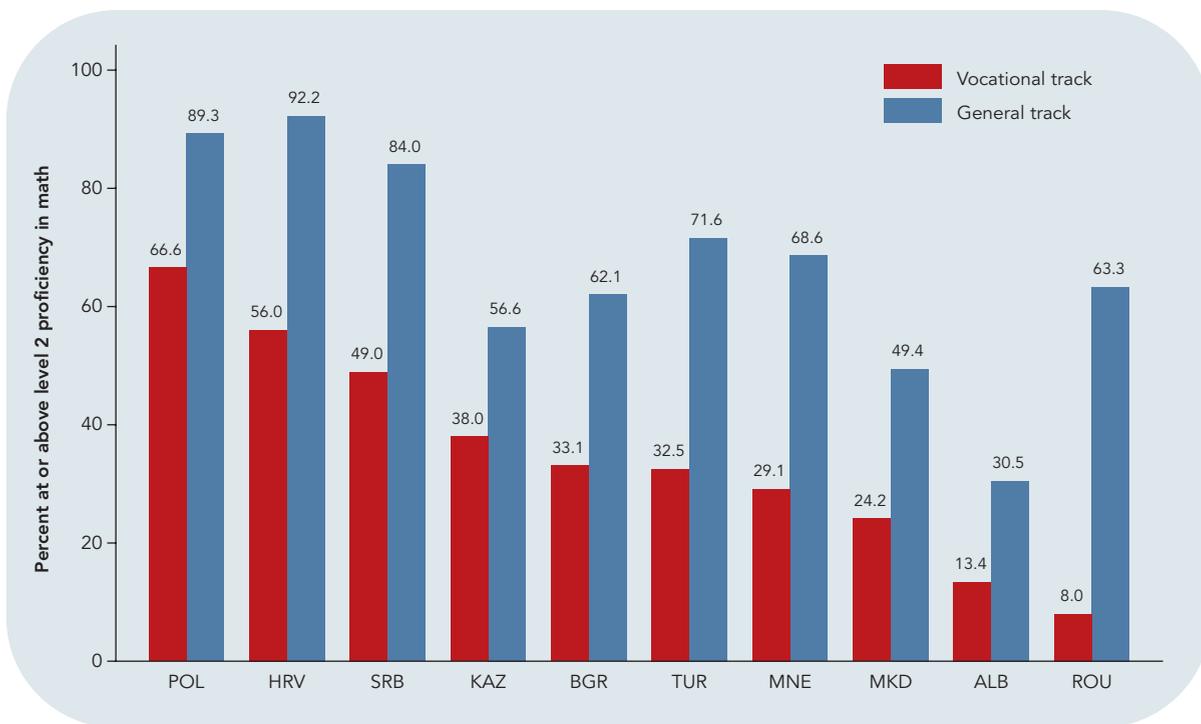
Tracking some students into VET is more expensive, yields lower benefits, and leads to higher inequality after graduation than providing secondary academic schooling to all students. Early selection into vocational education leads to inequality by channeling poor, less able, and minority students into the less prestigious vocational track; it also reinforces ethnic inequalities (Foster 1965; Psacharopoulos 1987, 1991). A recent systematic review examines the effects of sorting secondary students into tracks on efficiency (the overall level of student learning achievement) and inequality (achievement dispersion and inequality of opportunity) (Terrin and Triventi 2023). The 53 studies reviewed, conducted in 2000–21, yielded 213 estimates of efficiency and 230 estimates of inequality. They

**FIGURE 2.5.** Vocational track students come from a lower socioeconomic background than general track students



Source: Authors' estimates based on scores on the 2022 PISA.

Note: This graph plots the distribution of the index of economic, social, and cultural status among upper-secondary students in EU countries sampled in the 2022 round of the PISA survey. The blue line plots the distribution of the index for upper-secondary students in the general track. The maroon line plots the distribution of the index for upper-secondary students in the vocational. Figures include only countries with a meaningful sample of vocational track students (Albania, Bulgaria, Croatia, Kazakhstan, Montenegro, North Macedonia, Poland, Romania, Serbia, and Türkiye). The index has a value of zero, which corresponds to the average of each survey respondent's country.

**FIGURE 2.6.** Vocational track students perform considerably worse in math than general track students

Source: Authors' estimates based on PISA 2022 results.

Note: This graph plots the share of upper-secondary students achieving minimum proficiency in math (understood as level 2 proficiency) in the PISA 2022 test. The blue bar plots the share for upper-secondary students in the vocational track. The orange bar plots the share for upper-secondary students in the general track. Only countries in which at least 10 percent of the surveyed students are on the vocational track are included.

show that the mean effect size of tracking on efficiency is not statistically significant, implying that tracking contributes little to the efficiency (learning) of an education system. The mean effect size on inequality is significantly positive, indicating that tracking increases the inequality of the education system. The fact that students who are streamed into VET are in some cases not allowed to switch to another track limits opportunities and reduces their options for post-secondary schooling.

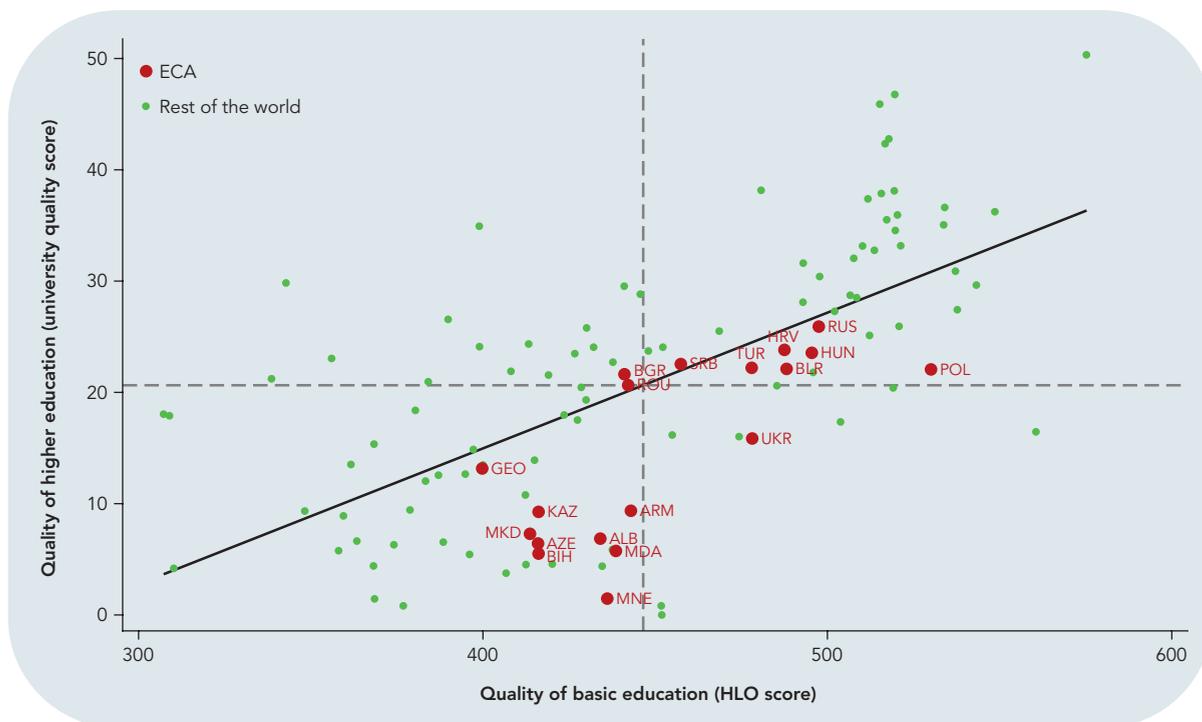
A substantial body of evidence suggests that a comprehensive basic education system that does not track students early on improves students' academic and labor market performance. Education reforms that delay or eliminate tracking at an early age and teach a nationally unified curriculum improve outcomes because students in academic schools spend more time on task and are subject to higher expectations. Cross-country comparisons show that for the same mean values, the variance in test scores is higher in countries where tracking takes place at an early age (Hanushek and Woessmann 2006). Reforms of the educational system in Finland, Norway, and Poland led to increased schooling and earnings for students from low socioeconomic backgrounds (Aghion and others 2023; Jakubowski and others 2016; Ollikainen 2021; Pekkala Kerr, Pekkarinen, and Uusitalo 2013; Pekkarinen, Uusitalo, and Pekkala 2009; Meghir and Palme 2005).

## The quality of higher education in ECA is problematic

The quality of higher education in Europe and Central Asia is particularly worrisome. ECA countries appear to have a lower quality of higher education than warranted by the quality of their primary and secondary education. Almost all countries in ECA are below the linear fit line relating the quality of higher and basic education (figure 2.7), indicating that higher education in the region is underperforming relative to global trends.

The low quality of higher education is mirrored by the relatively poor performance on tests of cognitive skills among adults with tertiary degrees. Where higher education is of low quality, adults with a tertiary degree perform worse on literacy, numeracy, and problem-solving than they do in countries with better institutions of higher learning (figure 2.8).

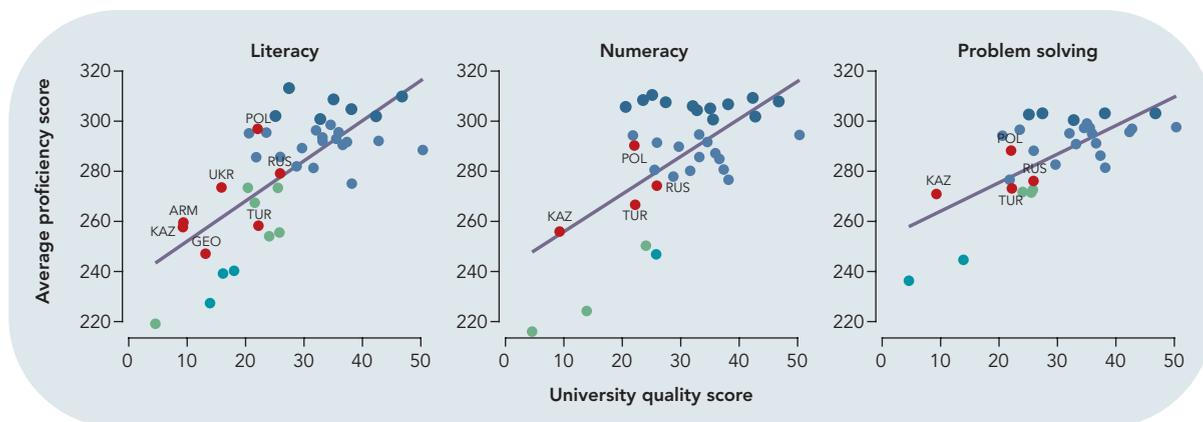
**FIGURE 2.7.** The quality of higher education in Europe and Central Asia is particularly low when compared to the quality of basic education



Sources: Demirgüç-Kunt and Torre (2022); World Bank (2022).

Note: This graph plots, for every country with available data, the quality of higher (vertical axis) and basic education (horizontal axis). The black line indicates the linear fit between both variables. The dashed horizontal line indicates the average quality of basic education in the country sample, while the dashed vertical line indicates the average quality of higher education. The quality of basic education is proxied by the average harmonized test score (HLO score) in each country in the World Bank Human Capital Database. The quality of higher education is proxied by the aggregate university quality score used in Demirgüç-Kunt and Torre (2022).

**FIGURE 2.8.** A worse quality of higher education is associated with a worse proficiency in cognitive skills among adults



Sources: Demirgüç-Kunt and Torre (2022); World Bank (2022).

Note: This graph plots the country-level average skills proficiency scores for tertiary graduates (vertical axis) against the country-level quality of higher education (horizontal axis). The quality of higher education is proxied by the aggregate university quality score used in Demirgüç-Kunt and Torre (2022). Red points indicate ECA countries.

The skills mismatch between higher education and the labor market is also a reflection of poor educational quality. Employers frequently report that graduates lack essential soft skills, such as communication and teamwork, as well as technical skills specific to their industries. This skills mismatch results in high levels of overqualification and underemployment among graduates and can lead to brain drain (box 2.3).

### BOX 2.3 Understanding the brain drain from Europe and Central Asia

A common concern across ECA countries is the emigration of talented workers. More than a third of the people with higher education degrees emigrate from Albania, Bosnia and Herzegovina, Kazakhstan, and Moldova, and more than a quarter in Armenia, Bulgaria, Croatia, the Kyrgyz Republic, and North Macedonia do so. Countries with fewer higher education graduates see the highest emigration rates among them (figure B2.3.1).

A nontrivial share of high school graduates also emigrate to pursue tertiary studies abroad. Of the 151,274 individuals aged 20–24 that migrated to the European Union from ECA countries in 2022,

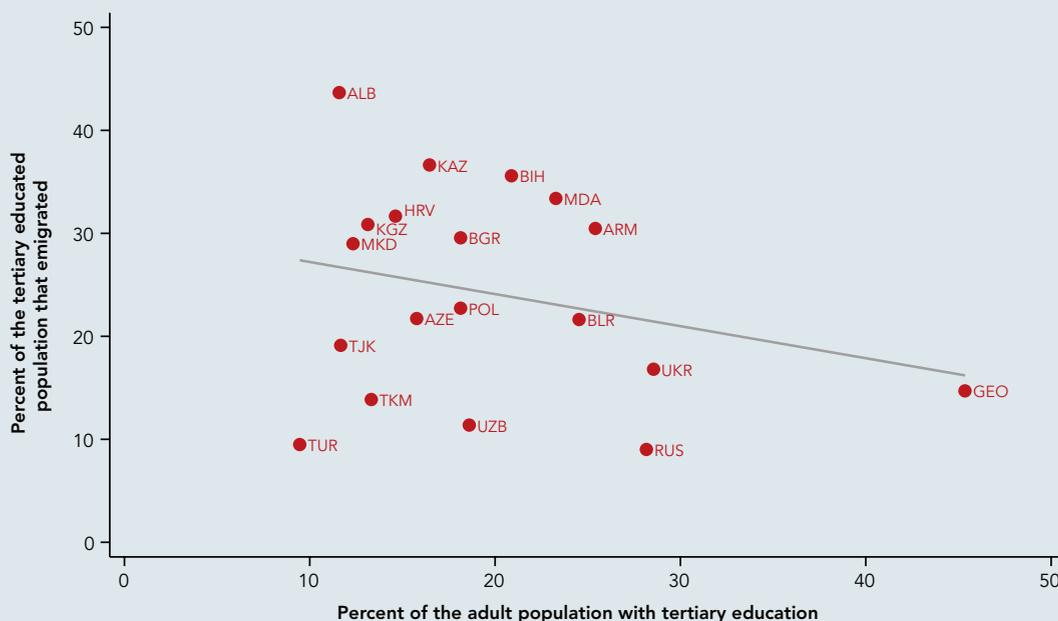
about 25,967 (17.2 percent) did so for educational reasons.<sup>a</sup>

In small countries where education is publicly funded, the emigration of individuals with higher education degrees represents a subsidy from the origin country (typically a middle-income country) to the destination country (typically a high-income country). The emigration of high-skilled workers represents an obstacle to development when the costs to the origin society from losing a highly qualified worker outweigh the benefits from the remittances and the knowledge spillovers the worker generates (World Bank 2023).

(Continued next page)

### BOX 2.3 (continued)

**FIGURE B2.3.1.** Countries with a smaller share of people with higher education see the highest levels of high-skilled emigration



Source: own elaboration based on World Bank Migration Database

Several factors underpin the emigration of high-skilled workers. “Pull” factors include proximity to the European Union, where demand for high-skilled labor is strong. “Push” factors include the limited job opportunities for some specialized professions in origin countries.

There is little that origin countries can do with respect to pull factors, but they can try to diminish the strength of push factors (World Bank 2019). Increasing the competitiveness of wages and productivity in critical high-skilled occupations can help weaken the incentives for talented workers to migrate. Small countries may focus on developing “niche” sectors, such as personal and health

services for tourists, which may become strong enough to retain qualified workers when they attain a critical mass. Origin countries could also establish bilateral agreements with high-income countries to ensure that the benefits of migration are shared evenly. The Global Skills Partnerships (GSPs) are a model of collaboration in which either the government or the private sector of the country of destination finances the training of potential migrants in the origin country before migration. This training also benefits students in the program who ultimately stay home and enter the domestic labor force, reducing some of the adverse effects of brain drain (World Bank 2023).

Source: Authors’ elaboration based on World Bank (2019b, 2023).

a. These values correspond to citizens of ECA countries who obtained their first permit of residence in any EU country during 2022. Citizens of Bulgaria, Croatia, Romania, and Poland are excluded because they enjoy freedom of movement within the EU. Data are from Eurostat table migr\_resfas.

Outdated curricula fail to equip students with the skills they need to compete in the job market. Many universities in the region still use Soviet-era curricula that focus more on memorization and repetition than on critical thinking and practical skills (Smolentseva, Huisman, and Froumin 2018), an approach that fails to equip students with the skills required to thrive in a dynamic job market.

Many institutions also have inadequate infrastructure, including poorly maintained buildings and outdated equipment. This lack of investment significantly hampers the learning environment and the overall educational experience.

“Academic capture” (corruption and conflicts of interest that undermine educational standards) is depriving talented students of fair learning opportunities. Close relationships between educational institutions and political or business elites often erode academic integrity and cause decisions to be made based on personal or political interests rather than educational merit. Corruption undermines the credibility of higher education institutions and deflates the value of the degrees they offer. Academic capture also deprives some talented students of receiving a robust education (Milovanovich, Denisova-Schmidt, and Anapiosyan 2018). Some students may seek education and career opportunities abroad if they perceive that their home country does not offer a fair or supportive environment for their talents.

The research performance of ECA’s universities lags far behind that of Europe, the United States, and East Asia. Just 9 universities in ECA rank among the world’s top 500 according to the 2024 edition of the Times Higher Education ranking, well below the numbers in the European Union (154), East Asia and Pacific (116), and the United States alone (107) (Table 2.1). No ECA country appears in the top 50 of any ranking, and only one ECA university is in the top 100.

**TABLE 2.1. Number of universities in the top 500 of Times Higher Education ranking, by region and country**

Region/country	Number of universities in the top 500
Europe and Central Asia	9
Russian Federation	6
Türkiye	3
European Union	154
United Kingdom	55
East Asia and the Pacific	116
Australia	32
China	31
Japan	10
Korea, Rep.	13
Rest of region	30
United States	107

Source: Authors’ compilation of data from the 2024 edition of the Times Higher Education ranking of world universities.

Notes: Figures show the number of universities appearing in the top 500 of the 2024 Times Higher Education ranking. Countries not included in the table have no university in the top 500 of the ranking.

Although investment in them is low, universities are major centers of R&D in ECA, more than in other regions of the world. About 30 percent of the R&D investment in ECA is executed by higher education institutions. Values range from above 50 percent in Bosnia and Herzegovina and North Macedonia (albeit very low in absolute terms) to around 40 percent in Kazakhstan; 30 percent in Poland, Serbia, and Türkiye; 25 percent in Romania; and less than 10 percent in Bulgaria. The average in the European Union is about 22 percent (Eurostat 2024a). The share of R&D executed by universities is 8 percent in China, 9 percent in the Republic of Korea, 10 percent in the United States, and 12 percent in Japan. University investment in R&D per inhabitant in ECA is low, however (ranging from €6 in Bulgaria to €81 in Poland), representing a small fraction of the investment in the United States (€214), the European Union (€172), Korea (€133), and Japan (€132).

Lack of infrastructure and support hinders innovation and entrepreneurship in ECA. Many countries lack the infrastructure to support innovation, including research labs and technology parks, institutional support of intellectual property rights, venture capital, and government policies that promote entrepreneurship and innovation. Without these elements, it is difficult to develop new ideas and bring them to market. Talented individuals may find it difficult to turn their innovations into viable businesses, discouraging creative and entrepreneurial efforts. Higher education systems in ECA are also not conducive to developing commercially viable research outputs (box 2.4).

### BOX 2.4 How do higher education systems around the world support research, entrepreneurship, and innovation?

The US/UK and European education systems have adopted different approaches to integrating research and education and nurturing and identifying talent. Historically, the United States and the United Kingdom have embedded research within universities, which have developed robust mechanisms for identifying and nurturing talent, often through competitive admissions processes and specialized honors programs. Universities in these countries have strong ties to industry, which provide talent identification and development opportunities through internships, cooperative education programs, and industry-sponsored research projects.

The German system developed a dual structure in which universities focus on teaching and basic research while specialized institutions, such as the Max Planck Society, concentrate on applied research and industry collaborations. This model,

followed by several European and most post-communist countries, often identifies talent through performance in rigorous secondary education systems and develops it through specialized academic tracks.

The US/UK model integrates industry collaboration within universities, resulting in numerous startups and significant technology transfer revenue. The European model leverages specialized institutions for a more structured approach to applied research. Both systems effectively identify and nurture talent, but with different emphases: The US/UK model often fosters entrepreneurial talent, whereas the German model excels in developing specialized technical expertise.

The former Soviet republics adopted another model, characterized by a dual structure: the Academy of Sciences for research and teaching universities for education. This system featured centralized

*(Continued next page)*

**BOX 2.4 (continued)**

control, specialized institutions, free education, limited institutional autonomy, and an emphasis on applied sciences and engineering (Smolentseva 2003). Talent was often identified early through specialized schools and competitions, with a strong emphasis on mathematics and sciences. However, the rigid separation between research and teaching institutions often led to a disconnect between cutting-edge research and classroom instruction. Centralized control limited innovation in curricula and teaching methods, potentially stifling creativity and critical thinking. This system produced highly skilled specialists in specific fields; it struggled to develop a more diverse range of talent.

Comparing the post-Soviet system to the US model reveals stark contrasts. The US system encourages institutional autonomy, fosters innovation and entrepreneurship, and integrates research and teaching; the post-Soviet model does not. The flexibility and responsiveness to market demands of the US system contrasts with the often rigid and

slowly adapting post-Soviet institutions. This flexibility allows the US system to adapt more quickly to new fields and forms of talent. US universities' success in research relies on its free-market nature, characterized by autonomy and freedom of entry and scope (Urquiola 2020). It is not clear, however, whether this model can be replicated in other societies.

Many post-communist countries have been reforming their systems to align more with Western models—integrating research into universities, creating private universities and introducing tuition fees, increasing institutional autonomy, and participating in the Bologna Process. Reforms also aim to improve talent identification and nurturing processes, making them more flexible and responsive to global trends. Challenges remain, however, in funding, modernizing curricula, and balancing historical strengths with the need for reform and international integration (Smolentseva, Huisman, and Froumin 2018).

*Source:* Authors' elaboration based on Smolentseva, Huisman, and Froumin (2018).

Despite high enrollment, inequalities in access persist. Extending compulsory schooling in basic education is critical to ensure that children from disadvantaged backgrounds reach higher education. Evidence shows that students from poorer families benefit more from higher education than other students (Duryea and others 2023; Londoño-Vélez and others 2023), as the poor may rely more on skills to find jobs.

Compulsory school laws for basic education increase higher education attainment, particularly for marginal students. They accomplish this by reducing drop-out, increasing secondary education completion, and enlarging the pool of students who are eligible to attend institutions of higher learning, thereby improving the allocation of talent. On average, increasing compulsory education by one year raises the probability of attaining higher education by 10 percentage points. The returns to education of people affected by increases in compulsory schooling who complete higher education were superior to the average gain for the entire population in most of these countries, illustrating once more that disadvantaged students benefitted the most from these reforms that compelled them to stay longer in school. In particular, the returns for higher education among those whose schooling increased because of the compulsory schooling laws exceeded the returns for higher education among the average population by 2 percentage points (or 22 percent of the average annual return).

## Even with lower quality, strong demand for talent has boosted returns to education

The returns to higher education have increased since the COVID-19 pandemic. The increase was driven by the region's upper-middle-income countries, where the earnings returns to higher education increased from 6.8 percent in 2016 to 7.5 percent by 2022 (table 2.2). Returns slowed in the region's lower-middle-income countries, falling from 6.0 percent in 2016 to 5.7 percent in 2022. The average returns to higher education in EU countries rose modestly from 9.9 percent in 2016 to 10.1 percent in 2021.

**TABLE 2.2.** Returns to higher education in Europe and Central Asia, by country, 2016 and 2022

Country	Percentage increase in earnings associated with higher education		Percentage point change
	2016	2022	
Armenia	10.2	1.0	-9.2
Azerbaijan	2.5	20.5	18.0
Belarus	4.0	4.3	0.4
Bosnia and Herzegovina	9.8	4.6	-5.2
Bulgaria <sup>a</sup>	12.3	13.7	1.5
Croatia <sup>a</sup>	11.9	9.8	-2.1
Georgia	0.8	4.9	4.1
Kazakhstan	6.3	10.3	4.1
Kosovo	10.7	4.9	-5.7
Kyrgyz Republic	4.4	3.9	-0.5
Moldova	5.7	4.4	-1.4
Montenegro	5.0	11.0	6.0
North Macedonia	7.0	9.0	2.0
Poland <sup>a</sup>	12.3	9.4	-2.9
Romania <sup>a</sup>	10.7	11.1	0.4
Russian Federation	6.0	7.8	1.7
Serbia <sup>b</sup>	10.9	10.5	-0.3
Tajikistan	4.4	4.0	-0.4
Türkiye	9.9	10.6	0.7
Ukraine	2.1	—	—
Uzbekistan	9.2	9.3	0.2
Average	7.4	8.3	0.9
Upper-middle income countries in ECA	6.8	7.5	0.7
Lower-middle income countries in ECA	6.0	5.7	-0.3

Source: Authors' estimates based on LiTS (2016 and 2022) and EU-SILC (2017 and 2022).

Note: Values are the coefficients associated with higher education in a regression with the logarithm of earnings as the dependent variable and secondary education, experience, and experience-squared as controls. The regression is estimated for each country separately. Upper middle-income countries in ECA include Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kosovo, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, and Ukraine. Lower middle-income countries in ECA include the Kyrgyz Republic, Tajikistan, and Uzbekistan. — Not available.

a. Estimates are for 2017 and 2022.

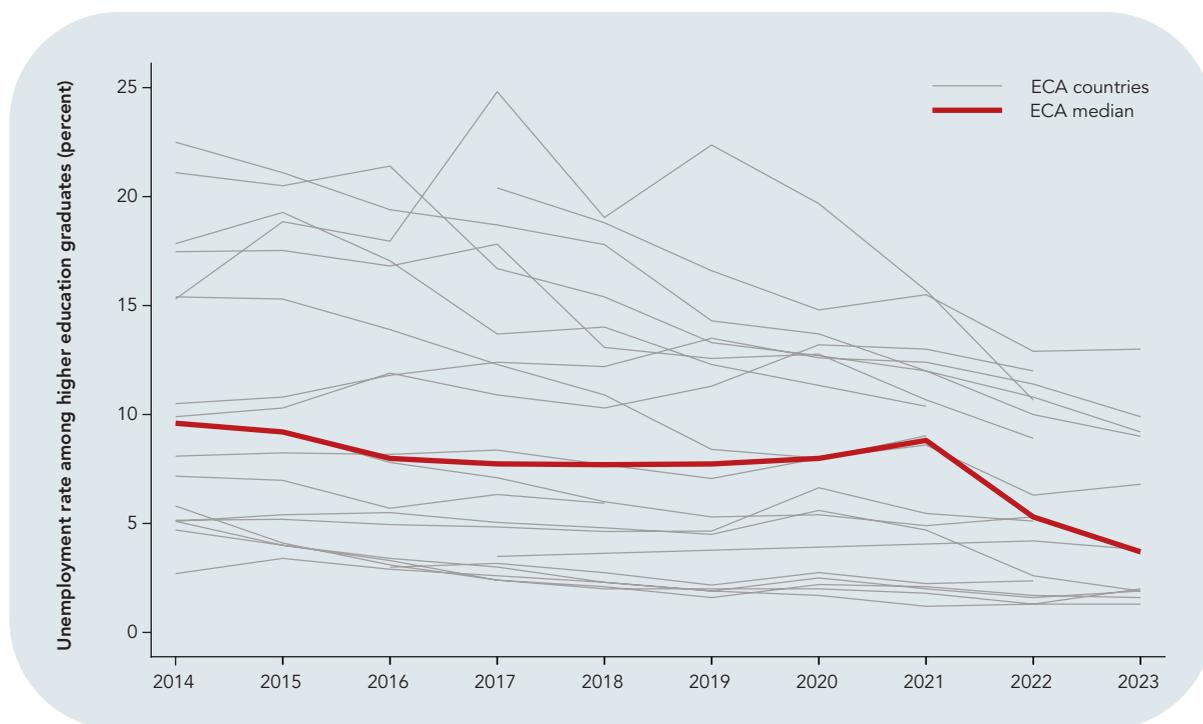
b. Estimates are for 2016 and 2020.

Returns to education have increased since the transition to a market economy started and (for some countries) accession to the European Union. Using comparable returns to education over time for 28 transition and 20 nontransition economies in ECA, Patrinos and Rivera-Olvera (2023) find that transitioning from a centrally-planned economy to a market economy increased the returns to schooling in post-socialist countries significantly, primarily through the EU accession channel. Neither transitioning to a market economy without acceding to the European Union nor joining the European Union without being a transition economy was associated with higher returns to education. Trade openness increased the returns to education, possibly because it increased demand for labor and human capital.

Unemployment rates for higher education graduates plummeted in the last decade. The unemployment rate for higher education graduates in the median ECA country fell from almost 10 percent in 2014 to below 4 percent in 2023 (figure 2.9). The lowest rates in the latest year for which data were available were in Poland (1.3 percent) and Romania (1.6 percent); the highest rates were in Georgia (13.0 percent) and Kosovo (10.7 percent).

Lower unemployment rates among higher education graduates suggest that, despite the decline in quality, the education system in ECA still delivers productivity benefits. Indeed, more schooling results in higher earnings. Evidence using

**FIGURE 2.9.** Unemployment rates among higher education graduates have fallen in the last years



Source: Authors, based on data from Eurostat, ILOstat, and World Development Indicators.

Note: This graph plots the unemployment rate, in percent, among the working-age population with higher education. Countries included are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kosovo, the Kyrgyz Republic, Moldova, Montenegro, North Macedonia, Poland, Romania, Russian Federation, Serbia, Türkiye, and Ukraine.

family background and compulsory schooling laws as an instrument for years of education shows that individuals with more years of education because of exogenous reasons end up earning more. Between 1962 and 2005, 28 countries in ECA passed at least one law aiming to increase compulsory schooling beyond the average schooling attainment in their country. In 19 of these countries, these reforms increased the educational attainments of those affected by the reform (“compliers”) as well as their returns to education. On average, the schooling attainment of compliers grew by 0.7 years per additional year of schooling prescribed by the reforms in these countries. Estonia was the only country in which the reform did not increase earnings. The higher schooling attainment propelled by the laws resulted in higher returns to education, especially for students for whom the policy directly increased schooling.

A high wage premium on education and a decrease in unemployment rates in ECA countries indicate strong demand for skilled workers. The high wage premium on education also highlights the mismatch between the skills demanded by the industry and those supplied by the higher education system. Many employers in the region report difficulties finding workers with the right skills, despite the large number of graduates (ILO 2020). This skills mismatch contributes to the elevated levels of graduate underemployment and overqualification, and constrains the growth and competitiveness of businesses in the region. To address this issue, higher education institutions must work closely with industry to ensure that their curricula and programs meet the labor market’s needs. Developing industry-specific programs, promoting work-based learning opportunities, and fostering closer collaboration between academia and the private sector can help ensure that graduates meet the needs of employers (European Training Foundation 2019).

A strong demand coupled with declining quality of education will, however, affect the long-term growth perspectives of the region. The economies of ECA are in the process of transitioning to high-income status, where a skilled workforce is more important than ever (World Bank 2024c). The strong demand for skilled workers is thus a proof of the strength of this transition process. However, convergence to high income may be thwarted if the quality of education—in particular, higher education—does not improve. To make this transition a reality, economies need to move closer to the global technological frontier, supplementing investment and infusion of foreign technologies, capital, and expertise. While the decline in education quality may not necessarily affect the productivity of workers in elementary occupations, it does affect the productivity of workers in skilled occupations and, most importantly, it has a negative impact on the innovation dynamics of the region. Substantial evidence shows that cognitive skills are linked to innovation outcomes (Bell and others 2019).

## Making the talent of ECA flourish

The countries in ECA need to ensure that foundational learning is strong at all levels; that education systems become more resilient; and that teaching, research, and training address the climate and technology challenges of the future (World

Bank 2024a). ECA already outperforms many other developing regions of the world on educational outcomes; it needs to allow talent to flourish and reduce its large misallocation. If it fails to do so, a rapidly changing technological, environmental, and demographic environment will stymie the region's innovation engine and prevent convergence to high-income status.

Several cost-effective strategies can help address the challenge of diminishing education quality. Three “great buys” in the menu of educational interventions—interventions that are highly cost-effective and supported by a strong body of evidence—are recommended. The first one is the provision of information on the benefits, costs, and quality of education to parents, principals, teachers, and students. The second cost-effective intervention is supporting teachers with structured pedagogy (a package that includes structured lesson plans, learning materials, and ongoing teacher support). And lastly, a third “smart buy” consists of targeting teaching instruction by learning level, not grade (i.e. “teaching at the right level”) (Akyeampong and others 2023).

Using standardized tests for diagnostic purposes is a “low-hanging fruit.” Many countries do not measure student learning systematically and periodically with tests that allow comparability over time and provide concrete feedback to schools and teachers on improvement. Evidence from Latin America shows that providing principals with information on their students' test scores leads to improvements in school management, instruction, and student achievement (De Hoyos, Garcia-Moreno, and Patrinos 2017; De Hoyos, Ganimian, and Holland 2021; De Hoyos and others 2024).

Teachers' performance can be improved with structured pedagogy and managed professional development. Managed professional development provides teachers with precise training and curricular materials. These programs are significantly more prescriptive than simple guidelines and their impacts are large (Education Endowment Foundation 2021; Fryer 2017). Education systems need clear teacher career paths, solid pre-service training, a merit-based selection process, recognition of good performers, and continuous professional development for weak performers (Bruns and Luque 2014).

Tech-enabled, high-dosage, small-group tutoring can be effective in ensuring that teachers are “teaching at the right level” while significantly reducing costs. Individualized, intensive, in-school tutoring (high-impact tutoring) has shown large positive effects on learning, but such efforts are expensive (Fryer and Howard-Noveck 2020; Guryan and others 2023). More affordable models emerged during school closures during the COVID-19 pandemic. In Italy, for example, a program using volunteer university students provided free individual online tutoring to disadvantaged students during lockdown for three to six hours per week. The program substantially increased students' academic performance at very reasonable costs while significantly improving their socioemotional skills, aspirations, and psychological well-being (Carlana and La Ferrara 2021). Effects were stronger for children from lower socioeconomic backgrounds and immigrant children. A teacher-led online tutoring program in Spain focused on math and socioemotional support. It was delivered by qualified teachers using digital devices and the Google Workspace platform (Gortazar, Hupkau, and Roldán-Monés 2024). New technology can be used to teach at the right level for

all students, including secondary school students, as a study of a personalized technology-aided after-school instruction program shows (Muralidharan, Singh, and Ganimian 2019).

Countries should also drastically reform secondary vocational education and training (VET) systems. Delaying vocational school tracking to the end of lower-secondary education would help reduce talent misallocation, by improving the opportunities and academic outcomes of children from disadvantaged backgrounds, who are disproportionately enrolled in VET. VET can be effective only if students have strong foundational skills (which is generally not the case for students from disadvantaged backgrounds in ECA) and private sector employers are heavily involved in providing work-based learning and apprenticeships. If these conditions are not met, VET can lead to poor academic and employment outcomes for graduates. Countries need to reconsider the format of VET and consider resizing it.

Increasing instruction time can improve average learning outcomes, but it may not reduce inequality. The amount of instruction time in primary education is relatively low in ECA. The average number of instructional hours per year is 805 in the Organisation for Economic Co-operation and Development countries—far more than in Croatia (473), Bulgaria (507), Poland (558), and Romania and Türkiye (each 720) (OECD 2023). Policy makers in several ECA countries are discussing going to full-time schooling (understood as at least 28 hours of instructional time per week), to reduce inequality in academic outcomes. However, recent evidence from Nordic countries indicates that inequality in educational outcomes across socioeconomic status may be a result of differences in parental investment, which public interventions may find it difficult to make up for (Carneiro, Reis, and Toppeta 2024). Analysis of a German reform that increased instruction time shows that average student performance improved but the gap between low and high performers increased (Huebner, Kuger, and Marcus 2017).

Demographic trends provide an opportunity for countries to improve the efficiency of educational spending. With a diminishing student cohort over time, educational systems can improve the allocation of existing resources by consolidating the school network and reassigning teachers away from areas with low student-teacher ratios. These savings can be used to improve teacher pay and school infrastructure. Consolidation can also be a strategy to improve the efficiency of spending and quality of universities (box 2.5).

However, investment alone is not sufficient; better management is also needed. ECA needs to increase funding for universities. To make this investment worthwhile, universities need to become more autonomous, as autonomy and funding are mutually reinforcing factors. Universities are more productive when they are both more autonomous and face more competition (Aghion and others 2010).

Greater accountability is required to improve the quality of higher education institutions. It could come through increased reliance on competitive grants, enhanced competition for students and faculty (promoted by reforms that increase mobility), and yardstick competitions (which often take the form of assessment exercises). Higher education institutions often have underdeveloped review

**BOX 2.5 Consolidating tertiary institutions to improve quality, reduce expenses, and adjust to demographic changes**

As birth rates decline and young people increasingly seek educational opportunities abroad, many regional universities face dwindling enrollment numbers. This trend is particularly pronounced in several Eastern European countries. In Poland, for example, the number of students decreased by 28 percent between 2013 and 2022, while in Bulgaria the decrease was about 20 percent and in Romania it was about 10 percent (Eurostat 2024b). In Moldova, tertiary enrollment fell from 128,000 in 2006/07 to 56,700 in 2022/23, a decrease of over 41 percent (National Bureau of Statistics of the Republic of Moldova 2022). The decline was not matched by a reduction in the size of the higher education system, leading to a high density of higher education institutions in Eastern Europe. In 2017/18, Poland had more than 10 higher education institutions per million inhabitants, and Ukraine had 7.7. These figures were less than 5.0 per million in Germany and less than 2.0 per million in Spain (Gresham and Ambasz 2019).

These trends have sparked discussions about consolidating universities (merging two or more institutions into a single entity) as a strategic response to these challenges and avoiding university closures, which are costly for students. Consolidation could address the decline in the number of students and the need for improved educational quality.

Consolidation can achieve significant cost savings by eliminating duplicate administrative structures and optimizing infrastructure. It also makes it easier to streamline curricula, focusing resources on high-quality, in-demand courses. The Estonian government's initiative to consolidate smaller specialized institutions into larger universities resulted in the development of more interdisciplinary programs that better align with market demands (Aidnik 2018).

A critical mass of expertise can be achieved in specific fields by bringing together researchers from multiple institutions. This concentration of talent can lead to increased funding opportunities and enhanced interdisciplinary collaboration. For countries experiencing significant student decline, consolidation can help maintain research output and quality. Larger, more resource-rich institutions often achieve better positions in global rankings, which attracts more international students. This strategy could benefit countries like Armenia and Georgia, which could potentially attract students from neighboring regions to offset domestic declines.

Integration of different institutional traditions can be complex. Careful planning is required to ensure equitable access to higher education, particularly in regions where consolidated universities might be more geographically concentrated.

The World Bank is currently supporting Ukraine's efforts to consolidate its network of higher education systems by providing seed funding in the form of merger support packages. These packages include laboratories for teaching, research, and/or learning; equipment for laboratories; learning support facilities and other learning spaces; modern digital infrastructure to support distance learning; and minor refurbishment/rehabilitation (excluding new construction).

Consolidating universities in ECA countries presents a promising strategy for addressing demographic shifts and enhancing the quality of the region's higher education sector. By improving resource allocation, research capabilities, and international competitiveness, consolidated institutions are better positioned to meet the evolving needs of a smaller but more diverse student body.

Source: Authors' elaboration based on Gresham and Ambasz (2019).

mechanisms to update curricula and course material, and they do not regularly track feedback from graduates and employers. Faculty and career management systems are frequently underarticulated; in many countries, faculty have no incentives or support mechanisms to be responsive to student needs. Countries need to allow universities to compete on quality.

Integrating research centers into the higher education system can improve the system's quality, relevance, and innovation capacity. In the Soviet Union, higher education institutions in the Caucasus and Central Asia were a specialized part of an integrated system. After the collapse of the Soviet Union, many of these specialized institutions were isolated from innovation and education. Policy makers need to determine how many institutions need advanced research capacity to participate in global science networks.

Re-skilling the adult population may be an opportunity for higher education institutions to seize (box 2.6). As the population ages and younger birth cohorts become smaller, many higher education institutions in the region will see a decrease in enrollment. At the same time, there is a growing need for adult re-skilling. Higher education institutions could become one of the places where this happens. This opportunity is particularly relevant in Eastern European and post-Soviet countries, where the legacy of the Soviet education system, which emphasized specialized, narrow vocational training, has left many adults with obsolete skills. The transition from centrally planned to market economies highlighted the need for new skills and knowledge in the workforce (Chankseliani and Silova 2018).

### **BOX 2.6** The potential role of higher education institutions in re-skilling older workers

Some higher education institutions in the region have adapted to meet the needs of adult learners. Estonia's Lifelong Learning Strategy seeks to provide all people in Estonia with learning opportunities tailored to their needs and capabilities throughout their lifespan to maximize opportunities for dignified self-actualization within society in the sphere of work and family life. Poland's Universities of the Third Age program provides educational opportunities for older adults, focusing on vocational skills, personal development, and social engagement (Formosa 2019).

Many institutions in the region still lag in digital infrastructure and online teaching capabilities. Investing in these areas is crucial for reaching adult

learners. Collaboration between higher education institutions and employers is also essential to help ensure that re-skilling programs meet the needs of the labor market.

By adapting their offerings, embracing technology, fostering industry partnerships, and addressing cultural and funding challenges, institutions of higher learning can play a crucial role in preparing their aging workforce for the demands of the 21st-century economy. As countries continue to navigate the complexities of economic transition and demographic change, the ability of their higher education systems to meet the needs of adult learners will be a key factor in their economic competitiveness and social well-being.

Source: Authors' elaboration based on Formosa (2019) and Republic of Estonia (2014).

Lifelong learning is essential if older workers are to adapt to new technologies and job requirements—something that is critical as the region’s population ages and older workers need to remain in the labor force longer. Without high-quality higher education systems that support lifelong learning, older workers may find adapting to new technologies and job requirements challenging, leading to further underutilization of talent. By promoting lifelong learning, ECA countries can mitigate the adverse effects of population aging, reduce talent waste, and build a more resilient and adaptable workforce, thereby contributing to increased productivity, innovation, and competitiveness in the global economy.

Inclusive talent development practices are needed to recognize and nurture a wide range of talents in an age-diverse workforce. Doing so requires shifting from traditional, youth-centric approaches to talent development toward more inclusive practices that value older workers’ unique skills and experiences (Festing and Schäfer 2014).

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WORLD BANK **ECA ECONOMIC UPDATE** Fall 2024

## Better Education for Stronger Growth

Economic growth in Europe and Central Asia (ECA) is likely to moderate from 3.5 percent in 2023 to 3.3 percent this year. This is significantly weaker than the 4.1 percent average growth in 2000–19. Growth this year is driven by expansionary fiscal policies and strong private consumption. External demand is less favorable because of weak economic expansion in major trading partners, like the European Union. Growth is likely to slow further in 2025, mostly because of the easing of expansion in the Russian Federation and Türkiye.

This Europe and Central Asia Economic Update calls for a major overhaul of education systems across the region, particularly higher education, to unleash the talent needed to reinvigorate growth and boost convergence with high-income countries. Universities in the region suffer from poor management, outdated curricula, and inadequate funding and infrastructure. A mismatch between graduates' skills and the skills employers are seeking leads to wasted potential and contributes to the region's brain drain. Reversing the decline in the quality of education will require prioritizing improvements in teacher training, updated curricula, and investment in educational infrastructure. In higher education, reforms are needed to consolidate university systems, integrate them with research centers, and provide reskilling opportunities for adult workers.

ISBN (electronic): 978-1-4648-2185-1

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1818 H Street NW, Washington, DC 20433  
Telephone: 202-473-1000  
Internet: [www.worldbank.org](http://www.worldbank.org)



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