

### BOX 2.2.1 Potential growth in Europe and Central Asia

*Potential growth in Europe and Central Asia has declined by around 1.4 percentage point in 2013-17 from pre-crisis period, to 2.3 percent. The decline is mostly attributable to weaker productivity growth, but shrinking labor supply have played a role. Although population aging and slowing productivity growth are expected to continue weighing on potential growth over the next decade, there are policy options available to offset the decline.*

#### Introduction

Growth in Europe and Central Asia (ECA) has slowed considerably since the global financial crisis, reversing the rapid convergence to advanced EU per capita incomes seen in prior years. To a large extent, this slowdown reflected cyclical factors—including the global financial crisis in 2007-08, the European debt crisis in 2010-11, and the oil price collapse in 2014-16—which triggered deep output contractions in some ECA countries.

Concurrent with the cyclical slowdown, potential growth appears to have slowed as well. Historical evidence suggests that steep output contractions can leave a lasting dent in potential growth through legacies such as human capital loss in extended unemployment spells, weakened investor confidence about growth prospects, and slower productivity gains resulting from weak investment (Chapter 3).<sup>1</sup>

Against this backdrop, this box discusses the following questions.

- How has potential growth evolved in the region and what were its main drivers?
- What are prospects for potential growth?
- What are the policy options to lift potential growth?

#### Evolution of potential growth and its drivers

Potential output growth in ECA has declined significantly since the global financial crisis, from 3.7 percent in 2003-07 to 2.3 percent in 2013-17 (Figure 2.2.1.1). About three-quarters of the decline reflected slowing total factor productivity (TFP) growth, and the remainder due to slowing labor supply growth. The decline in potential growth over the previous decade was steeper among commodity exporters (-1.7 percentage points) than among commodity importers (-0.9 percentage points). Spillovers

from severe output contractions from falling commodity prices and geopolitical tensions in large commodity exporters such as Russia and Ukraine weighed on investment and potential growth for commodity exporters. Potential growth in Russia and Poland showed a decline after 2008-09, reflecting weak investment and demographic trends (Narodowy Bank Polski 2017). The exception was Turkey, where potential growth was largely unchanged during 2013-17 due to large numbers of youth entering the labor force.

#### Total factor productivity growth

Total factor productivity (TFP) growth in the region declined to 0.8 percent in 2013-17, about 0.4 percentage points below the long-term average. The deceleration of TFP growth reflected three factors (Figure 2.2.1.2):

- *Slowing foreign direct investment (FDI) inflows.* Growth in FDI flows to the region slowed to 1 percent per year in 2013-16 from 37 percent in 2005-07 (EBRD 2015). This likely adversely affected TFP growth in light of evidence that FDI has fostered technological transfers and productivity gains in the ECA region as a whole and particularly in Central Europe (Goldberg, Goddard, and Kuriakose 2011; Bijsterbosch and Kolasa 2010; IMF 2016c).
- *Slowing sectoral reallocation.* The reallocation of labor from the agriculture sector to services and industry has been an important source of economy-wide productivity gains over the past two decades (IMF 2016c). However, in the Western part of the region, the shift from agricultural to non-agricultural employment slowed after the global financial crisis.
- *Slowing reform momentum.* Over the past decade, countries in the ECA region have made large strides in improving their business environments, and the relevant indexes in Central and Eastern Europe, the Western, Balkans, and the South Caucasus are approaching the levels in advanced EU countries. However, reform momentum appears to have slowed after EU accession in the mid-2000s for Central Europe. Business climates in Central Asia continue to lag well behind those elsewhere in the region (EBRD 2014).

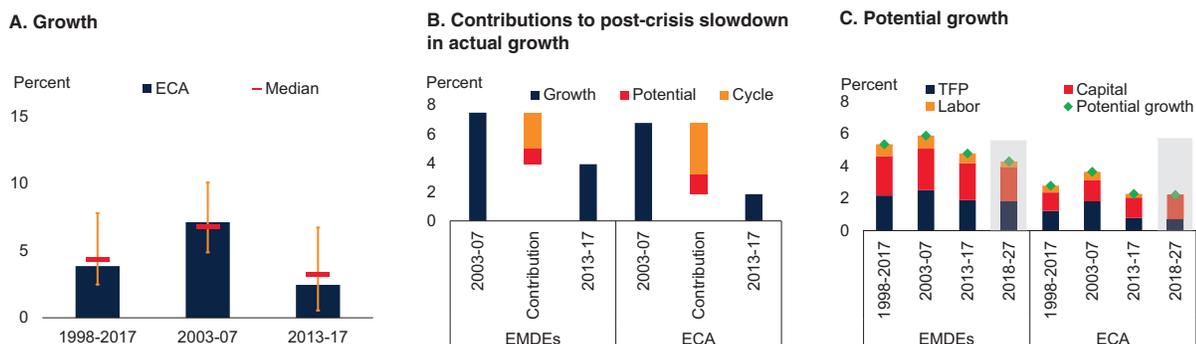
Note: This box was prepared by Yoki Okawa, Sinem Kilic Celik, and Modeste Some. Shituo Sun provided research assistance.

<sup>1</sup>The recent slowdown of potential growth and its implications for long-term growth prospects have been highlighted by EBRD (2014) for the region as a whole, IMF (2016c) for Central and South-Eastern Europe, and by ADB (2016) for Central Asia and the Caucasus.

### BOX 2.2.1 Potential growth in Europe and Central Asia (continued)

#### FIGURE 2.2.1.1 Regional growth and drivers of potential growth

The growth slowdown in the region reflects both cyclical and longer-term structural factors. Unfavorable demographic trends, easing productivity growth, and weak investment have weighed on potential growth.



Source: World Bank.

Notes: GDP-weighted averages.

A. Blue bars indicate GDP-weighted average of 24 ECA countries. Vertical lines indicate range of averages for all EMDE regions.

B. C. Based on potential growth estimates using the production function approach (Chapter 3).

C. Shaded areas indicate forecasts.

#### Capital accumulation

Post-crisis, investment growth in the ECA region slowed from double-digit rates in 2011 to near-zero in 2015-16. In most Western ECA countries, investment growth has remained well below the EU average, reflecting weak activity in Euro Area trading partners, external borrowing constraints especially during the Euro Area debt crisis, and structural and institutional impediments that slowed productivity growth (World Bank 2017b). Elsewhere in the region, low commodity prices, slowing growth in China, and weak activity in major advanced economies have softened growth prospects and weighed on investment (EBRD 2015). The oil price plunge of 2014-16 also had negative spillovers for investment in the mining sector.

#### Labor Supply

Working-age population growth, which has long been well below the EMDE average, has turned negative in the ECA region (Figure 2.2.1.3). This demographic shift began in the late 2000s and is attributed to collapsing fertility rates in the 1990s in the aftermath of the collapse of the Soviet Union. Slowing emigration and rising female labor force participation have only partially mitigated the effects of population aging.

- *Immigration to EU.* Although proximity to the EU has encouraged large-scale emigration from ECA

countries since 1990, these flows have slowed since the global financial crisis amid weak Euro Area activity. While emigration has helped reduce unemployment and poverty in origin countries (partly by generating large remittance inflows), it has weighed on growth in these countries, especially where high-skilled workers have left (Docquier, Ozden, and Peri 2014; IMF 2016c; Mansoor and Quillin 2006; Hausmann and Nedelkoska 2017). In addition, large remittance inflows have generated currency appreciation pressures and further dampened competitiveness of origin countries (World Bank 2017b; Meyer and Shera 2017).

- *Immigration to Russia.* Linguistic, family, cultural, and economic ties with Russia and neighboring countries created strong migration flows to Russia, especially from Central Asia (World Bank 2017s). This has helped slow the decline in working-age population growth in Russia, but accelerated the slowdown in Central Asia. However, immigration to Russia slowed sharply in the steep recession of 2015-16.

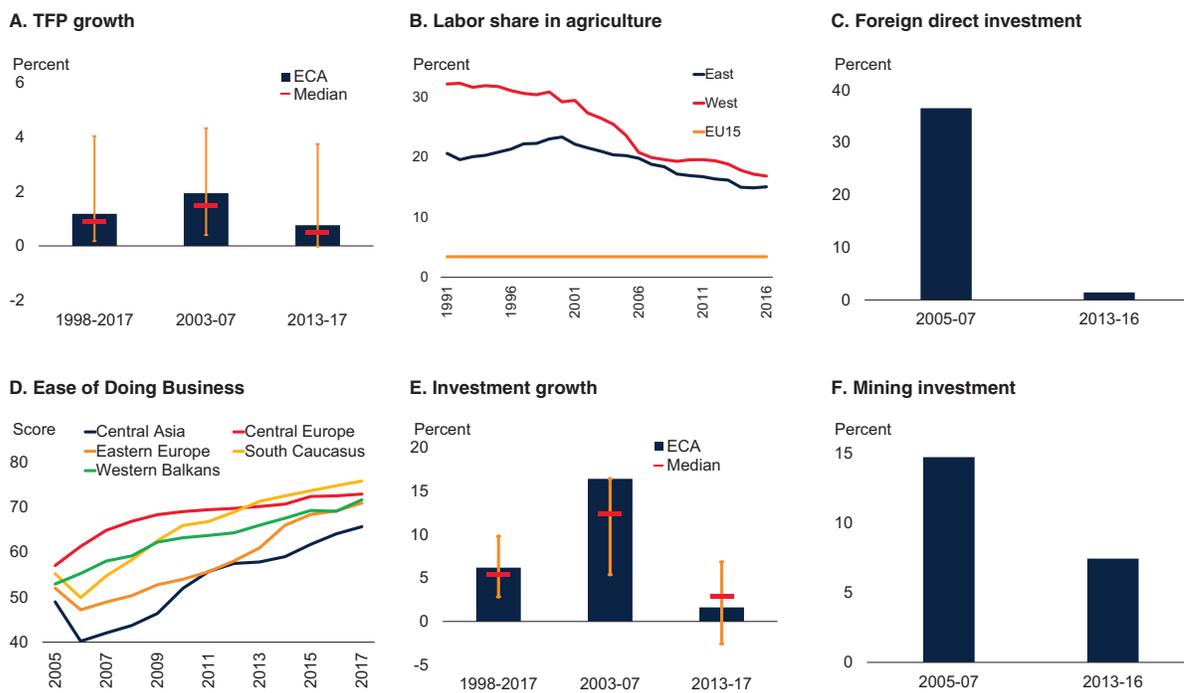
#### Potential growth prospects

Regional potential growth is expected to remain subdued in 2018-27 at 2.2 percent, slightly down from 2.3 percent in 2013-17 (Figure 2.2.1.4). This reflects a combination of weak productivity growth and unfavorable demographic trends in many countries. Population aging, which leads to

**BOX 2.2.1 Potential growth in Europe and Central Asia (continued)**

**FIGURE 2.2.1.2 Factors contributing to the slowdown in productivity**

Total factor productivity growth has slowed below its long-term average. In the western part of the region, the reallocation of labor from agriculture to the more productive industry and service sectors slowed, as did FDI inflows. In Central Europe, reform momentum slowed after 2007 as well. Investment growth decelerated sharply following the crisis. Among commodity exporters, a slowdown in the mining sector played a significant role.



Sources: European Bank for Reconstruction and Development, Haver Analytics, International Labor Organization (ILO), Ministry of the National Economy of the Republic of Kazakhstan, Organization for Economic Co-operation and Development, Penn World Tables, Russian Federation Federal State Statistics Service, World Bank.

A. GDP-weighted average of TFP growth from Chapter 3. Blue bars indicate average for 10 ECA countries; vertical lines indicate range of averages for all EMDE regions.

B. Percent of agricultural employment in total employment in each region. "East" includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. "West" include Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, FYR Macedonia, Poland, Montenegro, Romania, Serbia, and Turkey. "EU15" includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

C. Average annual growth in FDI inflows to Belarus, Croatia, Georgia, Hungary, Kazakhstan, FYR Macedonia, Moldova, Poland, Russia, Romania, and Ukraine.

D. Distance to frontier in Doing Business Indicators, with a higher index denoting easier business environments. Central Asia includes Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan. Central Europe includes Bulgaria, Croatia, Hungary, and Romania. Eastern Europe includes Belarus, Moldova, Russia, and Ukraine. South Caucasus includes Armenia, Azerbaijan, and Georgia. Western Balkan includes Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia, and Turkey.

E. GDP-weighted average annual growth rates.

F. Average annual growth rates of mining sector investment in Kazakhstan and Russia.

both a shrinking labor force and a growing share of older workers, will weigh particularly heavily on potential growth in the Eastern part of the ECA region. Increasing share of older workers tends to reduce aggregate labor market participation rate and productivity growth. A notable exception is Turkey, where continued strong growth in the working-age population supports a positive outlook for potential growth.

Among commodity-exporting economies, limited prospects of the substantial recovery in commodity prices could continue to adversely affect investment. In turn,

lower investment growth would cap potential growth through slower capital deepening and embodied technological improvements.

**Policy options to lift potential growth**

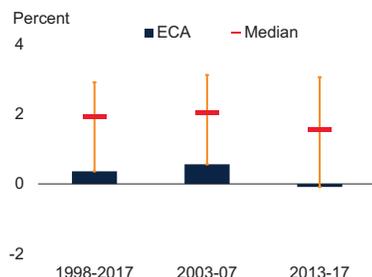
A wide range of policy options is available to help stem the decline in potential growth in the ECA region. A simulation suggests that increasing investment and labor market reforms can reverse the expected slowdown (Figure 2.2.1.5).

### BOX 2.2.1 Potential growth in Europe and Central Asia (continued)

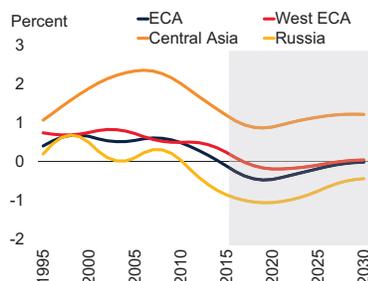
#### FIGURE 2.2.1.3 Labor supply

Working-age population growth, which has long been well below the EMDE average, declined across the region in the late 2000s. Rising female labor force participation has only partially mitigated the effects of unfavorable demographic trends and outward migration (except Russia). People who live outside their native country are better educated than those who remain. Russia saw net immigration from neighboring countries.

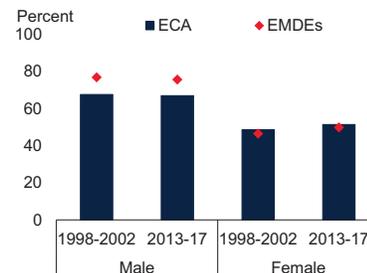
##### A. Working-age population growth



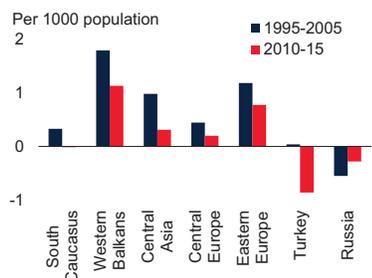
##### B. Working-age population growth in subregions



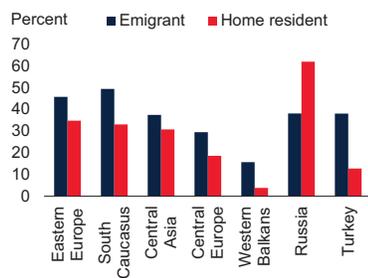
##### C. Labor market participation



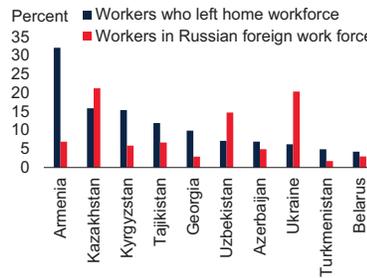
##### D. Net outward migration



##### E. Tertiary education for immigrants



##### F. Immigrants in Russia



Sources: International Labor Organization, Organization for Economic Co-operation and Development, Russian Federation Federal State Statistics Service, United Nations, World Bank.

A. GDP-weighted average shares of population aged 15-64 years as a percent of total population.

B. Annual growth rate of total population aged 15-64 aggregated by subregions. ECA includes Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Bosnia and Herzegovina, Georgia, Croatia, Hungary, Kazakhstan, the Kyrgyz Republic, Moldova, FYR Macedonia, Montenegro, Poland, Romania, Russia, Serbia, Tajikistan, Turkmenistan, Turkey, Ukraine, and Uzbekistan. West ECA includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, FYR Macedonia, Montenegro, Poland, Romania, Serbia, and Turkey. Central Asia includes Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Shaded areas indicate forecasts.

C. Simple average of 24 ECA countries. EMDE average includes 151 countries.

D. - E. Central Asia includes Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Central Europe includes Bulgaria, Croatia, Hungary, Poland, and Romania. Eastern Europe includes Belarus, Moldova, and Ukraine. South Caucasus includes Armenia, Azerbaijan, and Georgia. Western Balkans includes Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, and Serbia.

D. Number of total emigrants per 1,000 population during the sample period. Number is simple average across countries in each sub-region.

E. Percentage of the population above age 24 who completed some tertiary education in 2010 or closest year available. Emigrant is defined as a person who lives outside of their birth country. Numbers are simple averages across birth countries in the sub-region.

F. Number of total immigrant workers who arrived in Russia during 1997-2016 divided by the total labor force of the origin country in 2016. Number of total immigrant workers who arrived in Russia from each country during 1997-2016 divided by total immigrant workers who arrived in Russia during 1997-2016. For Tajikistan, data suggested by the domestic survey may differ from the data used here. For details, see Stokova and Ajwad 2017.

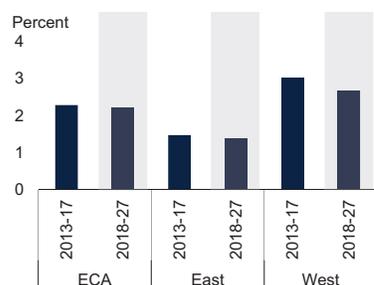
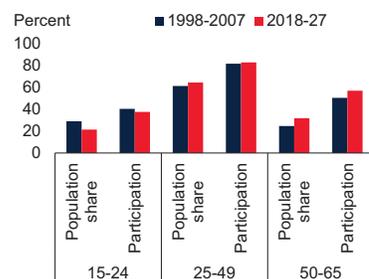
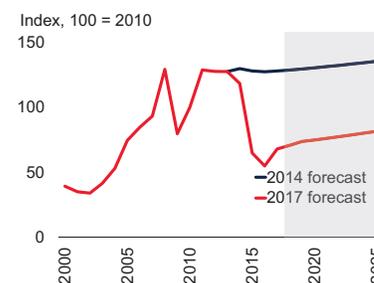
#### Raise capital accumulation

**Increase public investment efficiency.** Infrastructure needs are sizable in the ECA region. Investment gaps are estimated to be the equivalent to 1.3 percent of GDP (EBRD 2015). Although there is limited fiscal space available for governments to fill these gaps, there is scope to improve the efficiency of public investment (World

Bank 2017p). This could be achieved with more strategic, rigorous, and transparent project selection mechanisms, and by strengthening the institutional capacity to fund, manage, execute, and monitor project implementation. For example, by introducing a rate-of-return criterion for public investment, Azerbaijan has reduced the completion time of key projects by 26 percent (World Bank 2016h).

**BOX 2.2.1 Potential growth in Europe and Central Asia (continued)****FIGURE 2.2.1.4 Regional potential growth outlook**

Regional potential growth is expected to slow marginally to 2.2 percent in 2018-27 from 2.3 percent in 2013-17. The raising share of older workers will result in lower labor participation and could contribute to slower productivity growth. The lower energy price outlook could further weigh on investment and capital accumulation in energy exporters.

**A. Potential growth outlook****B. Composition and labor force participation rate of working-age population****C. Energy price outlook**

Sources: International Labor Organization, World Bank.

A. GDP-weighted averages. East includes 12 countries in Central Asia and Western Balkan. West includes 11 countries in Eastern Europe, South Caucasus, and Central Asia.

A. C. Shaded areas indicate forecasts.

B. Population share refers to the average share of the population of certain age ranges over the total population aged 15-65, weighted by the population of each country. Participation is a simple average of the labor market participation rate.

C. Index of energy prices and outlook published in "Commodity Markets Outlook" (World Bank 2014, 2017q).

**Increase savings.** The financing available for private investment could be expanded by raising household savings. In the western part of the region, for example, household savings rates are low by EU standards. Pension reforms, development of the mutual fund industry, and efficiency improvements in pension administration would yield benefits (IMF 2016c; World Bank 2011b).

**Expand labor supply**

**Raise labor force participation.** Male labor force participation in ECA lags behind that in other EMDE regions; female labor force participation, while higher than the EMDE average, lags behind that in advanced economies. Female labor force participation is responsive to steps to improve the educational attainment of women and to better access to child care services (Chapter 3). In Western Balkan countries, where multiple barriers and disincentives discourage female labor force participation, increased parental leave, decreased labor taxes, and lower childcare costs could significantly increase female labor force participation rates (World Bank 2016i, 2016j, 2017r; Atoyan and Rahman 2017).

**Attract and retain skilled labor.** Brain drain is a significant problem in the ECA region, especially in the Western Balkans where rates of emigration among the highly educated are high. Steps to mitigate the loss of skilled workers could pay considerable dividends (IMF 2016c;

World Bank 2017s). Several countries have launched initiatives to retain skilled workers or to encourage their return after years of absence. In 2006, Albania implemented a "brain gain" program to promote return migration by offering employment in public administration and improving the work environment in universities and research institutions (Agolli and Gugu 2010). Youth workforce development projects, such as entrepreneurship training programs and provision of micro credits, have created opportunities for skilled young people in the Western Balkans, the South Caucasus, and Central Asia (International Labor Organization 2017; World Bank 2013b).

**Increase productivity**

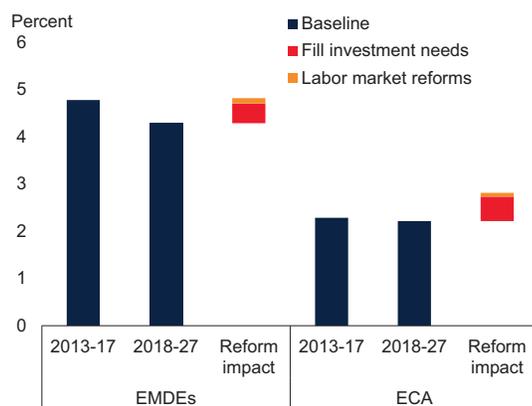
**Reform state-owned enterprises.** Public firms tend to be less efficient than private firms in ECA (Böwer 2017). While Central European has attained a private sector share of the economy similar to that in advanced economies, the private sectors for the rest of the region account for considerably smaller shares of the economy. Further privatization in these regions presents an opportunity to raise economy-wide productivity, especially if it is accompanied by improved management and corporate governance, open access to world markets, and well-functioning legal and institutional frameworks (Estrin et al. 2009). Short of privatization, there are important

### BOX 2.2.1 Potential growth in Europe and Central Asia (continued)

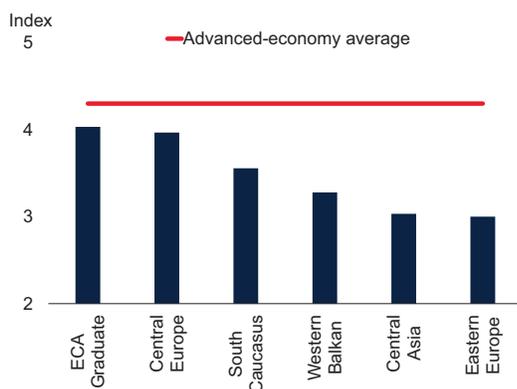
#### FIGURE 2.2.1.5 Policies to stem declining potential growth

A range of policy options is available to help stem the decline in potential growth in the ECA region, including measures to raise capital and increase labor force participation. Privatization in the ECA region continues to lag behind advanced economies, particularly countries in Eastern Europe.

##### A. Potential growth under reform scenarios



##### B. Privatization



Sources: European Bank for Reconstruction and Development, World Bank. A. GDP-weighted averages. Derived using the methodology described in Chapter 3.

B. Privatization index from EBRD. "ECA graduate" refers to regional economies no longer categorized as "emerging and development economies." These include Estonia, Latvia, Lithuania, Slovak Republic, and Slovenia.

opportunities to strengthen the governance and therefore the productivity of state-owned enterprises, as illustrated by the efforts being made by Romania and FYR Macedonia.<sup>2</sup>

**Make more business-friendly environments.** Efforts to improve the business environments in commodity-importing Central European economies to EU15 standards stalled after the global financial crisis (World Bank 2017; IMF 2016c). International integration or external standards such as the Doing Business Index can anchor reforms. Improvement in local-level transparency and accountability standards can be politically easier than national-level reform and can lead to national-level reform (EBRD 2014).

**Integrate into global value chains.** Cross-country evidence shows that exporting firms tend to benefit from faster productivity growth, especially through their participation in global value chains (Ruta, Constantinescu, and Mattoo 2017).<sup>3</sup> Over the past two decades, Central European countries have developed a comparative advantage in knowledge-intensive manufacturing, including as part of the German supply chain (Figure 2.2.1.6; IMF 2013). Policies to foster the integration of domestic industry into global supply chains go beyond tariffs and quotas. They include coordination of intellectual property rights protection, competition laws, FDI frameworks, and transportation infrastructure (Baldwin and Lopez-Gonzalez 2015). Moreover, manufacturing productivity can also be improved by lowering barriers to services trade (Beverelli, Fiorini, and Hoekman 2017). For countries in the South Caucasus and Central Asia, the Eurasian Economic Union and China's Belt and Road Initiative present opportunities to adopt a regional approach to building productivity-enhancing value chains (Ustyuzhanina 2016).

<sup>2</sup> In Romania, a number of state-owned enterprises depoliticized and professionalized their boards in 2013-16. Romania also passed a law on state-owned enterprise governance (Law 111/2016), which improved the criteria for the selection and evaluation of state-owned enterprise managers and introduced performance monitoring for others (Capannelli 2017). However the implementation of the law is lagging behind and resistance to change is significant. In FYR Macedonia, institutional and organizational reform combined with capital investment improved the operational effectiveness of the state-owned railway company (World Bank 2012).

<sup>3</sup> In the ECA region, a positive relationship between exports and productivity has been documented for Poland, Romania, and Russia. Cross-country studies in the region also find a positive relationship. (Goldberg, Goddard, and Kuriakose 2011; Gabrielczak and Serwach 2014; Stefanescu and Dumitriu 2014; Krasnopeeva et al. 2016).

**BOX 2.2.1 Potential growth in Europe and Central Asia (concluded)**

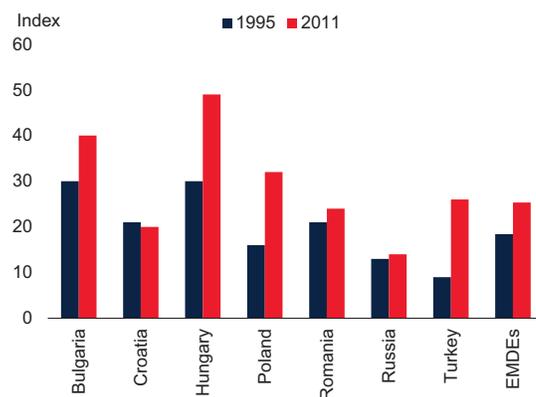
**Promote FDI.** Inward FDI stands to boost productivity in ECA by accelerating technology absorption. In Serbia, for example, firms with foreign capital have more efficient production technology, better foreign marketing, and more research and development activity than firms that do not have foreign capital. Foreign-owned firms initiated greater plant modernization and automation than domestically-owned firms, raising labor productivity (Goldberg, Goddard, and Kuriakose 2011). Such productivity-enhancing foreign investment can be encouraged by liberalizing FDI and merger and acquisition rules. Moreover, spillovers to domestically-owned firms can be encouraged by building public research and development infrastructure that bridges the gap between foreign entrants and domestic research capacity. In addition, improving domestic human capital by training and high-quality education encourages technological transfer to domestic firms that received FDI (Fu 2008; Teixeira and Fortuna 2010).

**Diversify resource-intensive economies.** Increasing specialization in global trade raised the share of commodities in exports for commodity-exporting ECA countries (van Eeghen et al. 2014). Reliance on natural resources poses several policy challenges. By concentrating on a few commodities, economies remain vulnerable to negative prices shocks. Even positive price shocks can be disruptive by weakening the competitiveness of other sectors in resource-intensive economies (“Dutch disease”). Strong policy frameworks to manage commodity revenues can promote long-term investment and job creation by reducing cyclical fluctuations and mitigating the adverse effects of Dutch disease. For example, in Russia, new public spending rules based on oil prices should help reduce pressures for procyclical fiscal policy responses to commodity price shocks from 2019 onwards. Moreover, governments in commodity-dependent economies are often slow to promote competition and entrepreneurship, favoring a known revenue stream over that which may develop from non-commodity sectors (van Eeghen et al. 2014). Creating a level playing field by improving the rule of law, reducing corruption, and broadening access to finance can help creating more resilient and balanced growth.

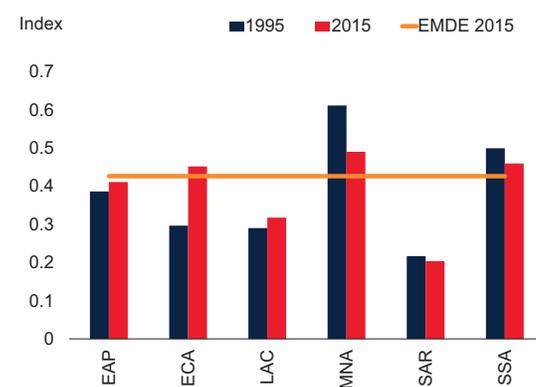
**FIGURE 2.2.1.6 Policies for more connected economy**

*Commodity dependence for ECA countries increased most among EMDE regions, reflecting the increased participation and specialization in global trade. Global value chain integration substantially increased in most of the countries.*

**A. Global value chain integration**



**B. Commodity dependence**



Sources: Organization for Economic Co-operation and Development, United Nations Conference on Trade and Development (UNCTAD).  
 A. Backward participation index in global value chains from OECD. It is measured by share of foreign value added content in gross exports.  
 B. Average trade concentration index for commodity exporters in each region. The trade concentration index is a measure of the degree of product concentration from UNCTAD. An index value closer to 1 indicates higher concentration. EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SSA = Sub Saharan Africa, and EMDE = Emerging Market and Developing Economies.