The role of the European Union in fostering convergence

Conference on European Economic Integration (CEEI)
Vienna, 26 November 2018
Uneven income convergence in CESEE economies

Real GDP per capita in PPP
(as a percentage of EU average)

Sources: World Bank (World Development Indicators) and ECB calculations.
Stronger income growth required for faster convergence

Growth in GDP per capita required to achieve 50% of EU-28 average by 2025, 2030 or 2035
(annual growth rates)

Sources: World Bank (WDI) and ECB calculation.
Notes: This assumes purchasing-power adjusted per capita GDP growth in the EU-28 of 1.2%, which is the average growth rate observed over 2010 to 2016.
Contributions to economic growth from labour, capital and total factor productivity (TFP)

(percentage points)

Sources: Penn World Table version 9.0 and ECB calculations.
Notes: Labour share in Albania and Montenegro assumed to be equal to the average observed in FYR Macedonia, Bosnia and Herzegovina, Serbia and Croatia. Average hours worked in the Western Balkan countries assumed to be equal to the average in new EU Member States. Calculations assume standard Cobb-Douglas production function.
**Per capita capital stock in CESEE economies in 2014**

(in 2011 USD)

![Graph showing per capita capital stock in CESEE economies in 2014](https://www.ecb.europa.eu)

**Average savings and investment ratios in 2000-2008 and 2010-2016**

(x-axis: saving rate (as a percentage of GDP); y-axis: investment rate (as a percentage of GDP))

![Graph showing average savings and investment ratios](https://www.ecb.europa.eu)

Sources: Penn World Table version 9.0, World Bank and ECB calculations.
Note: EU-15 refers to countries that joined the EU prior to 2004.

Sources: IMF (World Economic Outlook) and ECB calculations.
Notes: The 45-degree line is shown in green.
**GVC participation in 2000-2014**

(share in gross exports of the sum of domestic value added in third country exports and foreign value added in own exports)

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<table>
<thead>
<tr>
<th>Year</th>
<th>Euro area NMS</th>
<th>Non-euro area NMS</th>
<th>Western Balkans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2008</td>
<td>4.0%</td>
<td>6.0%</td>
<td>8.0%</td>
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<tr>
<td>2010-2016</td>
<td>5.0%</td>
<td>7.0%</td>
<td>9.0%</td>
</tr>
</tbody>
</table>
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Sources: WIOD (2016) and ECB calculations.
Notes: EU CESEE countries are Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

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**Average foreign direct investment inflows**

(as a percentage of GDP)

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<table>
<thead>
<tr>
<th>Region</th>
<th>2000-2008</th>
<th>2010-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euro area NMS</td>
<td>4.0%</td>
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</tr>
<tr>
<td>Non-euro area NMS</td>
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</tr>
</tbody>
</table>
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Sources: Wiw (FDI database) and ECB calculations.
Notes: Data in gross terms. Simple averages of country-specific data for regional aggregates.
Close link between TFP, GVCs and FDI developments

TFP growth of CEE national frontier, CEE GVC frontier, and non-CEE EU frontier and annual change in FDI inflows

(annual growth rates; annual changes in percentage of GDP)

Sources: ECB staff calculations based on CompNet, WIOD (2016) and Vienna Institute for International Economic Studies (wiiw) (FDI database).
Notes: CEE and non-CEE EU frontier represent firms in the 80th and 90th percentiles in terms of TFP in each country-sector-year. CEE GVC frontier is a weighted average of the most productive firms in non-CEE EU countries, with weights based on the share of imported intermediates of each CEE-sector pair from each non-CEE EU country-sector pair. The CEE countries included are EE, HU, LV, PL, RO, SK, and SI. The non-CEE countries are AT, BE, DK, FI, FR, DE, IT, PT and ES. For FDI, the regional aggregate is obtained from the simple average of country-specific annual changes.
A significant gap in institutional quality remains

EU-28: Worldwide Governance Indicators rank and GDP per capita

(Gross domestic product at current prices per head of population in PPS; EU-28=100)

Sources: Eurostat and World Bank.
Notes: The Worldwide Governance Indicator is the composite rank of average positions in six broad institutional dimensions. Luxembourg is excluded because GDP per capita computations are distorted by e.g. the high number of cross-border workers.
Most CESEE economies only modest or moderate innovators

Sources: European Commission (European Innovation Scoreboard).
Note: Data are available only for some CESEE economies.
New financial technologies have not yet found much traction in Europe.

### Total alternative finance volumes by region

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>Asia-Pacific (inc. China)</td>
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<td>Americas (inc. US)</td>
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<td>Europe</td>
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### Fintech funding platforms in CESEE economies

<table>
<thead>
<tr>
<th>Country</th>
<th>P2P platforms</th>
<th>Crowdfunding platforms</th>
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<tbody>
<tr>
<td>BG</td>
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<td>LV</td>
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<td>CZ</td>
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Notes: Data are based on information gathered from 344 crowdfunding, P2P lending and other alternative finance intermediaries across 45 countries in Europe.

Source: FinTechs and their emergence in banking services in CESEE (Stern, 2017)
Cohesion funds sizable but not all countries equally successful in accessing them

**EU funds for Cohesion and GDP per capita**

(\% of GDP, thousand PPS)

Sources: European Commission, AMECO, and ECB calculations. Notes: Data for the 2014-2020 programming period; red diamonds refer to the EU11, blue diamonds for the EU15. For nominal and per capita GDP, 2010-2013 average is used. Data for ERDF, CF, and ESF. Luxembourg is not shown.

**Absorption rate of EU funds for Cohesion and Rule of Law**

(index, \% of total allocations)

Sources: World Bank, European Commission, and ECB calculations. Notes: Data for the 2007-2013 programming period. The Institutional quality index for 2015 is rescaled between 0 and 10, indicating low and high institutional quality, respectively. Data for ERDF, CF, and ESF. Croatia is not shown.