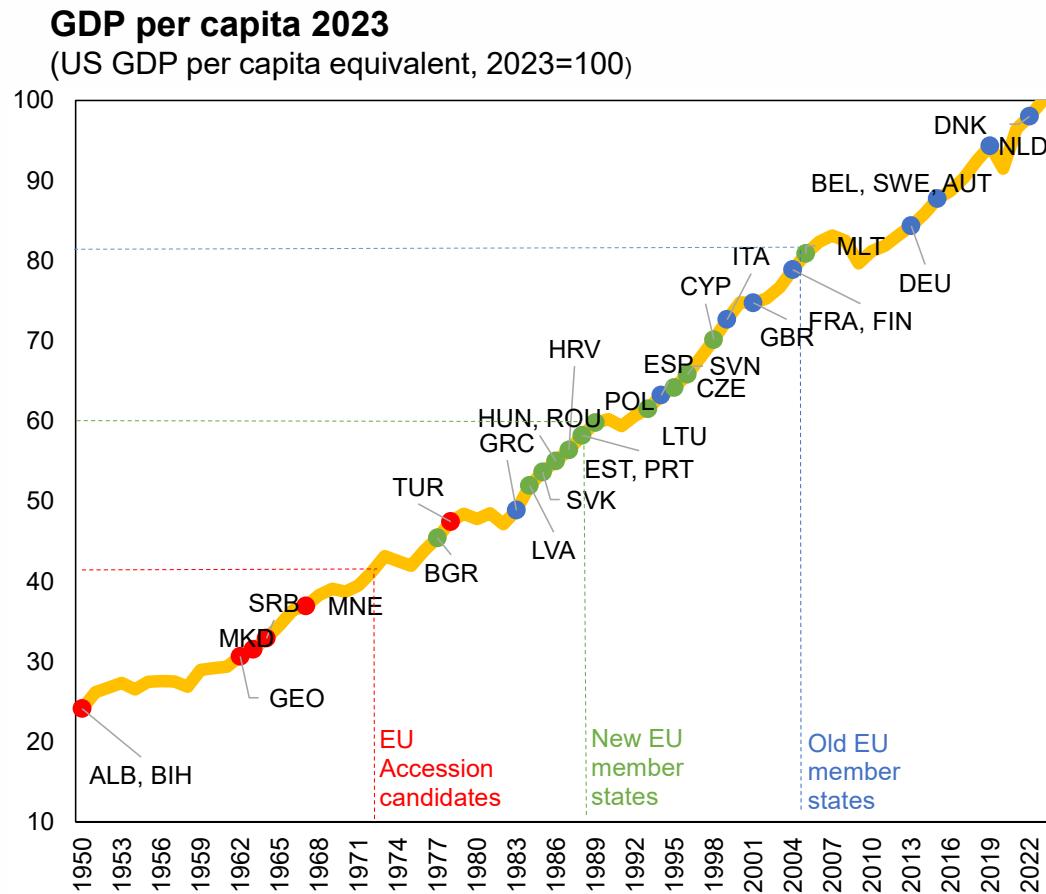# REGIONAL ECONOMIC OUTLOOK

EUROPE

EUROPEAN DEPARTMENT

Accelerating Europe's Income Convergence through Integration

DECEMBER 3, 2024, VIENNA - JVI

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(Deputy chief, IMF European Department)

GDP per capita 2023
(US GDP per capita equivalent, 2023=100)

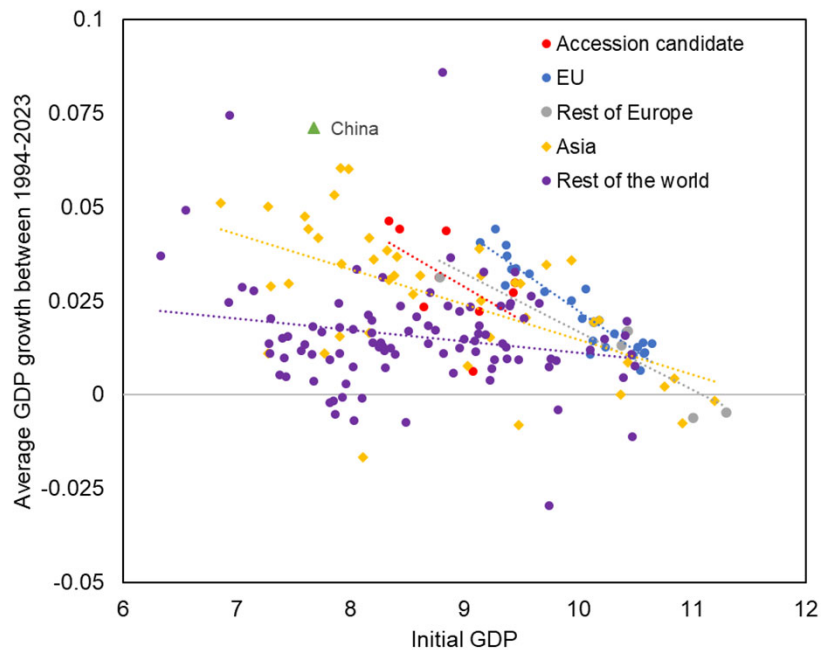Sources: IMF, World Economic Outlook database and IMF staff calculations.
Note: The 2023 GDP PC level is lower than the 1950 US level in three accession candidates (KOS, MDA, UKR).

Lessons from past EU enlargement for accelerating convergence
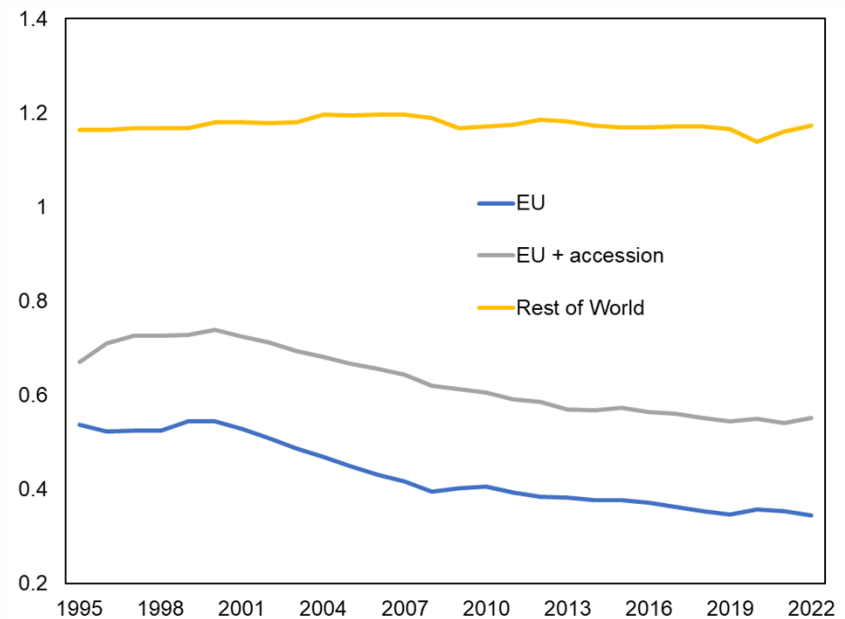
GDP per capita 2023
(US GDP per capita equivalent, 2023=100)

Sources: IMF, World Economic Outlook database and IMF staff calculations.
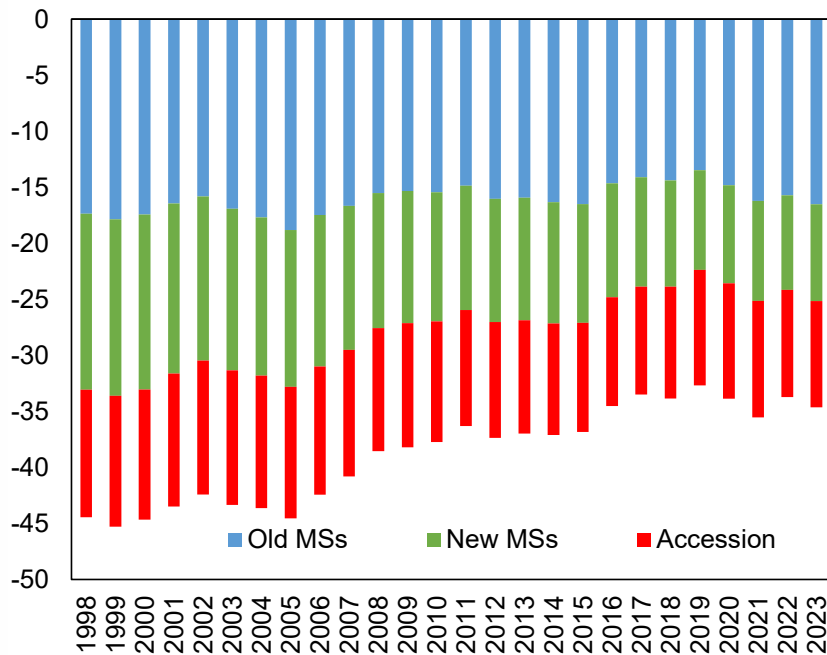Note:

Sigma convergence
(Standard deviation of log real GDP per capita within groups)

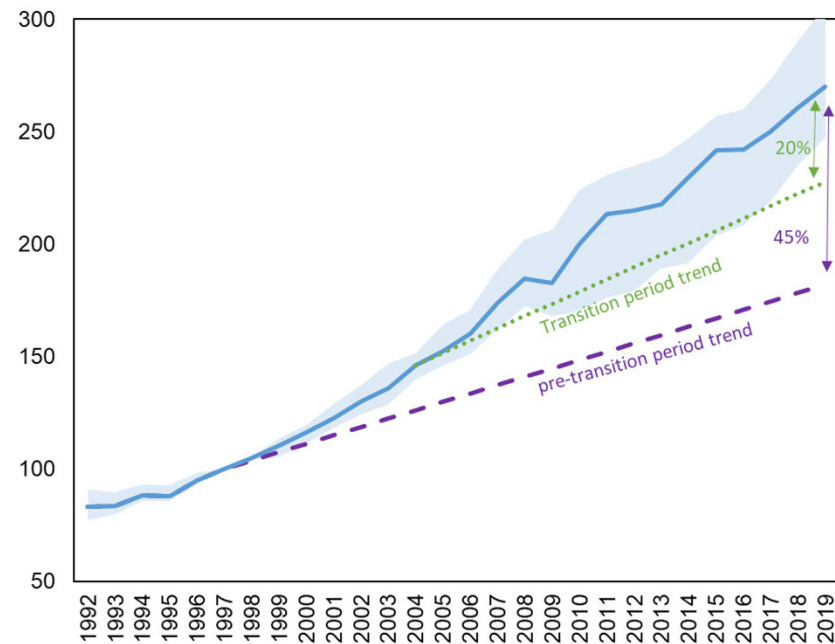

Source: IMF and staff calculations.

Europe's GDP per capita gap to US
(Percent contribution of old & new MSs and accession candidates)

Old MSs   New MSs   Accession

Source: European Commission and IMF and staff calculations.
Note: Due to data availability, accession candidates only include ALB, MKD, MNE, SRB, and TUR.

GDP per Capita of Regions in New MS
(Index, 1997 = 100)

Transition period trend

pre-transition period trend

20%

45%

Source: European Commission and IMF and staff calculations.
Note: Due to data availability, accession candidates only include ALB, MKD, MNE, SRB, and TUR.

Can more integration deliver faster convergence?

- **Narrowing Europe's income gap requires:** (i) closing the gap between the European and global frontier and (ii) faster catch-up within Europe (the focus of this presentation)

- **Our analytical question:** How much can EU enlargement contribute to faster economic convergence, and what can be done to maximize benefits?

- **Our approach:**
    1. Estimate Synthetic Difference-in-Difference Model to assess gains from past EU enlargement rounds for new and old members.
        - With this method, no need for parallel trends in aggregate data and straightforward statistical inference
        - Regional level analysis with panel data from 1995 to 2022, covering around 200 regions in old MSs, 60 regions in new MSs, and 50 regions outside of the EU (with shorter data)
        - 2004 enlargement round particularly well suited to identify gains from EU accession
    2. Split sample to understand how initial conditions impact gains from EU accession.
    3. Simulate potential long-term gains from EU enlargement covering current accession candidates.

Income gains averaged 23 percent over 15 years after joining EU.

2004 EU accession effect on new MSs
(Log difference of GDP per capita to control group)
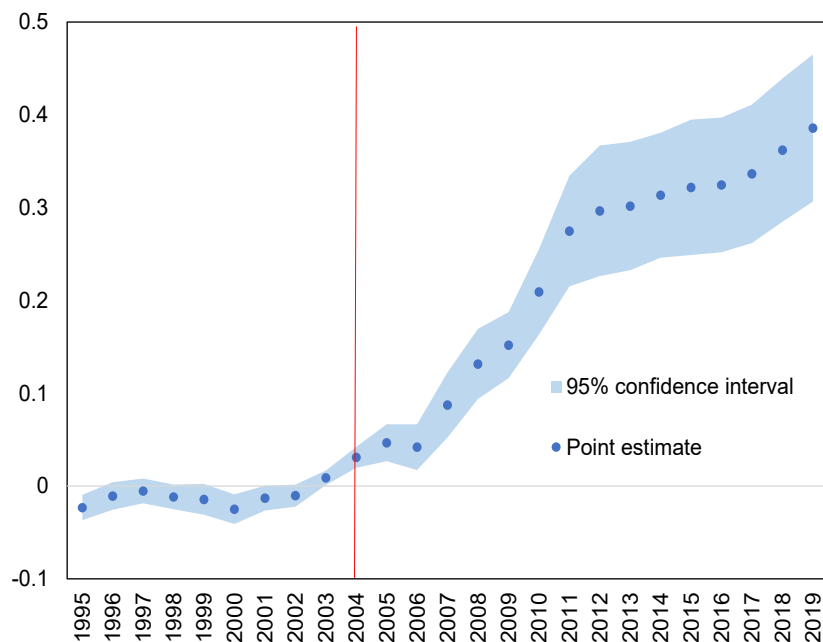
95% confidence interval

• Point estimate

Sources: IMF staff calculations.
Note: Synesthetic difference-in-difference approach using regional data.
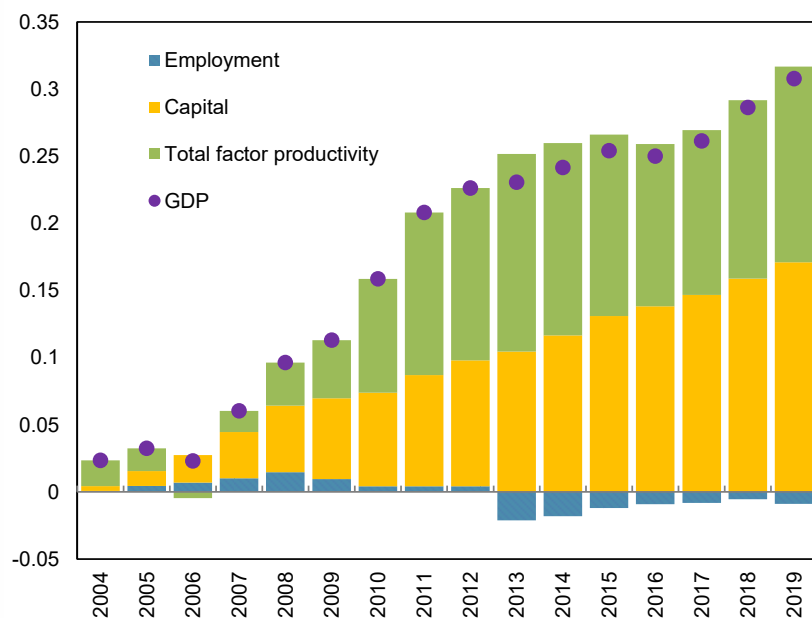Control group includes old MSs (excl. UK) that joined EU before 2004.

Return from accession
(Log difference of GDP per cap. to control group)

Above 0.6
(.4,.6]
(.2,.4]
[0,.2]
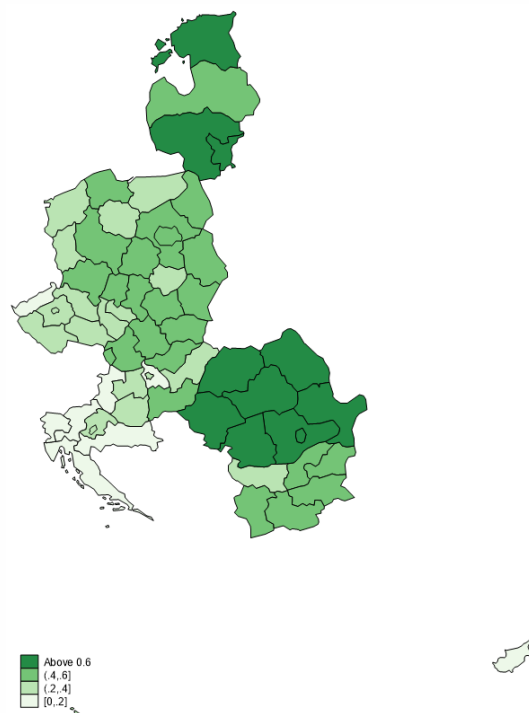
Sources: IMF staff calculations.
Note: Impact after 9 years for Croatia and 15 years for the others.

Factor contributions to convergence
(Log difference of GDP to control group)
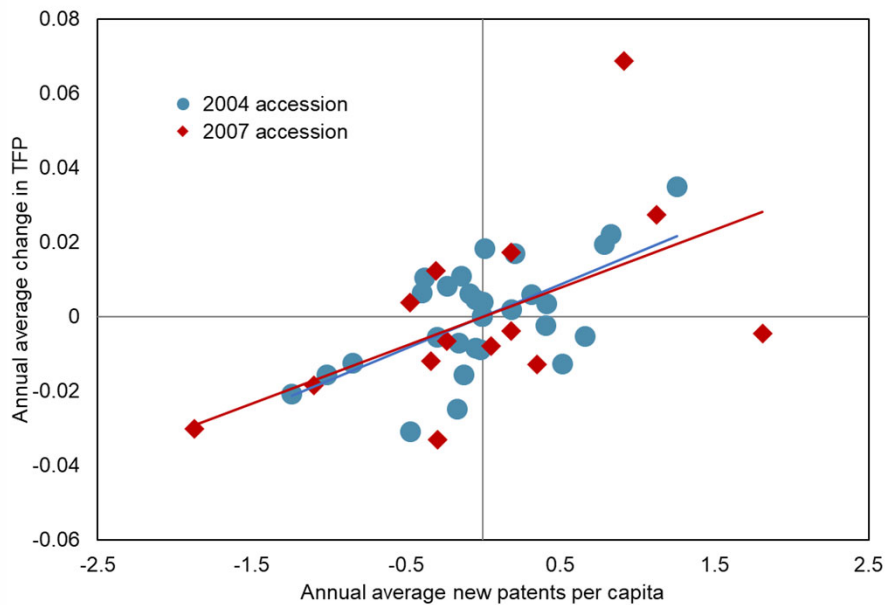

Sources: IMF staff calculations.

Reform momentum around EU accessions
(Index change over time compared to rest of world)
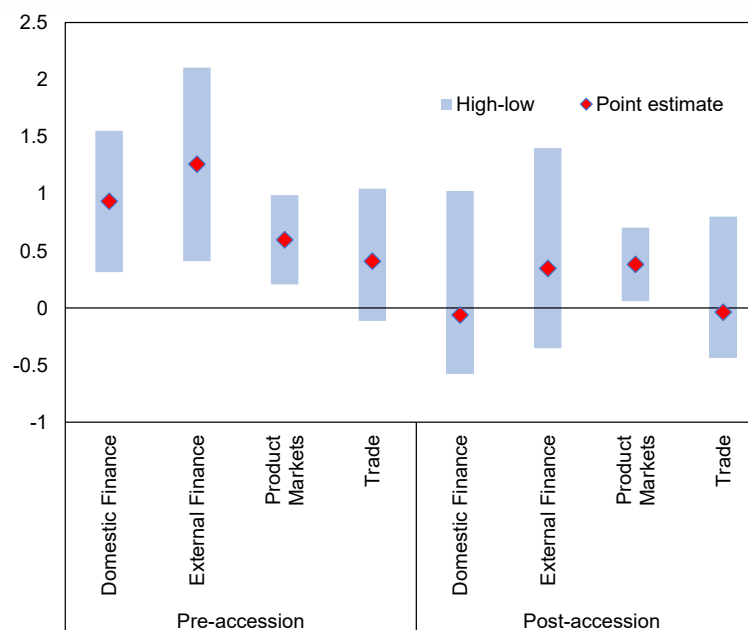
Sources: IMF Structural Reform Database and IMF staff calculations.
Note: This figure includes all EU accession rounds, starting in 1975.

Innovation and skill upgrading followed EU accession.

New patents and productivity growth
(Deviation from country mean)

Source: ESPON database, European Commission, and IMF staff calculation.
Note: Regional data on new patents are only available through 2012..

Population with tertiary education
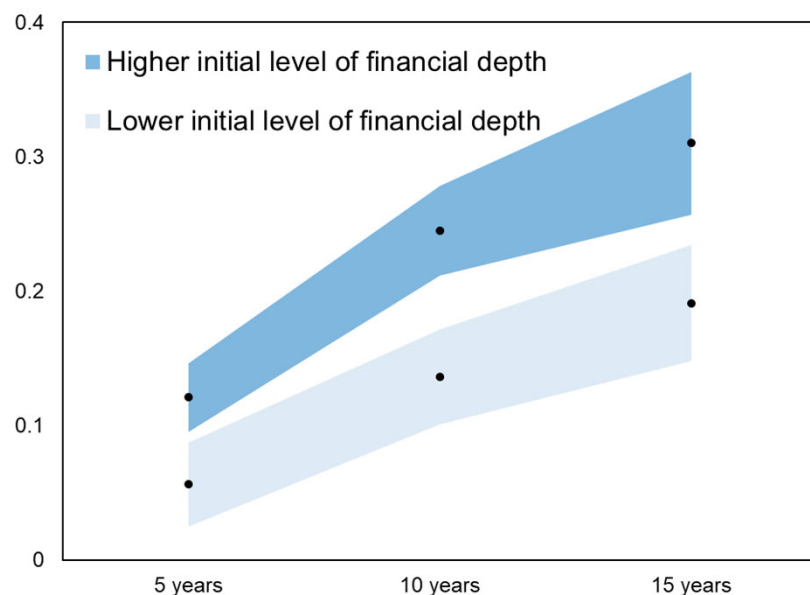(Difference of population share to control group)
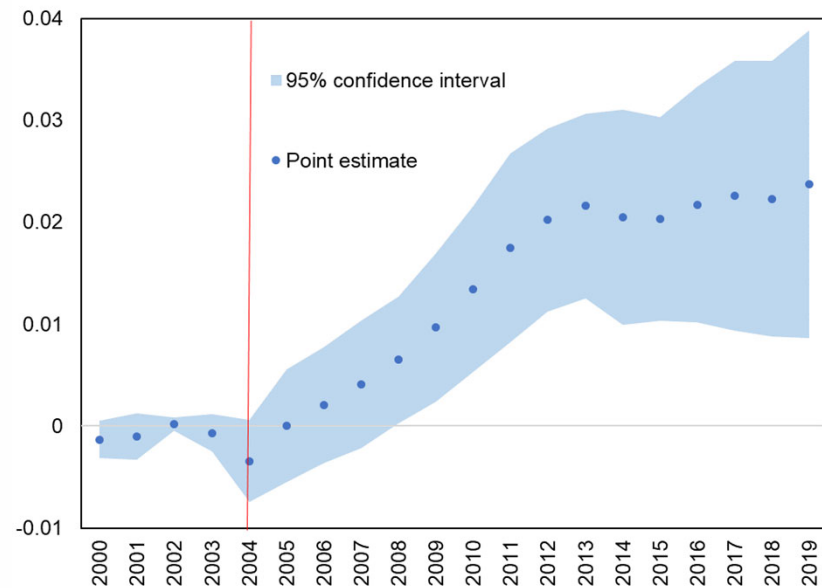
Source: IMF staff calculations.
Note: Synesthetic difference-in-difference approach using regional data. Control group includes old MSs (excl. UK) that joined EU before 2004.
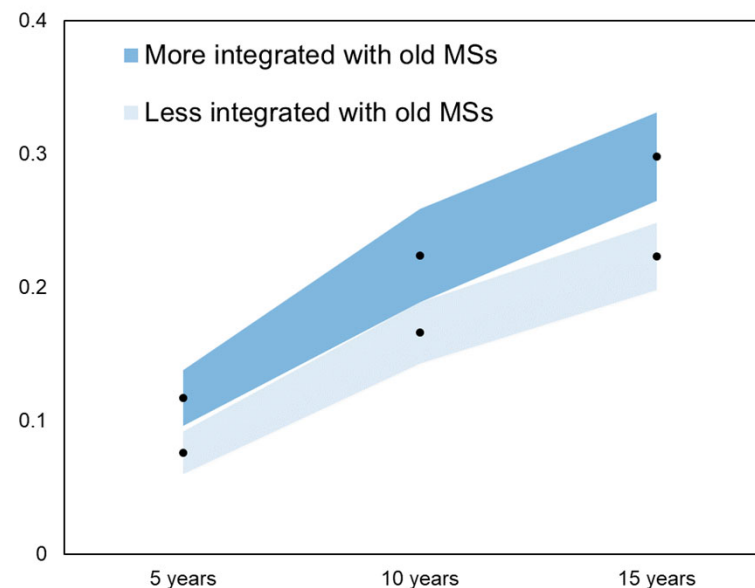
Financial depth and accession gains
(Log difference of GDP per cap. to control group)

Note: The median is used as the cut-off point to divide new MSs sample. The dots show the estimated average accession gains over 5, 10 and 15 years. The shaded areas show the 95 percent confidence band.

Prior Integration and accession gains
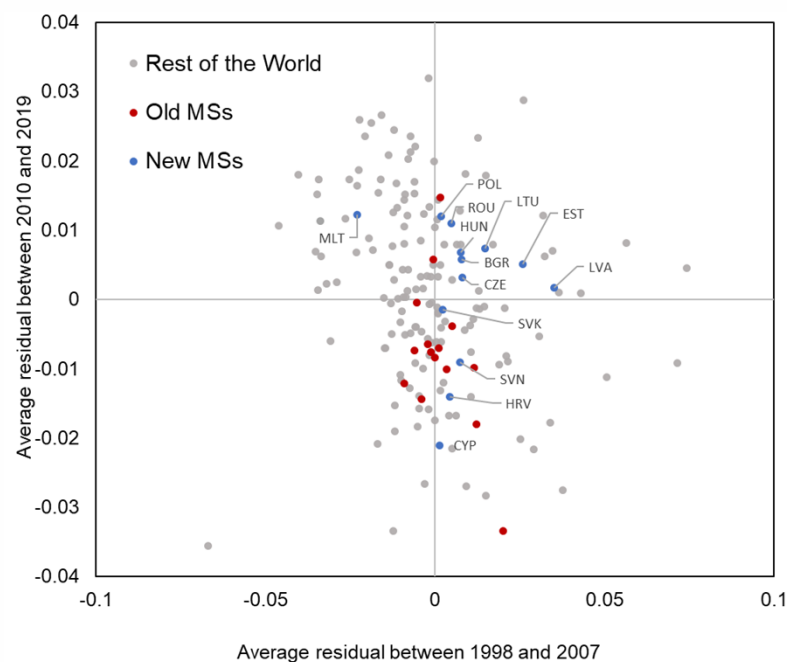(Log difference of GDP per cap. to control group)

Source: IMF staff calculations.
Note: The median is used as the cut-off point to divide new MSs sample. The dots show the estimated average accession gains over 5, 10 and 15 years. The shaded areas show the 95 percent confidence band.
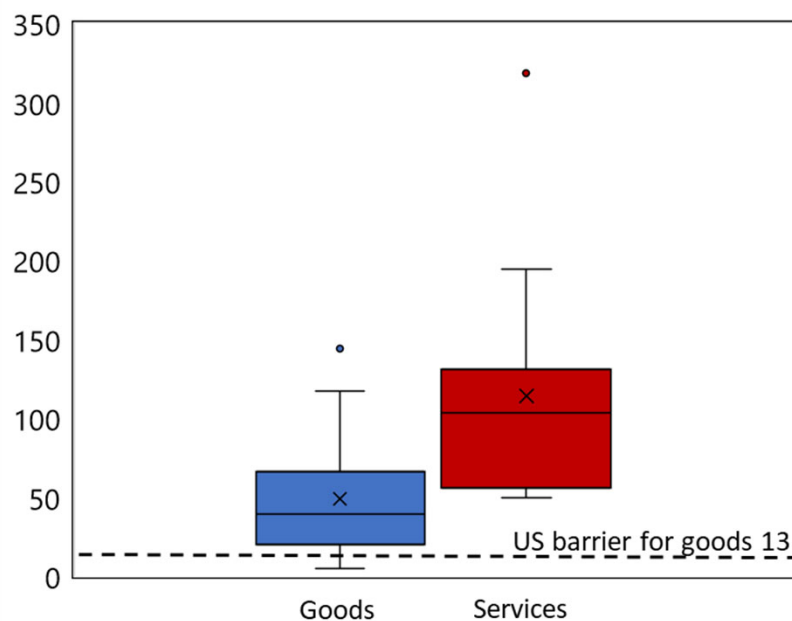
Country performance across time
(y-axis = Percent, x-axis = Percent)

Source: World Economic Outlook and IMF staff calculations.

**Estimated intra-EU trade barriers in 2020**
(Percent)

Source: REO Fall 2024 Analytical Note 1, Inter-Country Input-Output Tiva tables and IMF staff calculations.

Note: Each box represents the distribution of the estimates of intra-EU trade barriers across sectors for goods and services using gravity models for bilateral flows in 2020.

# A deeper and larger single market would benefit the EU.

Simulated EU-37 GDP per capita gap to US: A thought experiment
(Percent contribution old MSs, new MSs, and accession candidates)
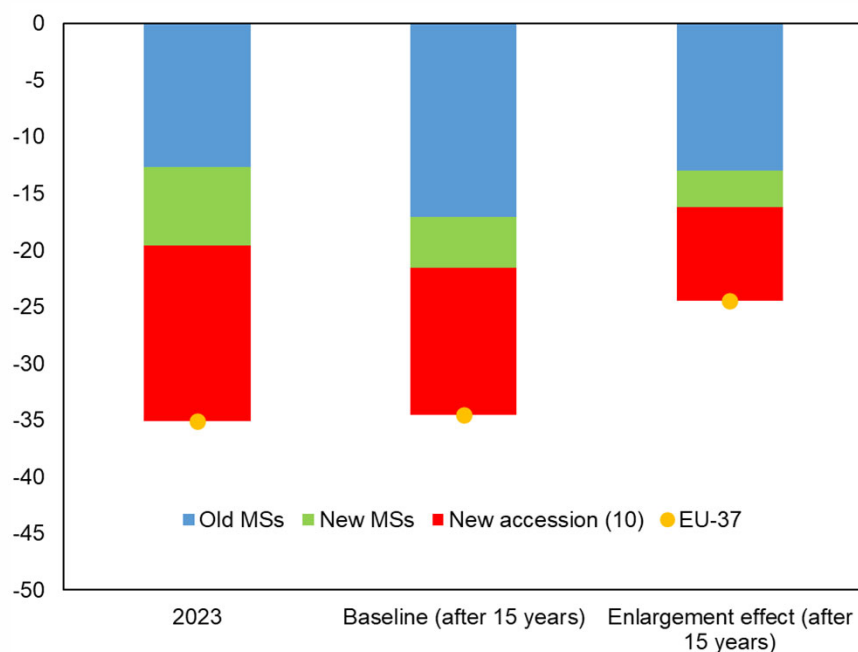
Sources: IMF staff calculations.
Note: The simulated GDP per capita gain from enlargement of all 10 accession countries is based on an increase of 10 percent for existing EU members and 30 percent for new EU members from their current GDP per capita levels 15 years after simulated accession.

Reform gap: Current vs. past accession countries
(Index)
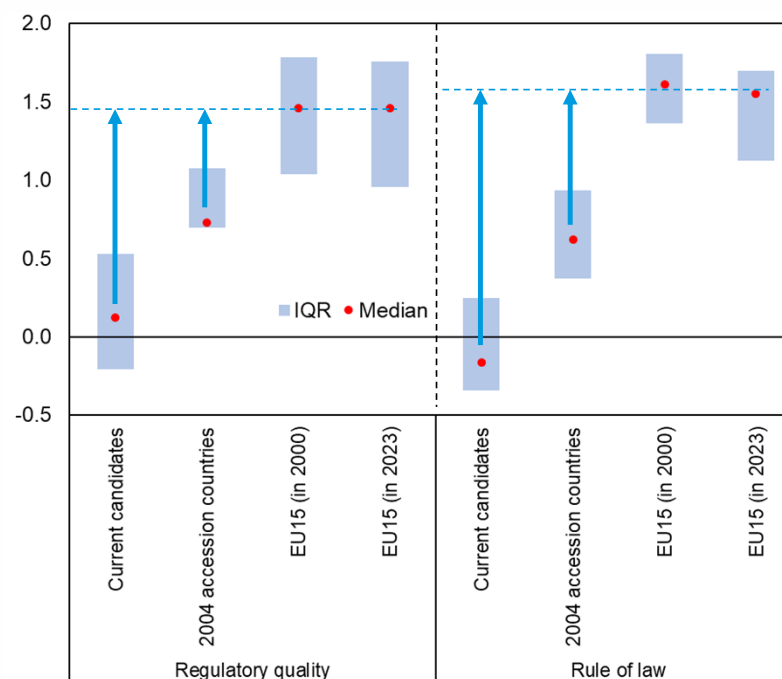
Sources: WB Worldwide Governance indicator and IMF staff calculations.
Note: Index is a weighted average of sub indices using an Unobserved Components Method. Units follow a standard normal distribution, with mean zero, standard deviation of one, and running from approximately -2.5 to 2.5, with higher values corresponding to better governance.

Key messages

Europe needs faster growth	Incomes in Europe remain stuck below the US
	Europe needs both, faster convergence and faster growing frontier

Old & new MSs benefitted from EU enlargement	Past convergence has been driven by new MSs that benefitted greatly from EU accession
	New MSs gained over 30% of GDP pc from accession, with all regions gaining (but some more than others)
	The larger market size also benefitted old MSs, that gained around 10% from the 2004 EU enlargement

Currently diminishing returns	Convergence has slowed, driven by slow TFP convergence
	Reform momentum in new MSs tends to be strong before accession and to slow afterwards

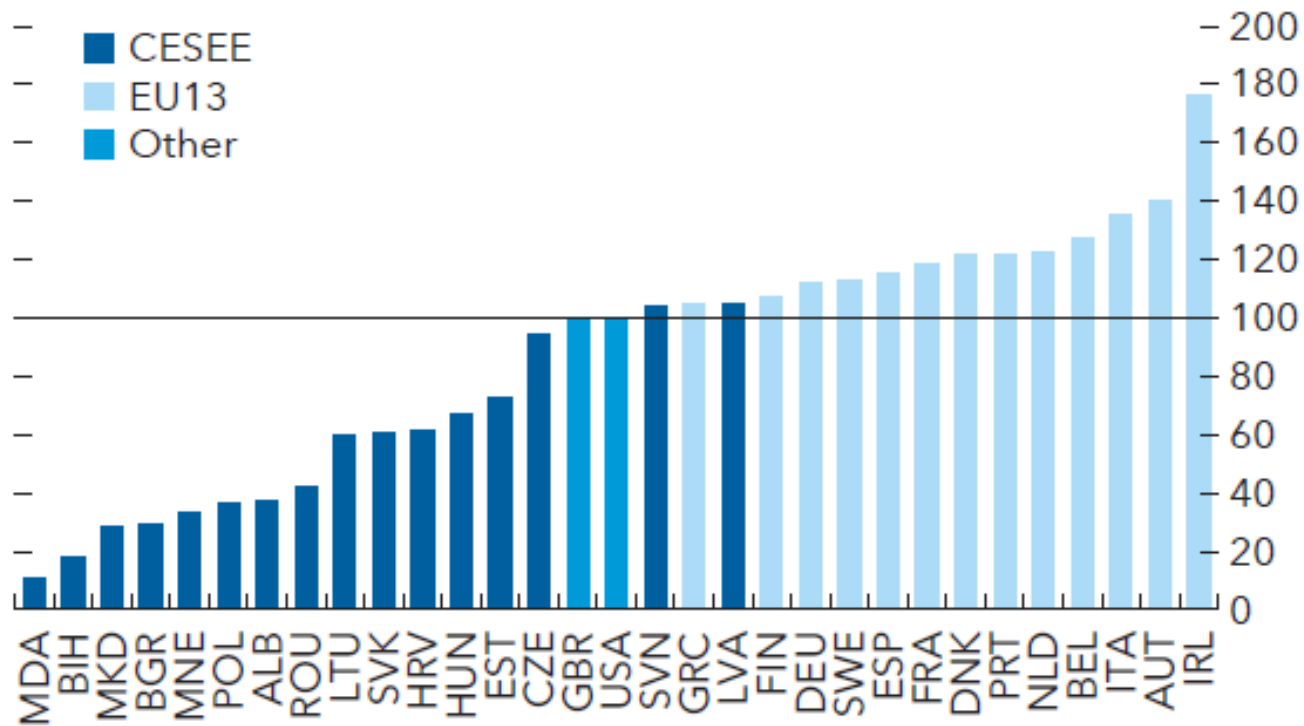| **Larger & deeper EU for faster convergence**	Current projections suggest no closing of the income gap to the US, but a new enlargement round could help
	Deepening de-facto integration could magnify impacts from EU enlargement

Thank you!

Additional Slide

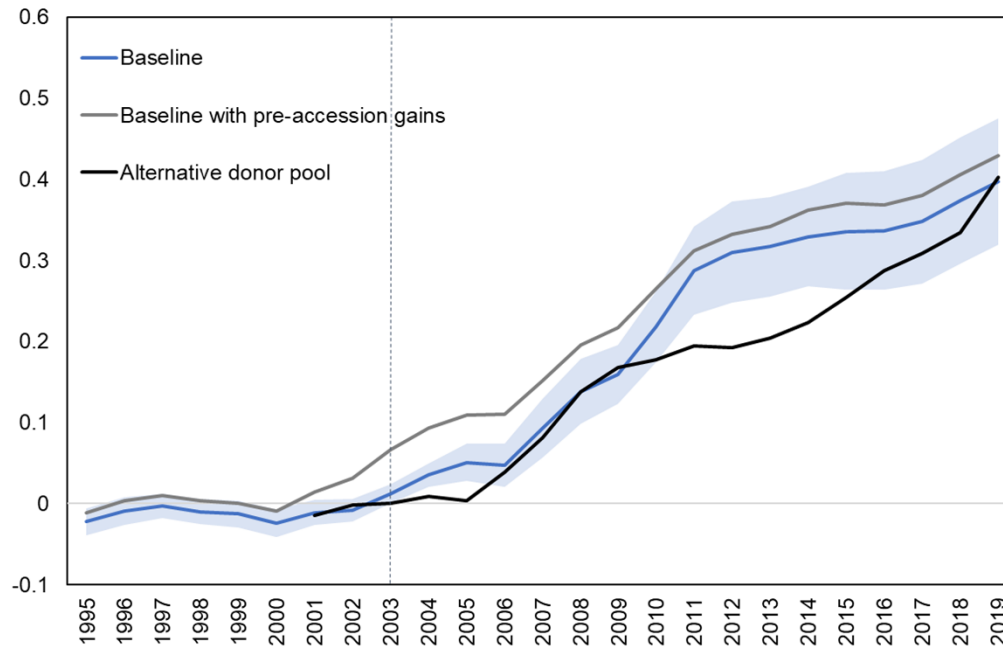# There is much room for investment in CESEE amid low capital stock.

Per capita capital stock 2023
(USA = 100)

Source: Penn World Table, version 10.01; and IMF staff calculations.

2004 EU accession effect on new MSs
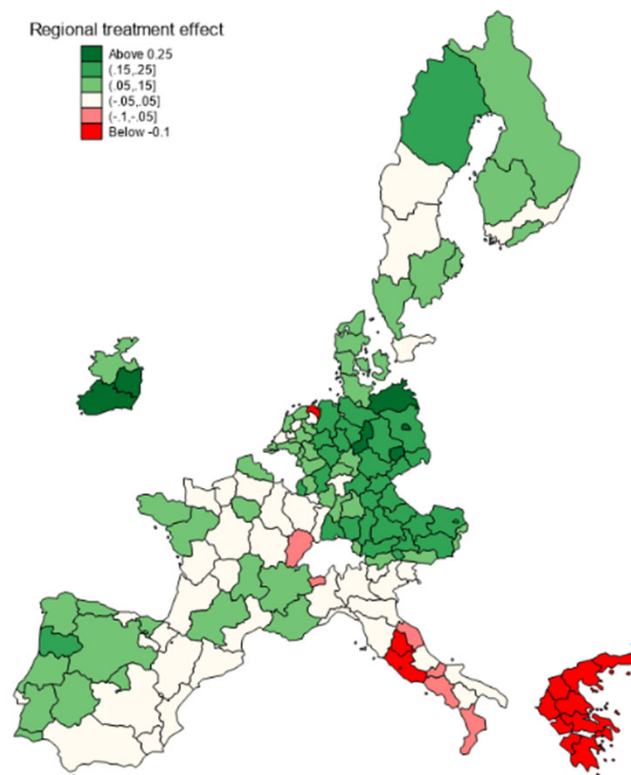(Log difference of GDP per capita to control group)

Sources: IMF staff calculations.
Note: Synesthetic difference-in-difference approach using regional data. Control group includes old MSs (excl. UK) that joined EU before 2004.

Region specific return from accession
(Log difference of GDP per capita to control group)

Source: IMF staff calculations.
Note: Impact from 2004 EU enlargement round after 15 years.