Infrastructure in Central, Eastern and Southeastern Europe (CESEE)

Andreas (Andy) Jobst


June 8, 2021

Webinar “Recovery and Growth in CESEE”

The views expressed here are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.
Roadmap

I. Benchmarking CESEE infrastructure

II. Getting the most from infrastructure investment
   ▪ Macroeconomic effects of infrastructure investment
   ▪ Enhancing infrastructure governance
   ▪ Strengthening private participation
   ▪ Coordinating investment across CESEE
   ▪ Enhancing long-term resilience and supporting climate action

III. Conclusion
I. Benchmarking CESEE Infrastructure
CESEE countries have only half of the per capita capital stock available in EU15—considerable heterogeneity within CESEE

Sources: IMF, Fiscal Monitor database; WDI; WEO; IMF staff calculations.
Note: Bars indicate the weighted average in each country group. CESEE-EU includes Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia. Large emerging markets (EM) includes Russia, Turkey, and Ukraine. Western Balkans plus includes Albania, Belarus, Bosnia and Herzegovina, Kosovo, Moldova, Montenegro, North Macedonia, and Serbia.
II. Getting the Most from Infrastructure Investment
The COVID-19 crisis raises the need for more and better public investment to boost short-term growth and potential output

- Public investment to support the recovery and raise productivity
  - Key tool due to its high multiplier, and discretionary and lumpy nature
  - Potential to crowd in private capital (e.g., long-term investors) while corporate investment is likely to remain depressed

- Policy Implications
  - Strengthen infrastructure governance to achieve more effective and integrated public investment and risk management (esp. for PPPs) and get the most out of taxpayers’ money
    - Availability of de-risking options for private investors while managing fiscal risks
  - Reprioritize capital spending towards well-planned, selected, and implemented projects that can enhance long-term resilience (e.g., green and digital infrastructure), including upgrades
  - Review capacity constraints and identify potential for cross-border collaboration
A. Macroeconomic Effects of Infrastructure Investment
(Empirical and Model Estimates)
Public investment booms are associated with a significant increase in output, especially in CESEE

Sources: Fiscal Monitor; WEO; IMF staff estimates.
Note: Cumulative response of GDP growth for CESEE (left) and EU15 (right) following public investment boom episodes. The episode is normalized such that public investment as percent of GDP increases by 1 ppt on impact. $t = 0$ is the year of the shock; dashed lines denote 90 percent confidence bands.
Simulations using the IMF’s Globally Integrated Monetary and Fiscal (GIMF) model

Shock

- Infrastructure investment is increased by 1 percent of GDP for 10 years

Scenarios

- Higher efficiency of public spending

Not shown (in background section)

- Alternative modes of financing (public debt accumulation, higher consumption taxes, lower public consumption)

- Cross-border projects that improve regional connectivity and lower trade barriers
Infrastructure investment: the role of public sector efficiency

Source: IMF staff calculations.

Higher Efficiency of Public Spending: SE Region

SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.
B. Enhancing Infrastructure Governance: Public Investment and Risk Management
IMF Public Investment Management Assessments (PIMA) indicate significant scope for improving infrastructure governance in CESEE, with large variation across countries.

Source: IMF staff calculations based on Public Investment Management Assessments (PIMA) completed as of March 2020.
A novel IMF survey on infrastructure investment in CESEE complements these PIMA findings.
According to survey, there are still sizable gaps in fiscal risk analysis and management in most CESEE countries.

Infrastructure Survey of CESEE Authorities: Risk Management Practices

(Percent)

**Coverage & Monitoring**
- Proactive and continuous monitoring and assessment of infrastructure-related fiscal risks
- Fiscal Risk Assessments consider all infrastructure-related risks (PPPs, SOEs, guarantees).
- Project risks are analyzed for each project and the entire portfolio of projects.
- Project risks are quantified.

**Analysis**
- Different guidelines for analysis of cross-border projects?
- Analysis of project risks differs between public projects and those sponsored by SOEs

**Financial Mgmt.**
- Budget includes contingency allocations for fiscal risks.
- Project-specific risks are hedged.

Sources: country authorities and staff calculations.
C. Strengthening Private Participation
In CESEE, the private sector is involved mostly in economic infrastructure, where SOEs are also more prevalent.

Infrastructure Survey of CESEE Authorities: Project Ownership by Sector (Percent)

Sources: country authorities and staff calculations. Note: 1/ ICT = information and communications technology.
Regulatory, legal and political risks are major bottlenecks to private participation in CESEE infrastructure projects

Infrastructure Survey of CESEE Authorities: Sources of Risk for Private Investors (Percent)

- Tariffs have been changed in the past.
- Asset transfer restrictions (to the private sector).
- Contracts have been re-negotiated in the past.
- Permits have been cancelled in the past.
- Periodic review of tariff setting practices across asset classes and projects.
- Defer or amend termination payments in the event of project cancellation.

Sources: country authorities and staff calculations.
D. Coordinating Investment across CESEE
Most of “Juncker Plan” financing of CESEE infrastructure is pooled across multiple countries and/or involves cross-border projects ...

(Total: EUR254.3 billion, as of end-June 2020)

- Cross-border infrastructure projects/financing involving EU-CESEE countries 1/
  16%
- Domestic infrastructure projects (EU-CESEE countries)
  3%
- Cross-border infrastructure projects/financing (only EU-15)
  4%
- Domestic infrastructure projects (only EU-15)
  30%
- Other 2/ 47%

Sources: EIB; IMF staff calculations. Note: 1/ either as part of an EU-wide project or together with one or more EU-15 countries - there is no cross-border project comprising only Member States in CESEE; 2/ “other” includes cross-border and domestic non-infrastructure projects/finance in EU countries.
... and the conditionality of EU Structural/Cohesion Funds is a key success factor for cross-border projects in the region

SUCCESSFUL

- Simple but critical project (energy, transport)
- Clear payoffs for each country
- Adherence to international standards
- Coordination via EU framework

(CZE and POL)
Water management along the border
Co-financed by EU grants

(CZE and POL)
Rail line between Katowice and Ostrava
Co-financed EU grants

(ROM and MDA)
Natural gas pipeline
Co-financed by EU grants and PPP with Romanian SOEs

CHALLENGING

- Coordination challenges causing delays in project implementation
- Difficult/lengthy negotiations
- Relatively small scale (even for EU TEN-T and InvestEU)

(CZE and AUT)
Motorway D52 between Brno and Vienna

(POL and BLR)
Cross-border Domaczewo bridge project
E. Enhancing Long-term Socio-Economic Resilience and Supporting Climate Action
CESEE region will require additional public and private resources to achieve the desired “green and digital” transition

- COVID-19 lessons and recovery: (1) enhance long-term, socio-economic resilience and (2) “build better” (i.e., climate change mitigation and adaptation)
- Reliable telecommunications/digital services, education and health care
- Facilitate the “green” transition (renewable energy generation, low-emission transport, and energy efficiency)
- Mitigate the impact of natural disasters and progressive global warming
- Still large infrastructure gaps despite considerable NGEU resources (up to €212 billion of grants and loans (~6% of GDP)) and ambitious plans for green infrastructure and digitalization
- Additional “green” investment of ~1.5% of GDP per year (comparable to the required capital spending for reaching 50 percent convergence with the EU15)
III. Conclusion
Conclusion

• Relative to EU-15, **CESEE falls short both in terms of per-capita public capital** and various measures of physical infrastructure quantities, with considerable cross-country variation

  ➢ Filling 50% of the gap will require significant investment (3-8% of GDP for 10 years)

• Scaling-up infrastructure investment is important to support the post-COVID19 recovery and speed up convergence

  ➢ Getting the most of this investment would require better **“infrastructure governance”**, recognizing significant difference across countries → **IMF PIMA** can help identify shortcomings

  ➢ Opportunity to **enhance long-term resiliency by shifting towards green and digital infrastructure** (which would require additional investment of 1.5% of GDP for 10 years)

• **Attracting private participation** will be essential but requires better risk allocation and more effective fiscal risk management, especially in PPPs → **IMF PPP Fiscal Risk Assessment Tool (P-FRAM)** can provide guidance

• **Cross-border projects** involve coordination challenges but could yield greater growth dividends if they improve regional connectivity and integration
Background Slides
Reference

Infrastructure investment: the role of financing

Source: IMF staff calculations.

SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.
Infrastructure investment: the role of cross-border coordination

Source: IMF staff calculations.

SE: Bulgaria, Croatia, Romania, Czechia, Poland, Hungary.