CAREC SEMINAR ON MACROECONOMIC AND FINANCIAL STABILITY

INFRASTRUCTURE GAPS, GROWTH, FINANCING, AND PUBLIC DEBT

CLARIFYING THE LINKAGES

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Closing Infrastructure Gaps—Big Policy Picture

On the one hand:

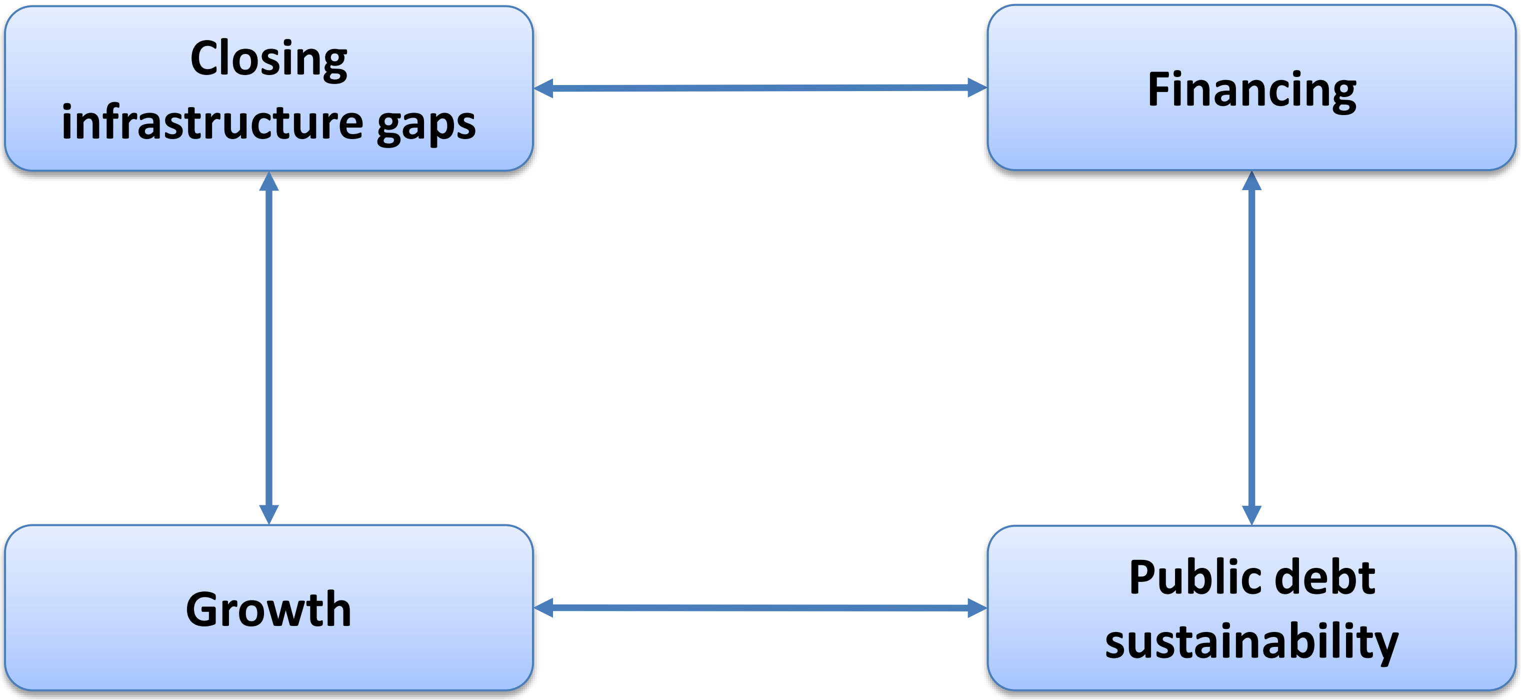
- Large CAREC infrastructure gaps
- Lots of financing available

On the other hand:

- Growth pay-off depends on closing other (reform) gaps
- Fear of debt trap risks

Bottom line: Two-handed policy analysis needed

Closing Infrastructure Gaps—Linkages



- This presentation will focus on two of the linkages:
  - Closing infrastructure gaps and growth
  - Financing and public debt sustainability

Closing Infrastructure Gap—Assumptions

- Debt-Investment-Growth (DIG) Model (IMF WP/12/144)
- Tracks interactions of public investments, growth, financing, and public debt
- Calibrated to mimic data of median CAREC country
- Simulations assume a public investment increase of 1 percent of GDP maintained over 10 years (2020-30)

Determinants of Growth Impact

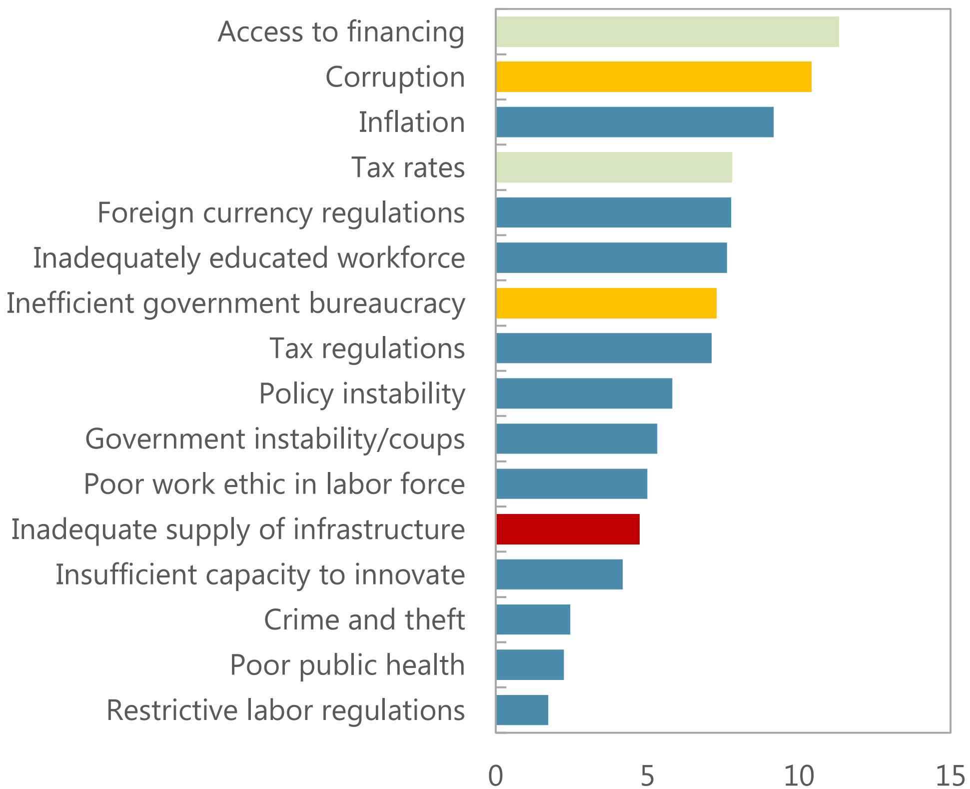
Infrastructure gap → **Growth**

- Quality of public investment management (PIM)
  - How much infrastructure is generated by 1 unit of spending?
  - Base case: PIM=0.5
- Return on infrastructure investment (RII)
  - What is the return of an additional unit of infrastructure?
  - Base case: RII=20 percent
- Crowding out of other investment
  - How much other investment is displaced by financing choice?
  - Base case: Domestic debt financing

CAREC Infrastructure Gaps vs. Other CAREC Reform Gaps

World Economic Forum (WEF): Most problematic factors for doing business (2017-18); 8 out of 11 CAREC countries ranked; averages shown below

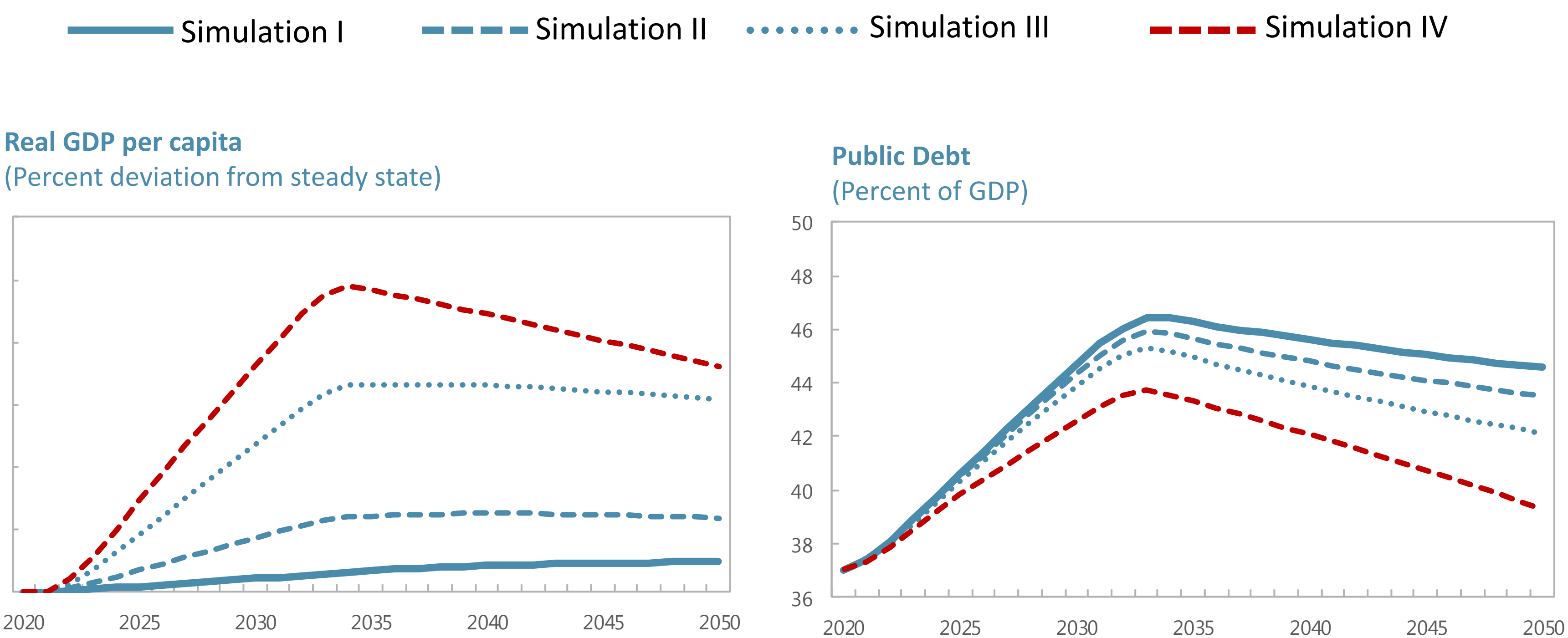
Ranking of problematic factors in CAREC countries



Source: WEG Global Competitiveness Report, and IMF staff

- **Overall message**: To get higher pay-off from closing infrastructure gaps, need to close other reform gaps
- **PIM message**: Much scope to improve quality of public governance
- **RII message**: Much scope for other reforms to increase pay-off; role of connectivity
- **Crowding out message**: Limited access to financing and already high tax rates are potential constraints

Growth Impact Simulations



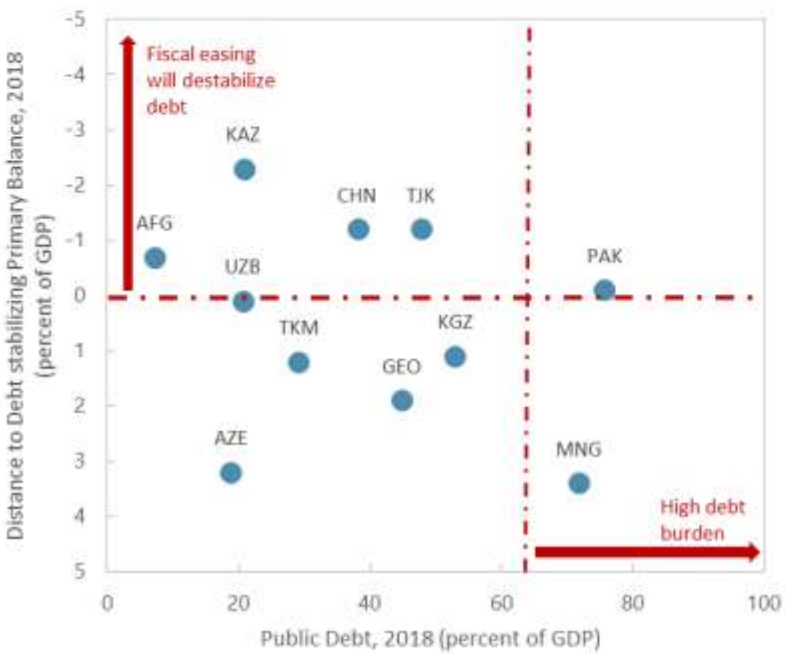
	Quality (PIM)	Return (RII)	Debt financing	Tax financing
Simulation I	Low (0.50)	Low (20%)	Domestic	Gradual increase
Simulation II	High (0.75)	Low (20%)	Domestic	Gradual increase
Simulation III	High (0.75)	High (35%)	Domestic	Gradual increase
Simulation IV	High (0.75)	High (35%)	External market-based	Gradual increase

Determinants of Public Debt Impact

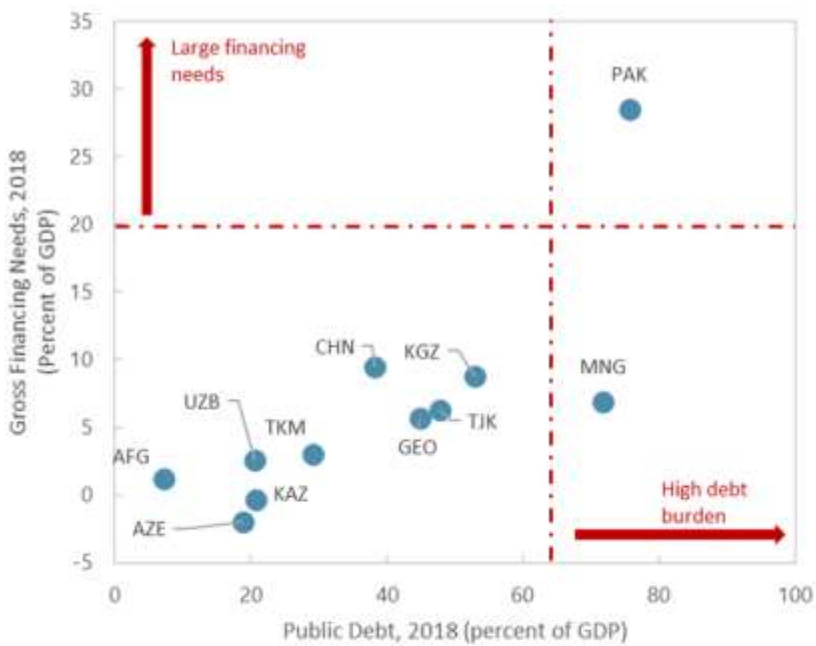
- Is fiscal space available?
  - –Baseline: Assumes fiscal space available
  - –If no fiscal space: Taxes or financing outside budget
- Debt vs. tax financing
  - –Baseline: Taxes increase gradually to stabilize debt ratio
- Domestic vs. external debt
  - –Baseline: Domestic debt financing

Fiscal Space in CAREC Countries

A few countries have limited fiscal space based on public debt sustainability indicators



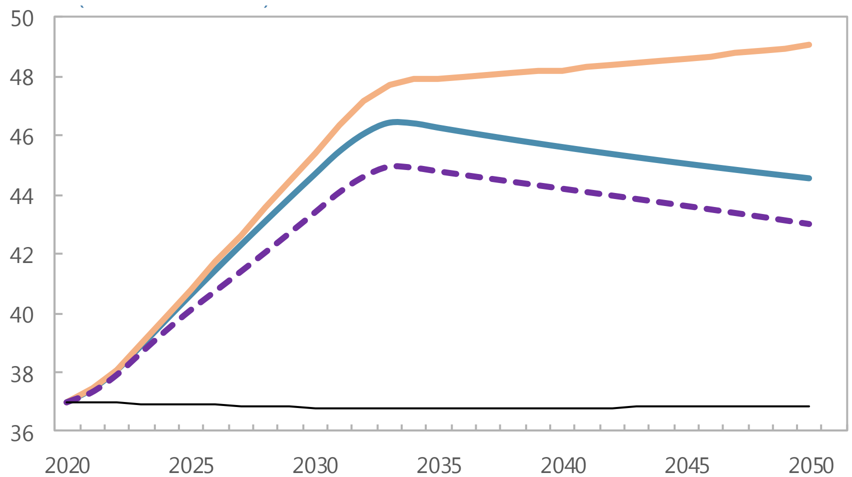
Gross public financing needs generally tend to be well below the threshold



Public Debt Impact Simulations

Simulation I   Simulation V   Simulation VI   Simulation VII

Real GDP per capita
(Percent deviation from steady state)



Real GDP per capita
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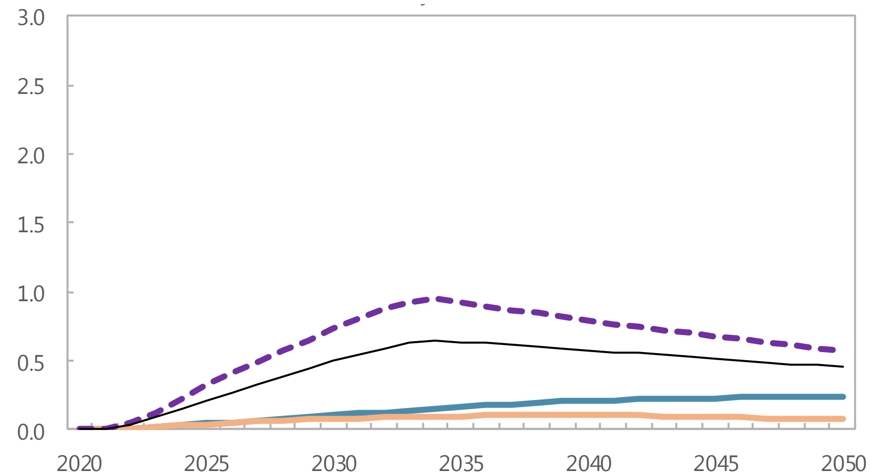


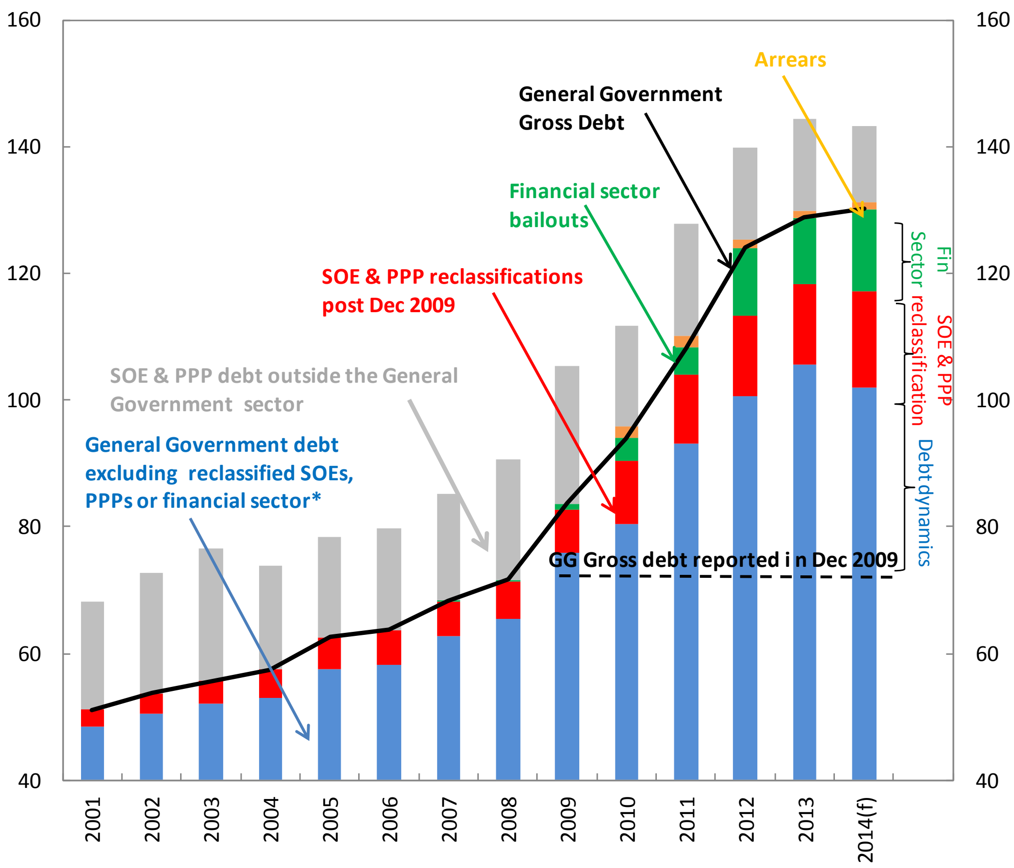
	Quality (PIM)	Return (RII)	Debt financing	Tax financing
Simulation I	Low (0.50)	Low (20%)	Domestic	Gradual increase
Simulation V	Low (0.50)	Low (20%)	Domestic	Slow, delayed increase
Simulation VI	Low (0.50)	Low (20%)	External market-based	Gradual increase
Simulation VII	Low (0.50)	Low (20%)	—	Fully tax-financed

Financing Infrastructure Outside Budgets: Fiscal Risks

- Financing outside budget
  - State-Owned Enterprises (SOEs) outside government perimeter
  - Public-Private-Partnerships (PPPs)
  - Fully private financing (e.g., FDI in energy sector)

- Fiscal risks
  - SOEs: Debt guarantees, SOE bail-outs, re-classification as government units
  - PPPs: Shifting of costs to the future; return guarantees; concessionaire bail-outs
  - Knock-on fiscal cost effects when fiscal risks from infrastructure materialize:
    - Fiscal cost of deep economic downturns
    - Fiscal cost of financial bail-outs

A Cautionary Tale: Portugal's Fiscal Crisis



- Heavy investments in infrastructure until 2010
- Little growth impact
- EU fiscal rule constraints
- Heavy use of SOEs/PPPs
- Public debt rose from 84 (2009) to 130 percent of GDP (2014):
  - 1/3 due to reclassification of SOE/PPP debts
  - 1/3 due to financial bailout cost
  - 1/3 due to public debt dynamics during crisis

Questions for Panel Discussion

Closing CAREC infrastructure gaps and growth:

- What is the scope for improving public investment management (PIM)?
- What complementary reforms are needed to raise return on public investments?
- Is crowding out of other investments a concern?

Closing CAREC infrastructure gaps and debt sustainability:

- How much fiscal space do countries see for financing infrastructure on budget?
- What is the preferred mix of domestic vs. external debt financing and why?
- How are governments evaluating and monitoring fiscal risks when infrastructure is financed outside the budget?

Final thought … and thank you!

"Someday, all this will be infrastructure."