

Meeting Infrastructure Needs for a Shared Prosperity: Key Challenges and Policy Implications

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***) All views here are personal** 1

Organization of Presentation

1. Key Characteristics and Role of infrastructure
2. ADB's Strategy and Operation
3. Infrastructure Needs and Impacts
4. Key issues and challenges
5. The Way Forward

Key Characteristics of Infrastructure

Public Good

- Externalities
- Non-excludability/free riders
- Poverty impacts

Long Horizon

- Need for long term financing
- Political risk/risk sharing

Bulky Investment

- Large investments by powerful agents
- Possible market dominance/regulatory capture

Infra-Industry Nexus

- Dynamic of comparative advantage
- Substitute/complement for factors of production
- Spatial effects

Importance of Infrastructure

One of the most important asset in any economy, providing benefits to society and the economy

Plays a central role in economic and social development.

Macroeconomy: productive capacity, output & economic growth; technical progress productivity growth; international trade; foreign direct investment (FDI)

Microeconomy: private sector costs & returns; spatial and regional development; private investment; employment & incomes; externalities

Positive Impacts of Infrastructure

Economic

- Supporting Economic Growth
- Generating Employment Opportunities

Trade & Invest.

- Reducing the Cost of Doing Business
- Supporting 'Regional Production Network'

Environ.

- Addressing Climate Change
- Mitigating Disaster Impacts

Poverty

- Reduce Poverty by Improving Access to Services
- "Energy / Transport / Water for All"

Inclusive Infrastructure defined in the ADB's Strategy 2020

- ✓ sustainable growth creating and enlarging opportunities
- ✓ broadening access to opportunities to ensure members of society can participate in and benefit from growth

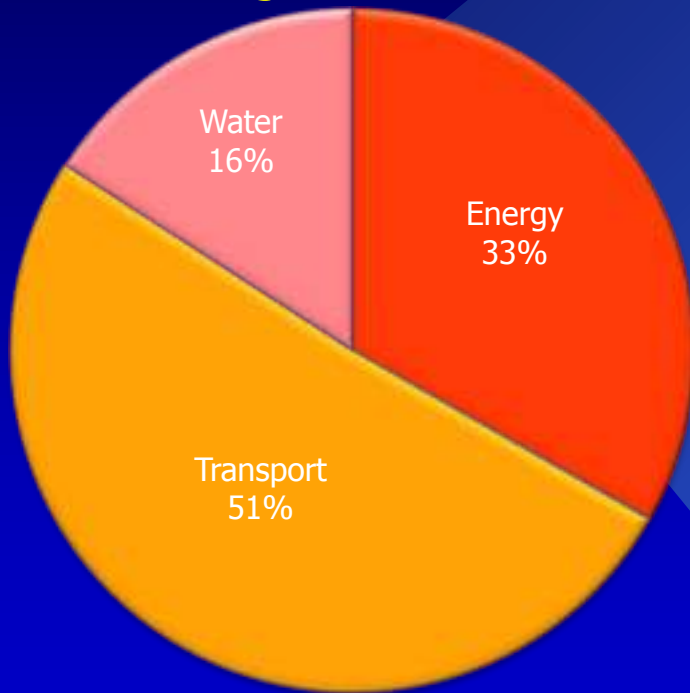
ADB's infrastructure operations emphasize public-private partnerships and private sector engagement

ADB's Long Term Strategic Framework: Strategy 2020

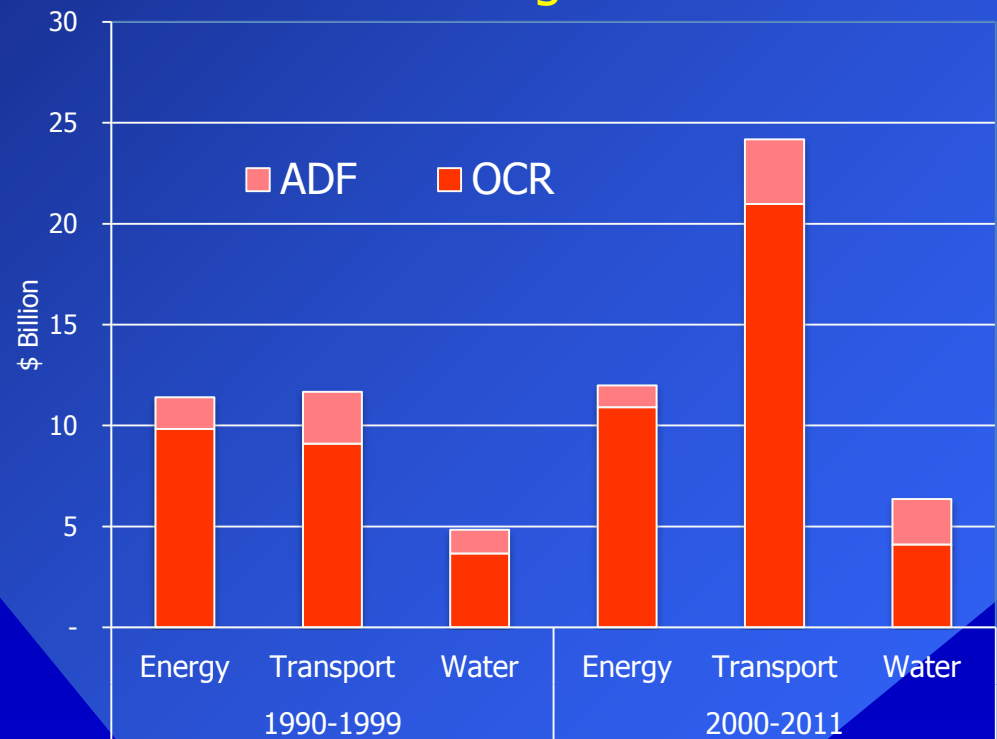
- Overarching goal: poverty reduction in Asia and the Pacific.
- Three strategic agendas: (i) inclusive economic growth; (ii) environmentally sustainable growth; and (iii) regional integration.
- Five core operational areas: (i) infrastructure; (ii) environment; (iii) regional cooperation and integration; (iv) financial sector development; and (v) education.
- Instruments: (i) lending, equity investment, and guarantees; (ii) policy dialogue, and (iii) capacity building and technical assistance.

ADB Operations on Infrastructure

ADB Lending for Infrastructure



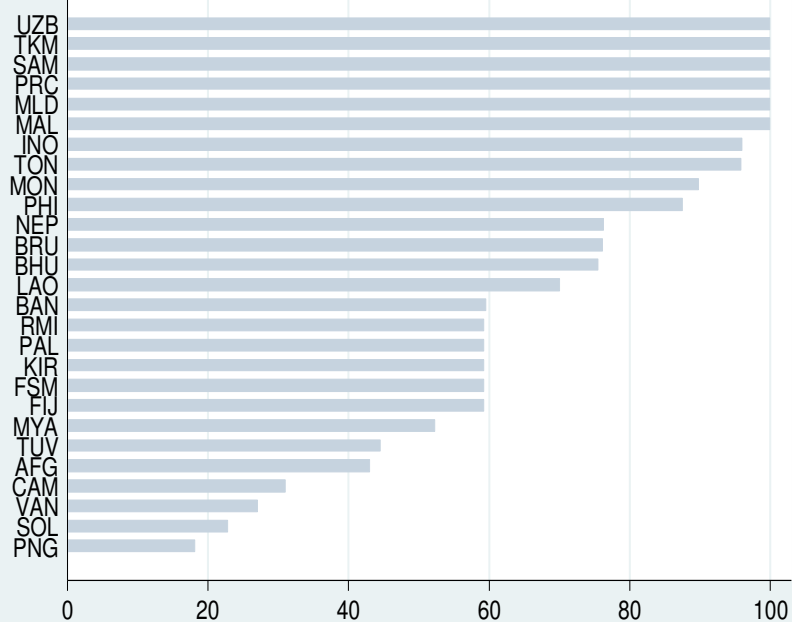
Lending for Infrastructure According to Source



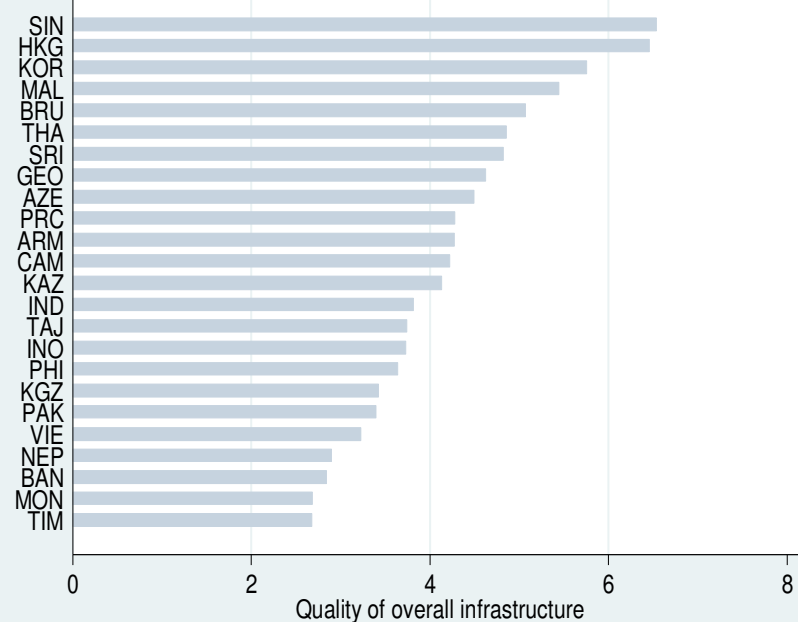
Source: ADB internal database on loan, TA, Grant, and Equity Approvals as of 23 March 2011.

Infrastructure provision across Asia: A snapshot

% of Population with Access to Electricity



Overall Infrastructure Quality



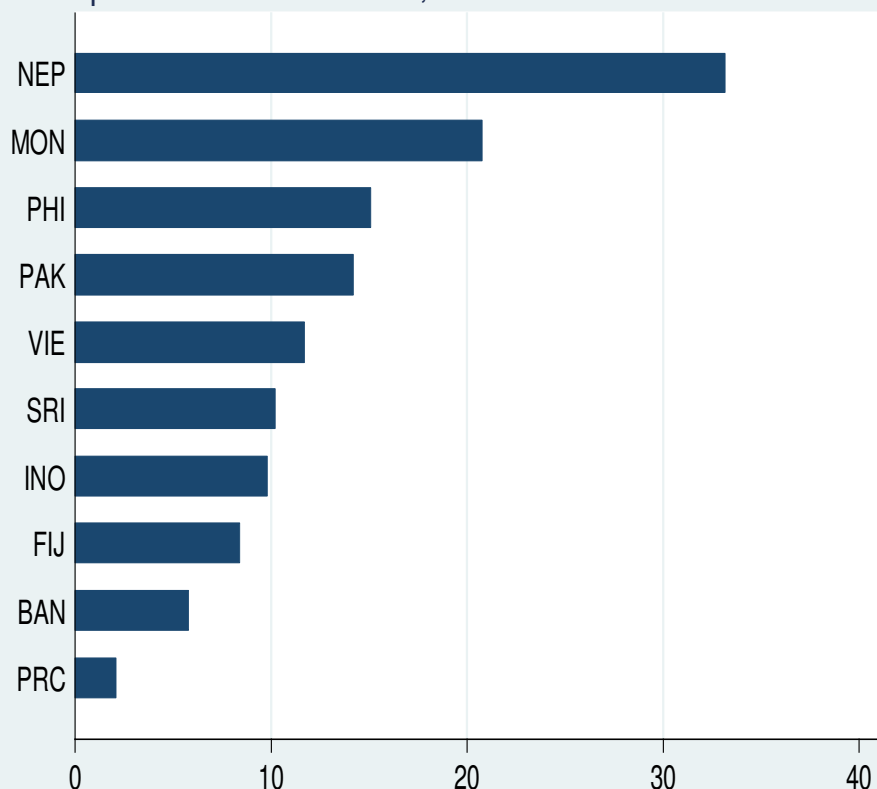
Source: WDI

Note: Higher number represents higher quality on a scale of 1 to 7.

Source: Global Competitiveness Index 2012,
World Economic Forum

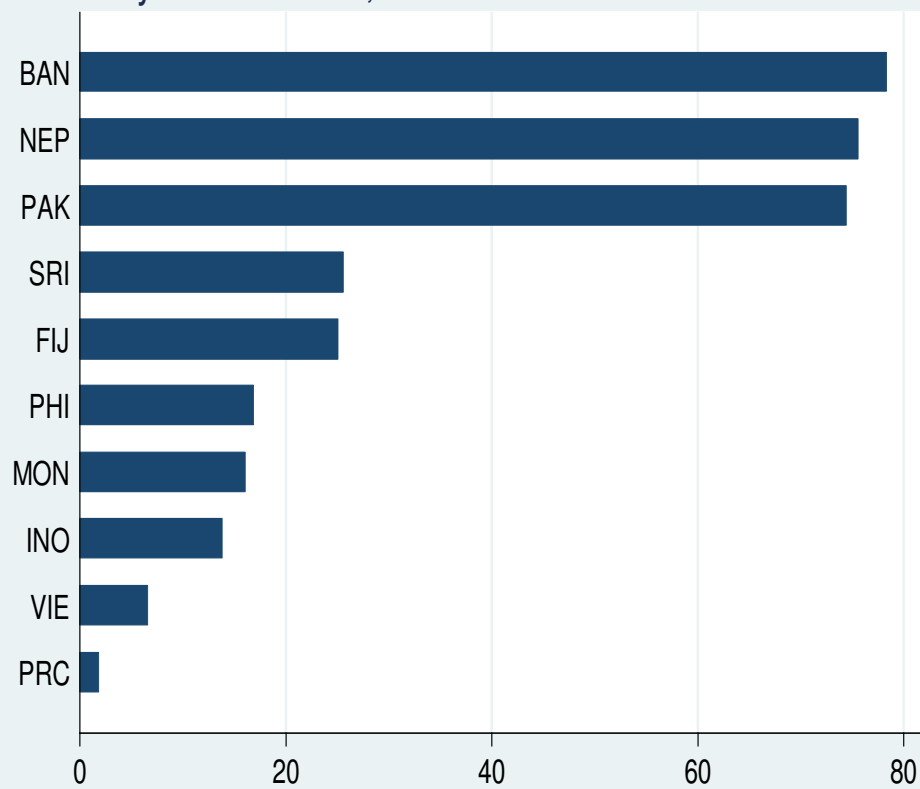
Lack of infrastructure is a constraint to operations and growth of firms

Transportation as Constraint, % of Firms



Source: WB Enterprise Survey, various years

Electricity as Constraint, % of Firms



Source: WB Enterprise Survey, various years

Note: Percentage of firms reporting constraint as "major" or "severe".

Comparison with *Seamless Asia*

Seamless Asia

Period: 2010-2020

Total: 8.22 Trillion (2008 USD)

Per annum: 747 billion

Percentage to GDP: 6.5%

Coverage: **32 DMCs**

Composition

- 68% new capacity
- 32% maintenance
- 49% energy
- 35% transport
- 13% telecoms
- 3% water and sanitation

Updated ERDI Estimate

Period: 2014-2030

Total: Based on 2010 USD

Percentage to GDP: 4.3%

Coverage: **45 DMCs** (including Korea; Singapore; Hong Kong, China; Taipei, China)

Composition

- 67% new capacity
- 33% maintenance
- 42% transport
- 36% energy
- 18% telecoms
- 4% water and sanitation

CAREC Economic Corridor Development: Assessment from a General Equilibrium Perspective

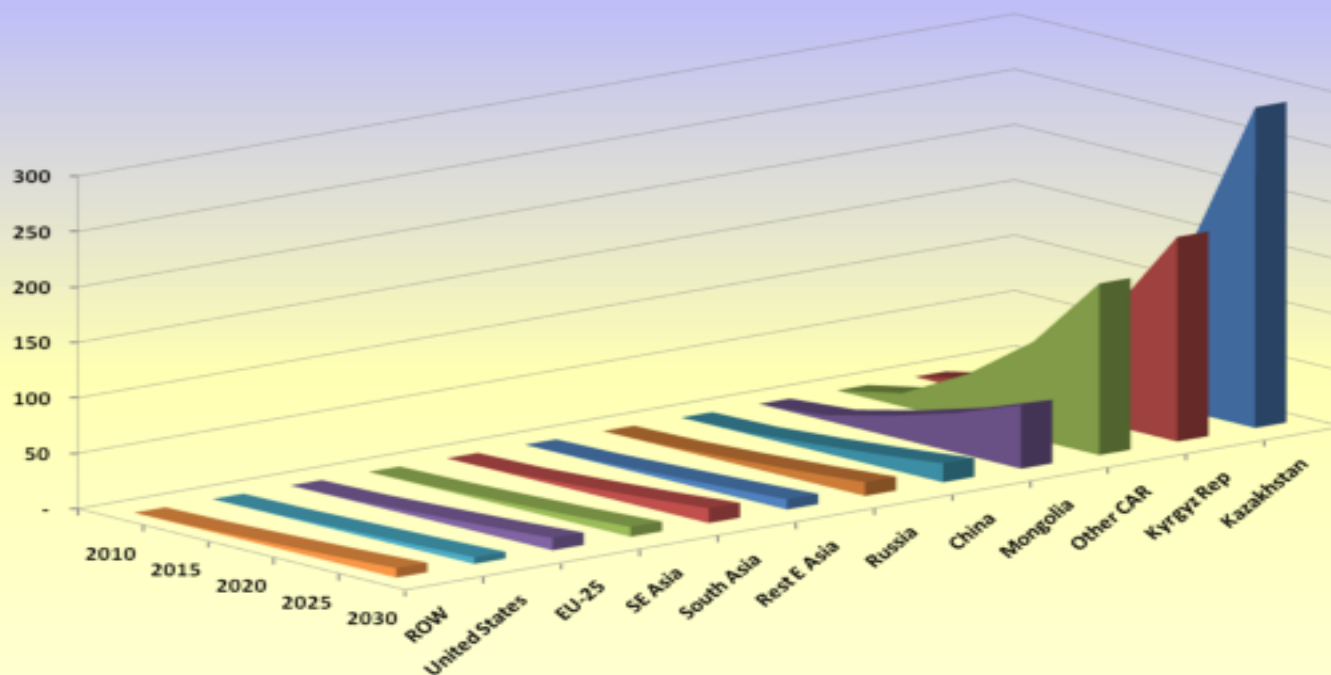


Examples of Infrastructure Impacts of KAZ Road Corridors

- *Vehicle Operating Costs (VOC)* – Includes complete project outlays and estimated economic benefits from improved safety, travel time, and reduced vehicle depreciation.
- *Productivity (Prod)* – Includes above and estimates of productivity gains for transport and distribution sectors.
- *Losses* – Includes above and reductions in product losses due to spoilage, damage, delays, and other adverse effects of roadway inefficiency.
- *Trade* – Includes above and estimates of reduced trade and transport cost margins.

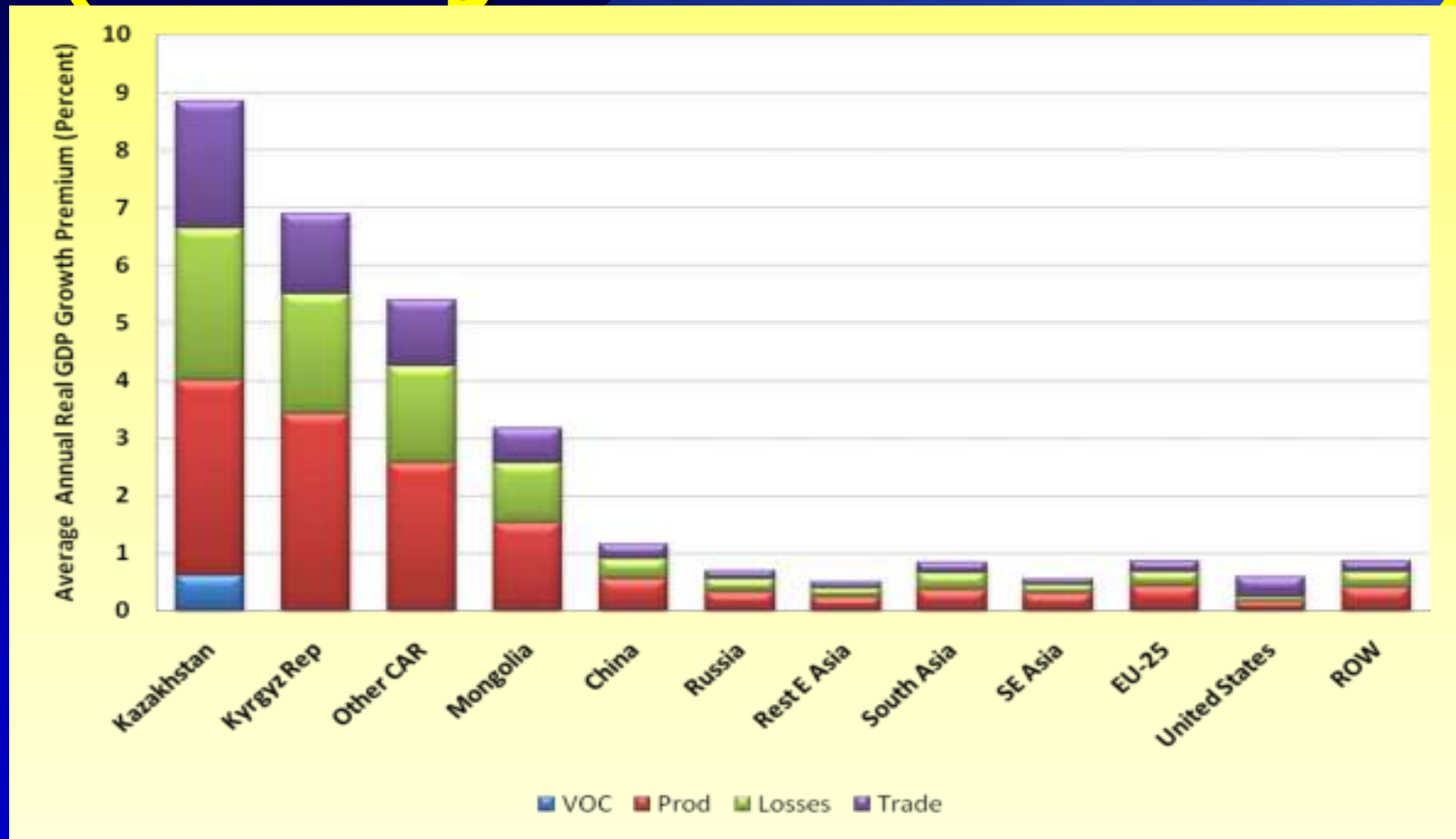
Real GDP Growth

(Annual % Change from Baseline of 2010 GDP)



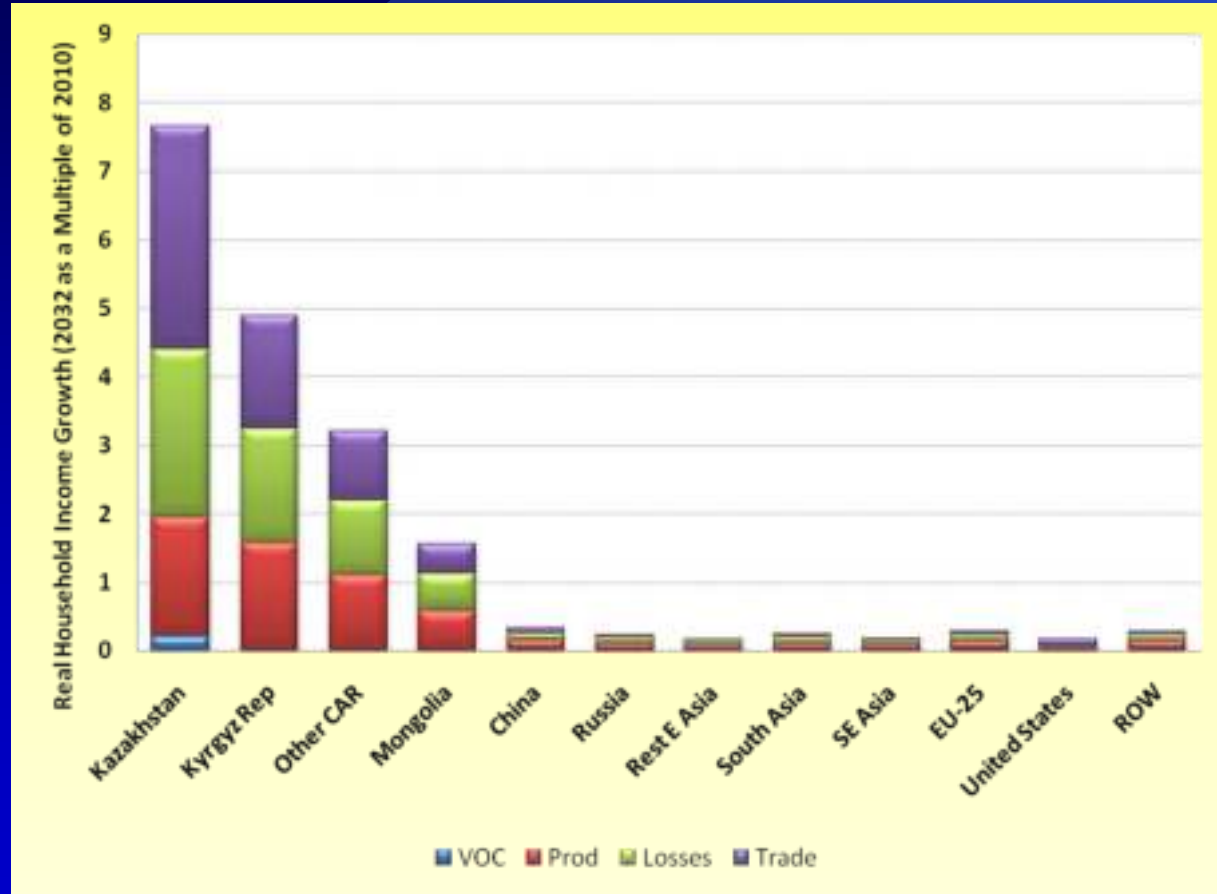
The main beneficiaries in relative growth terms are Kazakhstan and proximate economies. Regional spillovers are quite significant.

Real GDP Growth Premium (% change from 2030 Baseline)



- ❖ Significant nominal growth accrues to larger economies, however, suggesting a broader basis for financing and policy support.

Real Household Income Growth (% change from Baseline in 2030)

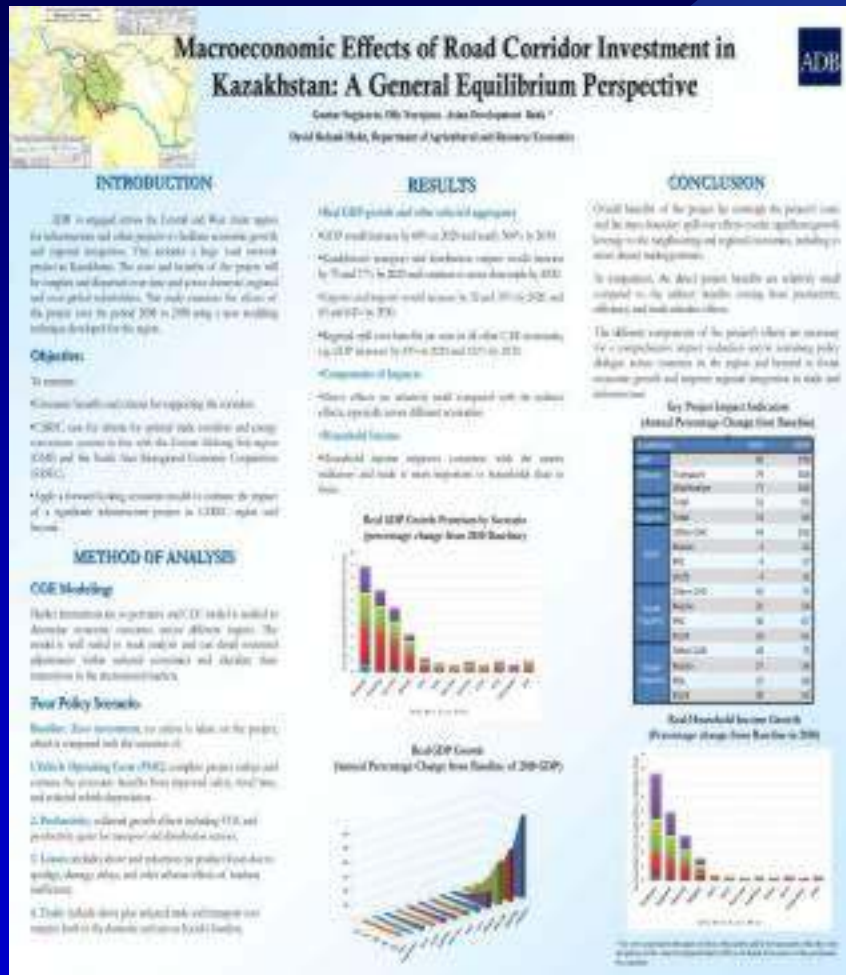


- ❖ Productivity effects are even more important to supply and employment responses.

Overall Impacts ...

- The benefits of KAZ road project far outweigh its costs.
- Transboundary spillovers confer significant growth leverage on other regional economies and more distant trade partners.
- Project benefits are negligible compared to productivity, efficiency, and trade stimulus effects.
- Productivity gains are the largest source of growth benefits, but reduced losses and trade stimulus are of nearly equal benefit.

Samples of outputs...



Major Issues and Challenges



Crowding in the private sector – PPPs, cost recovery, property rights, guarantees?



Managing networks and technical change



International cooperation; regional integration (growth spillovers)



Financing – long term, local currency bond markets, other instruments

Private Sector Financing

Key Challenges

**Long
Term**

**Difficulties in Providing Long-Term
Investments by Private Sector**

Risks

Inherent Risks in Infrastructure Investments

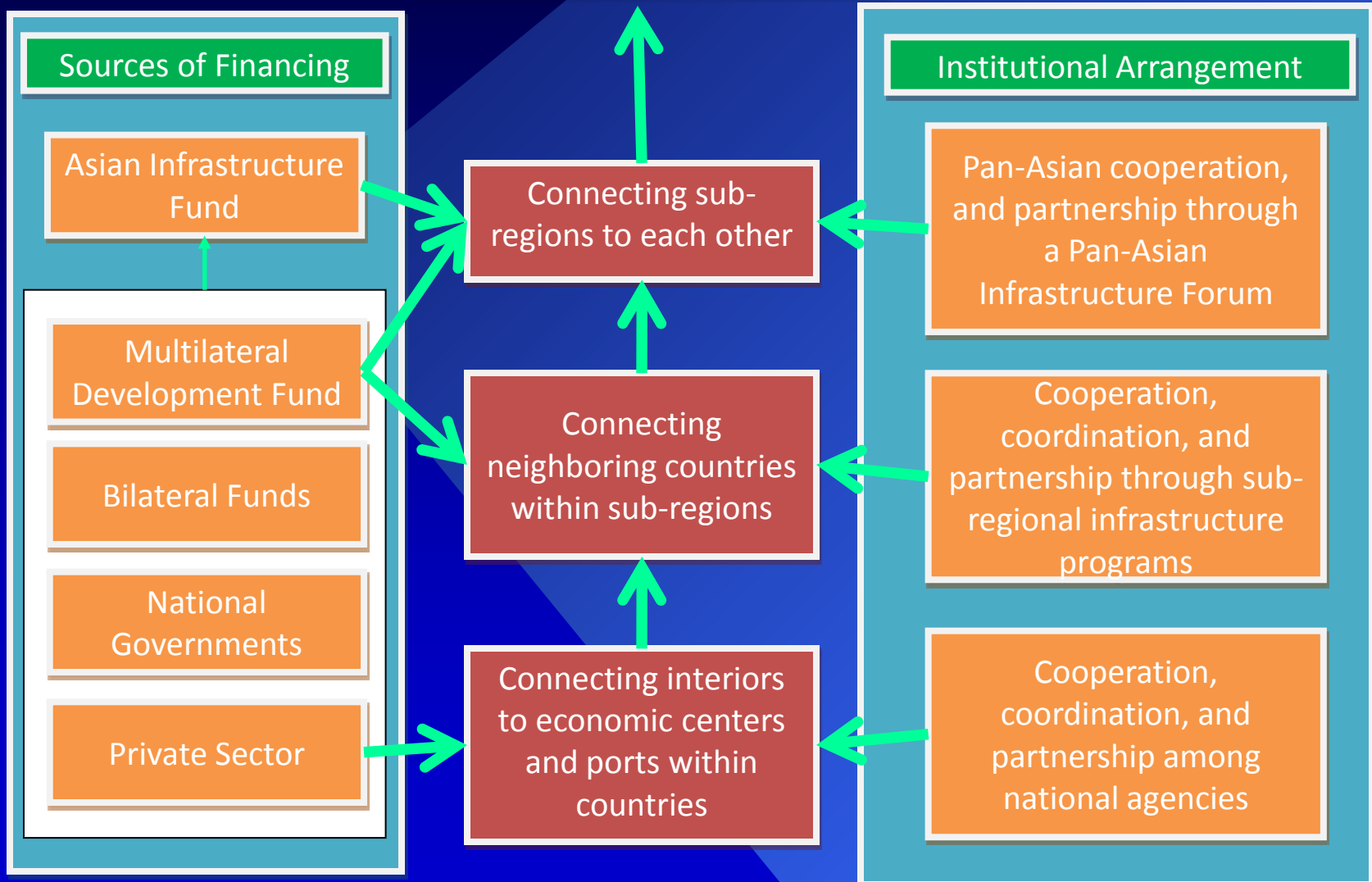
Inform.

Lack of Full Information on Projects

**Role of
Govt.**

Governments need to engage Private Sector

Framework and Partners



Key Challenges Ahead

Public

Limited Resources and Competing Needs of Fiscal Allocation

Private

Recent Financial Turmoil Reduces Investments (lesson from Asian and Global Crises)

PPP

Important role of PPP to Enhance Investments but need to address its risks

Donors

More Proactive Approach through Financial & Technical Supports

The Way Forward

- Meeting the infrastructure needs by accelerating infrastructure development
- Setting right policies and institutions
- Considering environmental concerns
- Supporting technological advancement
- Strengthening cross-border infrastructure through regional cooperation

Thank you!