Financing Asia’s infrastructure gap: New ideas for the public and private sectors

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Road Map

The Basics:
Why Infrastructure? Who pays? What’s the gap globally?

Role of Multilaterals
Closing Viability Gap. De-risking Projects

Impact of Crisis
Supply and Cost of Capital. De-leveraging

Asia
Role of PFI. Country Cases

New Global Regional Initiatives
Why Infrastructure?
Transforming Infrastructure

*Infrastructure alleviates poverty, creates jobs, enables growth and is central to the Climate Change agenda*

<table>
<thead>
<tr>
<th>Constraints</th>
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<tbody>
<tr>
<td>1. Insufficient investment to meet growth targets: $1 – $1.5 trillion/year gap</td>
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<td>2. Avoiding a 4º world requires <em>additional</em> funding: $500 billion</td>
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<td>3. Investment is key, but is not enough. Challenges on the ground are complex: Service efficiency, Consumer behaviors, Institutional capacity</td>
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<table>
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<th>Focus on Holistic Responses</th>
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<tbody>
<tr>
<td>• Across sectors &amp; levels of government</td>
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<tr>
<td>• Between Climate Change &amp; Investment</td>
</tr>
<tr>
<td>• Infrastructure + Services, Behaviors, Institutions</td>
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<tr>
<td>• Instruments and Facilities</td>
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Infrastructure Creates Employment

**Short-term Employment Impacts:**
Infrastructure is a pillar of job creation and stimulus...though not all investments are created equal.

**Long-term Employment Impacts:**
More infrastructure services mean greater options for employment, e.g. shifting from subsistence agriculture to the market economy.

**Annual jobs per $100 million investment**
Source: Schwartz, Andres, Dragoiu, WB, 2009

**Rural Road Maintenance**
25,000 to 50,000

**Water & Sanitation Network Expansion**
~ 10,000

**Highways**
~ 1,000

**Power**
< 100

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Source: Escobar and Torero, 2004
Lack of Infrastructure Reduces Quality of Life

Transport Data: Rural Access Index, 2007
Remaining Data: Regional Action Plans, Infrastructure Strategy Update 2012

“Those who are here now are truly desperate...we are on a boat with many problems, but if we abandon it, we will drown. If somebody would offer me money, I would take it and leave everything here. There is no light, no water, no basic services.”

- Resident of Villa Belen, El Salvador
Transport Generates Trade and Provides Access to Markets

- Transport and logistics bottlenecks restrict trade more than trade policies

Delivered price of food is 20 to 60 percent logistics and transport costs
Source: LCSSD Economics Unit, 2012

"Thick borders" correlate with poverty
Source: WDR 2009

Some borders have remained thick: Africa, South Asia, Central Asia

Pineapples from Costa Rica

Including storage and customs fees, logistics costs > 40% of the final price.

With the expense of wait times factored in, transport costs are equal to 36% of the final price.
Lack of Rural Roads Correlates with Maternal Mortality

“Without roads, there is no democracy”
Ethiopia’s Transport Minister, 2004

Availability of Paved Roads, by Country
Rocks translated into Geographic Size

Source: Worldmapper (http://www.worldmapper.org)
Financing Gap and Sources
# Yearly Infra Finance Needs – Developing Countries

<table>
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<tr>
<th>Green Investment Gap</th>
<th>c. $0.2 – 0.5 trillion</th>
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<td><strong>Infra Financing Gap</strong></td>
<td>c. $1 - 1.5 trillion</td>
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<td>Current Infrastructure Finance</td>
<td>c. $1 trillion</td>
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<td>MDBs = c.$40 billion</td>
<td></td>
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<td>PPI = $182 billion</td>
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## Infra Financing Gap
- **Developing Countries**
  - c. $1 trillion
- **Current Infrastructure Finance**
  - MDBs = c.$40 billion
  - PPI = $182 billion
- **Green Investment Gap**
  - c. $0.2 – 0.5 trillion

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Who Pays for What

User Fees
- Mobile, Fixed lines, Internet
- Most generation, Distribution
- Ports, Rail, Tollroads, Some mass transit
- Some supply, Treatment

ICT
- Rural telephony

Energy
- Transmission, Affordability, Some renewables
- Roads, Mass Transit, Waterways

Transport
- Wastewater Treatment, Sewerage, Affordability

Water

Securitizable Revenue

Public Transfers

Blended Finance

Flow of Funds
How much of PPI is private?

Private vs. PPP:
- Divestitures: $52 B
- Telecom: $5 B
- PPPs: $125 B

Priv & Public Debt & Equity:
- Private Equity: $11 B
- Public Equity: $26 B
- Public Debt: $58 B
- Private Debt: $30 B

Source: World Bank Infrastructure Policy, PPI Database
**Who Finances**

**What**

- **User Fees**
- **Tax Payers**

**Private Sector Sources of Funds**
- Strategic Investors
- Institutional Investors
- Equity Funds
- Banks

**Public Sector Sources of Funds**
- Budget
- IFIs
- Bond Financing
- State Dev Banks

**Private Projects**
- Securitizeable revenue

**PPP Projects**
- Viability Gap Financing
Flow of Funds

User Fees

ICT
- Mobile, Fixed lines, Internet

Energy
- Most generation, Distribution

Transport
- Ports, Rail, Tollroads, Some mass transit

Water
- Some supply, Treatment

Tax Payers

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Rural telephony

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Public Sector Sources of Funds

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• IFIs
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Private Sector Sources of Funds

• Strategic Investors
• Institutional Investors
• Equity Funds
• Banks

Private Projects

Public Projects

PPPs

Flow of Funds

Tax Payers

ICT

Energy

Transport

Water
What Could MDBs/World Bank Group Do?
Closing the Project
Viability Gap

Viability (Ec & Financial Value of the Investment)

Add Rev's

Government Transfers

User Fees, Tariffs or Tolls

Revenues
Closing the Project
Viability Gap

- Reduce Costs
- Add Rev’s

Government Transfers

- User Fees, Tariffs or Tolls

- Debt Financing

- Dividends / RoI

- Op Ex

- Cap Ex / Depreciation

Revenues

Costs
Closing the Project Financing Gap

Reduce Costs

Add Rev's

Government Transfers

User Fees, Tariffs or Tolls

Revenues

Costs

Costs with Support

Viability

Dividends / RoI

Debt Financing

Op Ex

Cap Ex / Depreciation

Dividends / RoI

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Op Ex

Cap Ex / Depreciation
Closing the Project Viability Gap

Reduce Costs

Government Transfers

User Fees, Tariffs or Tolls

Debt Financing

Op Ex

Dividends / RoI

Cap Ex / Depreciation

Lower regulatory & political risk

Longer-term finance; lower rates; Lower regulatory and political risk

Regulation and oversight. Incentives for efficiency

Increased competition from more bidders; Innovation from competitive investments; Project design; Transparency

Dividends / RoI

Debt Financing

Op Ex

Cap Ex / Depreciation

Risk Insur, PRG

Debt Financing, PRG, PCG, PRI

PPP design, regulation, market structure. Equity

PRI, PRG, Financing of project preparation

How to lower costs

Costs with Support

Products

Add Rev’s

Revenues

Costs
<table>
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<tr>
<th>Risk</th>
<th>Instrument</th>
<th>Availability</th>
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<tr>
<td>Covertability, expropriation</td>
<td>Political Risk Insurance</td>
<td>High – MIGA, commercial insurees</td>
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<tr>
<td>Breach of contract, Regulatory Change Non-honoring</td>
<td>Contractual &amp; Regulatory Cover Partial Risk Guarantee</td>
<td>Moderate but increasing WB, MIGA, some private insurers</td>
</tr>
<tr>
<td>Debt service</td>
<td>Partial Credit Guarantee</td>
<td>High – WB / IFI’s, private insurers</td>
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<tr>
<td>ForEx Cover</td>
<td>Devaluation</td>
<td>Low to none</td>
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<tr>
<td>Construction Ramp-up (early demand)</td>
<td>Project Bonds New PPP Structures</td>
<td>Under design</td>
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New Challenges - Post Global Crisis
### New environment – costlier and more uncertain

<table>
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<th>Before the crisis</th>
<th>Now</th>
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<td>Dominated by Banks (US &amp; Europe)</td>
<td>Avoided by Commercial Banks: Increase of financing costs &amp; restructuring balance sheets due to Basel III</td>
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<tr>
<td>Monoline Insurance for total wrap</td>
<td>Disappearance of Monoliners</td>
</tr>
<tr>
<td>Price (for UK): LIBOR +90bps</td>
<td>Price (for UK): LIBOR + 275 bps</td>
</tr>
<tr>
<td>Term (for UK): 30 years</td>
<td>Term (for UK): &lt;7 years</td>
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Gearing has decreased

Source: World Bank Calculations from ProjectWare Database
Asia
How much private infrastructure investment is going into East Asia?

Private investment in infrastructure in low and middle income countries, by region

2012 US$ billions*

Source: World Bank Infrastructure Policy, PPI Project Database.

* Adjusted by US CPI
Country Cases in the Region

The Philippines: PPP Center

Indonesia: IIF, IIGF

Korea: PPP Model

China: Water Sector

Singapore: Soft Infrastructure
New Initiatives

Global Infrastructure Facility

BRICS Bank

Asian Infrastructure Investment Bank

APEC PPP Center

Project Bond Market

New Monolines
World Economic Forum Recommendations

**Strategic vision**

- Key recommendations:
  - Create an integrated infrastructure pipeline
  - Define a viable role for investors
  - Develop a communication strategy

- Key outcomes:
  - Increased investor interest with a credible pipeline of future projects, and clear role for investors

**Policy and regulatory enablers**

- Limit re-negotiation risk
- Create an efficient, predictable and standardized procurement process
- Facilitate predictable project permitting processes
- Review and assess tax policy

- Key outcomes:
  - Stable and predictable regulatory environment; efficient and standardized procurement process and project execution that lowers costs and reduces risks

**Investor value proposition**

- Analyse the project returns from the investors’ perspective; focus on financial returns
- Create a robust risk allocation methodology
- Conduct market sounding with investors

- Key outcomes:
  - Bankable projects that attract investor interest and generate value for money for governments
Infrastructure as a New Asset Class

1. Sector economics and the role of public finance
2. Credible mechanisms to supply infrastructure assets
3. Risk/return profile
4. Multiple sources of financing for different stages
5. Technical expertise
6. Ecosystem of players including intermediaries