World Bank Perspective for PPP in the Road Sector in India

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South Asia Region, The World Bank

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Key Messages

- PPPs have begun to make a contribution in India
- Caution
  - PPPs not a panacea, and there have been problems and failures
- Multilateral have significant experience in Assisting PPP Programs worldwide ➔ to be tapped into
  - Examples of World Bank Assistance
- ... as there are significant issues to be addressed in Scaling up role of PPP
  - requires a corresponding scaling up of government capabilities
  - more effective mobilisation of financial resources
PPPs have begun to make a contribution
### Top Countries: PPPs in Highways

Cumulative sum of # projects & estimated costs since 1985

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Projects</th>
<th>Project Cost (US$ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>74</td>
<td>42.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>37</td>
<td>30.5</td>
</tr>
<tr>
<td>China</td>
<td>53</td>
<td>21.6</td>
</tr>
<tr>
<td>Spain</td>
<td>47</td>
<td>21.1</td>
</tr>
<tr>
<td>Mexico</td>
<td>78</td>
<td>20.4</td>
</tr>
<tr>
<td>Italy</td>
<td>3</td>
<td>18.5</td>
</tr>
<tr>
<td>Germany</td>
<td>34</td>
<td>17.1</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>18</td>
<td>16.2</td>
</tr>
<tr>
<td>Japan</td>
<td>1</td>
<td>14.4</td>
</tr>
<tr>
<td>Greece</td>
<td>11</td>
<td>11.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>44</td>
<td>11.4</td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>10.2</td>
</tr>
<tr>
<td>Portugal</td>
<td>15</td>
<td>9.8</td>
</tr>
<tr>
<td>Australia</td>
<td>12</td>
<td>8.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>18</td>
<td>7.8</td>
</tr>
<tr>
<td>Canada</td>
<td>22</td>
<td>7.7</td>
</tr>
<tr>
<td>Russia</td>
<td>2</td>
<td>6.6</td>
</tr>
<tr>
<td>Chile</td>
<td>24</td>
<td>6.3</td>
</tr>
<tr>
<td>Argentina</td>
<td>20</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Source: PWF Major Project Survey – October, 2004

### Sub-sector: Toll Roads

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Projects</th>
<th>Total Investment (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>155</td>
<td>23,968</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>7</td>
<td>2,698</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>160</td>
<td>35,221</td>
</tr>
<tr>
<td>South Asia</td>
<td>39</td>
<td>1,567</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>10</td>
<td>1,856</td>
</tr>
<tr>
<td><strong>Total Toll Roads</strong></td>
<td><strong>371</strong></td>
<td><strong>65,309</strong></td>
</tr>
</tbody>
</table>

**Total PPP** 771 126,106

Source: World Bank, PPI Database
PPP so Far in India—Transport and Urban

Project cost of awarded PPPs by sector (total = Rs 339.5 bn)
- Roads & bridges: 36%
- Ports: 55%
- Airports: 5%
- Rail: 1%
- Urban: 3%

PPP projects by states & central agencies (total = Rs 339.5 bn)
- Gujarat: 46.7%
- Tamil Nadu: 14.0%
- AP: 5.4%
- Delhi: 0.2%
- Kerala: 1.0%
- Punjab: 0.1%
- NHA: 17.2%
- East Godavari: 12.1%
- UP: 1.2%
- MP: 2.6%
- Maharashtra: 4.5%
- MOSRTH: 0.2%
- West Bengal: 0.2%

Expectations and Constraints

- Far bigger role envisaged for PPP
  - Roads (7%), Ports (24%), Airports (1%)

Investor Perceptions/Risk

- Still deficiencies in some sector policy and regulatory frameworks
- Lack of confidence in
  - capacity and independence of regulators
  - Gov. institutional capacity for PPP
- Contract commitment, red tape etc.
Caution:
There have been problems and failures worldwide
Problems and Controversies

- By 2004, 90 projects had seen exit of private sector
- Another 45 were in international arbitration or one side had requested termination
- Renegotiations frequent
  - in Latin America, 74% transport and 55% water concessions renegotiated
- Renegotiations most frequent
  - where bid criteria was lowest price or highest annual fee to government, less likely where regulators in place
Few cancellations but opportunistic renegotiations

### Cancelled Projects 1984-2003

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Investment 2003 (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>11,003</td>
</tr>
<tr>
<td>China</td>
<td>1,538</td>
</tr>
<tr>
<td>Thailand</td>
<td>890</td>
</tr>
<tr>
<td>Indonesia</td>
<td>653</td>
</tr>
<tr>
<td>Hungary</td>
<td>471</td>
</tr>
<tr>
<td>Argentina</td>
<td>181</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>115</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>14,851</strong></td>
</tr>
</tbody>
</table>

### Number of Projects 1990-2003

- **Cancelled**: 8%
- **Concluded**: 7%
- **Construction**: 3%
- **Distressed**: 2%

**Operational**: 80%

### high incidence of renegotiations:
- 54% of transport concessions in LAC were renegotiated
- 85% before 4th year, +60% before 3rd year

Source: J.L. Guash
Some key reasons for failures/problems

- **Unreliable revenue forecasting**

  • 32 toll-road projects
  • actual first-year: 70% of forecasts
  • Range: 30%-120%

Source: Standard & Poor, Traffic Risk in Start-Up Toll Facilities, 2002
## Approaches to traffic risk mitigation - no conclusive evidence of what’s best

<table>
<thead>
<tr>
<th>RISK SHARING APPROACH</th>
<th>TRIGGER VARIABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Traffic or Revenues</td>
</tr>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>Subsidy / payment</td>
<td></td>
</tr>
<tr>
<td>Approach 2:</td>
<td></td>
</tr>
<tr>
<td>Minimum Income</td>
<td></td>
</tr>
<tr>
<td>Guarantee CHILE</td>
<td></td>
</tr>
<tr>
<td>Toll</td>
<td></td>
</tr>
<tr>
<td>Contract Length</td>
<td></td>
</tr>
<tr>
<td>Approach 3:</td>
<td></td>
</tr>
<tr>
<td>1) Severn Bridge</td>
<td></td>
</tr>
<tr>
<td>2) LPVR CHILE</td>
<td></td>
</tr>
<tr>
<td>3) PORTUGAL</td>
<td></td>
</tr>
</tbody>
</table>

Source: Jose Vasallo, 2005 “Traffic Risk Mitigation in highway concession projects: the experience of Chile”
Some key reasons for failures/problems

- Complexity in structuring the transaction

Source: PPIAF – World Bank, PPP Toolkit for Highways
Some key reasons for failures/problems

Governments - not always good partners

Some Best Practices in Managing Contingent Liabilities

**Canada**: detailed information; limit on future liabilities;

**USA**: detailed information; NPV valuation

**Colombia**: creation of Contingency Fund

**Chile**: system for management and financing contingent liabilities under design

**Hungary**: reforms to increase transparency

**Japan**: modification of accounting system

**Malaysia**: modification of accounting system

**South Africa**: unit for management of assets/liabilities

**New Zealand**: transparent reporting; quantification & limit on exposure

Source: J.L. Irigoyen, PPP in Highways: International Experience and Lessons from Success
Payments can be large: The Incheon airport expressway in Korea

Source: Tim Irwin, PPP and Fiscal Risks, October 6, 2005
Summing up: The Need for Caution

- Late 90s “bust”
  - private sector corrected perceptions of risks in PPI
- Public sector often ill-prepared for complexities and problems
- Realism
  - investment programs can only be paid for by taxpayers or by users of services
- Fiscal risks
  - explicit and implicit liabilities (public sector FI lending)
  - long-term purchase contracts
Multilaterals Experience:
A source of information to be tapped into
Traditional Assistance

- Funding for Investment/Adjustment
- Guarantees
- Technical Assistance
- Knowledge Bank
# 2004 Multilateral Assistance for PPP

## East Asia and Pacific
- **Country:** China
- **Year:** 2004
- **Project Name:** Deqing Huanzhong Producing Water Company
- **Type of PPI:** Greenfield project
- **Sub-sector:** Potable Water
- **Agency:** MIGA
- **Type of Support:** Guarantee
- **Amount of Support:** 7.1

- **Country:** Armenia
- **Year:** 2004
- **Project Name:** Armvodorakanal
- **Type of PPI:** Management and lease contract
- **Sub-sector:** Potable Water and Sewerage
- **Agency:** IDA
- **Type of Support:** Loan
- **Amount of Support:** 23

## Europe and Central Asia
- **Country:** Brazil
- **Year:** 2004
- **Project Name:** Expansion Transmission Itumbariara Marimbundo (ETIM)
- **Type of PPI:** Greenfield project
- **Sub-sector:** Electricity
- **Agency:** MIGA
- **Type of Support:** Guarantee
- **Amount of Support:** 11

## Latin America and the Caribbean
- **Country:** India
- **Year:** 2004
- **Project Name:** Akhakol Combined Cycle Power Plant
- **Type of PPI:** Greenfield project
- **Sub-sector:** Electricity
- **Agency:** ADB
- **Type of Support:** Equity
- **Amount of Support:** 20.6

## South Asia
- **Country:** India
- **Year:** 2004
- **Project Name:** Tala Transmission Project
- **Type of PPI:** Greenfield project
- **Sub-sector:** Electricity
- **Agency:** ADB
- **Type of Support:** Loan
- **Amount of Support:** 54.4

- **Country:** Nepal
- **Year:** 2004
- **Project Name:** STM Telecom Sanchar Private Limited
- **Type of PPI:** Greenfield project
- **Sub-sector:** Telecom
- **Agency:** IFC
- **Type of Support:** Loan
- **Amount of Support:** 75

## Sub-Saharan Africa
- **Country:** Mozambique
- **Year:** 2004
- **Project Name:** Companhia Dos Caminhos De Ferro Da Beira (CCFB)
- **Type of PPI:** Concession
- **Sub-sector:** Railroads
- **Agency:** IDA
- **Type of Support:** Loan
- **Amount of Support:** 110

## Other years:
- **Debt guarantees:** Poland’s A2 motorway
- **Revenue guarantees:** Korea’s Incheon airport expressway

Source: World Bank, PPI Database
Recent PPP Support in response to country demands

- The challenge of financing sub-national entities
  - IFC Municipal Fund
- Use of performance based subsidies
  - OBA approaches
- Innovative Risk Mitigation Products
  - new applications partial risk guarantees
- Public Financial Support for PPP’s development
  - risk management framework
- Infrastructure Finance Vehicles
  - guarantee funds/facilities
Innovative Risk Mitigation Products

- Local Currency Debt Instruments
  - Development of Local Capital Markets (e.g., Chile and Korea)
  - IBRD (on-lending to private sector)
    - Currency conversion option in fixed spread loans (FSL)
    - Currency swap
    - Rolling forward
  - IFC Local Currency
    - Loans and Hedging Products

/1 Products under development
Innovative Risk Mitigation Products

- Regulatory risk support
  - Partial Risk Guarantee supporting transaction related regulatory framework
    - Nam Theun 2 in Laos, PRG supporting LAO’s government commitments (IDA and MIGA guarantees)
    - Guarantee Facility for Peru PPPs infrastructure development (15 projects, wholesaling PRGs)
    - Tariff Indexation Risk Transfer (supplemental subsidies) /1

/1 Products under development
Guarantee Facility

The World Bank establishes a guarantee facility to be administered by a local implementing agency. The Government undertakes an Indemnity Agreement with the World Bank.

The implementing agency will act as an intermediary for issuing guarantees for projects contracts against a discrete list of non-commercial risks. The Government defines the regulatory framework for projects with private participation.

Projects:
- A
- B
- C
- Z
Partial Guarantees help access private finance at improved terms

<table>
<thead>
<tr>
<th>Country</th>
<th>Debt Maturity</th>
<th>Interest Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia (P. Credit)</td>
<td>5</td>
<td>6.5%</td>
</tr>
<tr>
<td>Philippines (P. Credit)</td>
<td>7</td>
<td>3%</td>
</tr>
<tr>
<td>Uganda (P. Risk)</td>
<td>0</td>
<td>8%</td>
</tr>
<tr>
<td>Bangladesh (P. Risk)</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Cote d’Ivoire (P. Risk)</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>

PRGs can be used for a series of smaller projects

PRGs can backstop municipal undertakings

Some potential lessons for India
Potential Lessons for India

- A vast expansion of investments in highways will be required to sustain more rapid economic growth – of the order of 3% of GDP or more

- Private finance can play a larger role in India
  - domestic capital markets associated legal infrastructure are better established than in China

- ...but with risks and returns borne not by sponsor alone but by different types of investors
Structured project finance has come a long way, but not yet for all ...

- Adapting the finance to specific project needs
  - mezzanine finance
  - monoline insurance broadens access to capital markets
  - interest rate and foreign exchange hedging increasingly critical as projects become more finely balanced

- …but available only for certain projects/countries
  - mostly projects with investment grade credit rating
  - no realistic opportunities for hedging in many countries
  - contractual complexity/financial rigidity not always favored by sponsors/allowed by project economics
Summary
Private Investment can play a Bigger Role

- Public investment will always be majority
  - But private investment around 20% of total infrastructure investment in developing countries

- In India private investment in infrastructure around 1% GDP, half what was hoped for

- Comparisons
  - Chile: 3-4% GDP since 1996, Brazil c. 1.5% 1997-2001, Colombia 2-3% since 1996
  - China: private investment c. 10% of road program, c.f. 4% in India
Moving Forward

- Develop PPP nodal agencies
  - Personnel and resources to provide models and hand-holding to line agencies
  - Location and roles

- Strengthen capacities of line agencies
  - PPP cells in agencies/ministries

- World Bank Support
  - Funding for PPPs, technical assistance for capacity building
...but for this PPP role to materialise...

- Also pay attention to key areas (often neglected)
  - Identifying Areas of Greatest Pay-off
  - Significance of Domestic Capital Markets
  - Continuous Task of Improving Road Management
**Developing Local Capital Markets: Korea**

As of October 2004:
- 149 concessions
- 43 already in operation
- USD$ 11.5 billion

Predominantly funded in local capital and commercial bank markets

Source: Korea PPI Market, M. Dailami, World Bank, November 2004