Infrastructure financing and PPP in Asia-Pacific: Status and Policies

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22 Feb 2017, Bangkok
Infrastructure investments have traditionally been financed with public funds, given the inherent public good nature of infrastructure.

Public deficits and increased public debt to GDP ratios have led to reduction in the level of public funds for infrastructure.

Government needs to improve public expenditure efficiency and increase revenue mobilization.

Private sector needs to play much more role to finance infrastructure gap.

In this context, regulatory and institutional reforms are required to make infrastructure more attractive to private investors:

- Generate a pipeline of bankable projects
- Deepen capital market to channel the region’s substantial savings into infrastructure investment
Infrastructure gap and strategies

5% of GDP*  
Infrastructure gap (excluding China)

2.4% of GDP*  
Infrastructure gap

Improving Expenditure Efficiency
- Better selection / prioritization
- Streamlined project delivery
- Improved infrastructure management

Further involving the private sector
- Strong and stable political commitment
- Strengthened institutional capacity
- Promoting PPP
- Tapping Capital market

Mobilizing domestic resources
- Reformed tax policies
- Enhanced tax administration

Note: * ADB estimate (2017)
Scaling-up private investment in infrastructure is critical

To address infrastructure gaps, it is estimated that private investments should increase from around $63 billion a year to as high as $250 billion over 2016-2020.

Source: World Bank’s PPI Database   ADB (2017) - meeting Asia’s infrastructure needs
Five National Studies

- National Workshop & Sub-regional Policy Dialogue
  - Apia (Jan 2017)
  - Kathmandu (Feb 2017)
  - Tbilisi (Jun 2017)

- National Workshop
  - Manila (Aug 2017)

- National Workshop & Sub-regional Policy Dialogue
  - Hanoi (Oct 2017)

3 Sub-regional
Strategy #1: Improving Public Expenditure Efficiency in Infrastructure Development

**Typical issues with infrastructure projects**
- Poor project selection (e.g. based on political considerations)
- Delays in design and completion of projects
- Corrupt procurement practices
- Cost over-runs / Incomplete projects
- Failure to operate and maintain assets effectively

**Boosting productivity** can reduce infrastructure spending by **40%** according to McKinsey.

**✓ Strengthening Planning and Prioritization**
- Does the country have a National or Sub-National Infrastructure Plan? Does the country have guidelines for the appraisal of infrastructure projects?

**✓ Streamlining infrastructure project delivery**
- Accelerating permit approvals and land acquisition, enhancing procurement practices

**✓ Making the most of infrastructure assets**
- Demand management techniques, timely maintenance, innovation,...
Strategy #2: Partnering with the Private Sector through PPP

**PPP Enabling Environment**
- Stable long-term vision
- High level politicians championing PPP
- Track record building

**Policy Formulation**
- Clear legal basis (competent authorities,...)
- Adapted procurement rules
- Effective dispute resolution mechanisms

**Legal & Regulatory Frameworks**
- Clear process (who’s approving what and when)
- In-house expertise (PPP Units?)
- Guidance materials (model contracts,...)

**Institutional Capacity**
- Project Development Fund
- Capital Grants
- Guarantees

**Financial Support**
Strategy #3: Tapping financial markets & institutional investors

- Dominant banking sector role → risk of an over-exposition / single borrower limits
- Capital markets → reduce the pressure on the banking system + fresh capital to finance / refinance infrastructure projects.
- Much attention on institutional investors given the long-term nature of their liabilities.

**Obstacles for foreign investors:** underdeveloped markets, capital controls, low credit rating

**Possible solutions:** deepen capital markets, create investment opportunities, provide flexibility in investment mandates, develop credit enhancement mechanisms
Strategy #4: Mobilizing domestic resources through tax reforms

• Public resources remain the backbone for infrastructure financing

• In most Asia-Pacific developing countries, *private* infrastructure investment is less than 1% of GDP, far below the normal infrastructure spending needs of 5-10% per year

• Tax to GDP ratio is the region is however among the lowest in the world
  ✓ Rethinking tax incentives ?
  ✓ Mobilizing resources at the Municipal level
  ✓ Improving collection efficiency for VAT in A-P developing countries
  ✓ Exploring the potential of direct taxes (Corporate and Personal Income Tax)
**PPP Definition**

**Long term** (relationship beyond construction phase)

"A long-term contract between a private party and a government agency, for providing public services and/or developing public infrastructure, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance"

- Mobilizing resources
- Achieving a long-term solutions
- Transferring risks to the private sector

Source: PPP Reference Guide 2.0
Why use PPP?

- PPPs make projects affordable
- Injection of private capital
- Better value for money over the lifetime of the project
- More efficiency in procurement
- Faster project delivery with more projects in a defined timeframe
- Risks are allocated to the party best able to manage the risk
PPP Limitations

- **Not free**: users and/or tax payers have typically to pay for the project to be delivered profitably

- **Public guarantees = contingent liabilities**: fiscal risk has to be properly assessed and monitored

- **Complex arrangement**: high transaction costs / internal capacity constraints / not suitable for all projects (limited flexibility)

- **Private sector capacity** to take such long-term commitments / enough competition?

- **Possible public resistance**
PPP Legal & Regulatory Frameworks

- Objectives, Scope and Models of PPPs
- Institutional Responsibilities (Approval, ...)
- Financial Support Mechanisms
- Procedures (Procurement, Dispute Resolution, etc.)

Most countries have enacted **PPP Law in the Asia-Pacific region** ...

... but some countries have simply issued *guidelines / policy* documents (mainly in South Asia)
### Institutional Arrangement

**Asia-Pacific Situation**

- **No PPP Unit found**
- **Under Development**
- **Spread Responsibilities among Ministries/Agencies**
- **PPP Unit**
- **No Data**

Among 42 countries reviewed:

- 20 Central PPP Units
- 3 countries with multiple central entities responsible for PPP
- 6 PPP Units under development
- 13 countries with no central unit

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**ESCAP – PPP Policy, Legal and Institutional Frameworks in Asia and the Pacific 2017**
PPP Units
Location, Size and Role

- **Location**: Ministry of Finance, Planning, Prime Minister’s Office

- **Size**
  (No. of staff)

  - Over 30: 25%
  - 21-30: 10%
  - 11-20: 10%
  - 6-10: 30%
  - 1-5: 25%

- **Role**: Policy Formulation, Standardization, Coordination, Capacity Building, Promotion and Technical Support

  *Internal center of expertise*

ESCAP – PPP Environment in Asia and the Pacific 2017
Good practices:

- Assessment of long-term financial implications (prior MoF approval)
- PPP project prioritized along other public investment (planning process)
- Project justified in terms of socioeconomic analysis, market assessment, procurement method, etc. (legal requirements + methodology)
- Standardized contracts / consistency
PPP Contract Management

Good Practices in contract management:

• Establishment of a PPP project management team;
• Regulation of contracts modifications;
• Dispute resolution mechanisms in place;
• Ground for termination are well-specified and associated consequences defined;
• ...
PPP Track record
South and South West Asia

- Over $40 billion mobilized in 2015 (driven largely by Turkey)
- Indian levels remain low compared to 2006-2012 period
Good Practices to ensure transparent & fair competition in procurement include:

- online publication of procurement and award notice,
- evaluation according to the criteria stipulated in the tender documents,
- ...

Good Practices in contract management:

- Establishment of a PPP project management team,
- Regulation of contracts modifications
- Dispute resolution mechanisms in place,
- ...

World Bank – Benchmarking of PPP Procurement 2017
PPP Track record in South-East Asia
Country Breakdown

- Indonesia / the Philippines = largest market recently
- Lao PDR proportionally highest share of private investment

Private Investment (2012-16) as % of GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>0.0%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.8%</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>59.6%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.2%</td>
</tr>
<tr>
<td>Myanmar</td>
<td>2.9%</td>
</tr>
<tr>
<td>Philippines</td>
<td>4.6%</td>
</tr>
<tr>
<td>Thailand</td>
<td>2.2%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

World Bank PPI Database
PPP Track record in South-East Asia
Sectoral breakdown

- Private investment in infrastructure, 2000-2016
- Mainly in electricity sector, followed by ICT

![Sectoral breakdown pie chart]

- Electricity: 47%
- ICT: 38%
- Natural gas: 5%
- Airport: 2%
- Ports: 2%
- Roads: 2%
- Railways: 1%
- Water & Sewerage: 1%

*ESCAP – Infrastructure Financing Strategies for Sustainable Development in South-East Asia (2017)*
<table>
<thead>
<tr>
<th>Country</th>
<th>Institutional Framework</th>
<th>Ministry</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei Darussalam</td>
<td>No formal PPP Unit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Cambodia</td>
<td>PPP Unit under development</td>
<td>Finance</td>
<td>Ministry of Economy and Finance</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Several central PPP Units</td>
<td>Planning</td>
<td>MPI</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>PPP Unit under development</td>
<td>Planning</td>
<td>MPI</td>
</tr>
<tr>
<td>Malaysia</td>
<td>PPP Unit</td>
<td>Prime Minister</td>
<td>Prime Minister's Department</td>
</tr>
<tr>
<td>Myanmar</td>
<td>No formal PPP Unit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>The Philippines</td>
<td>PPP Unit</td>
<td>Planning</td>
<td>PPP Center under NEDA</td>
</tr>
<tr>
<td>Singapore</td>
<td>No formal PPP Unit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Thailand</td>
<td>PPP Unit</td>
<td>Finance</td>
<td>SEPO under Ministry of Finance</td>
</tr>
<tr>
<td>Vietnam</td>
<td>PPP Unit</td>
<td>Planning</td>
<td>PPP Office under MPI</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>PPP Unit</td>
<td>Finance</td>
<td>Ministry of Finance</td>
</tr>
</tbody>
</table>
## PPP Procurement Practices in South-East Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Preparation (score)</th>
<th>Procurement (score)</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>8</td>
<td>20</td>
<td>69</td>
</tr>
<tr>
<td>Indonesia</td>
<td>50</td>
<td>70</td>
<td>61</td>
</tr>
<tr>
<td>Malaysia</td>
<td>46</td>
<td>43</td>
<td>24</td>
</tr>
<tr>
<td>Myanmar</td>
<td>2</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>The Philippines</td>
<td>96</td>
<td>85</td>
<td>84</td>
</tr>
<tr>
<td>Singapore</td>
<td>58</td>
<td>75</td>
<td>64</td>
</tr>
<tr>
<td>Thailand</td>
<td>54</td>
<td>63</td>
<td>57</td>
</tr>
<tr>
<td>Vietnam</td>
<td>75</td>
<td>85</td>
<td>58</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>33</td>
<td>70</td>
<td>43</td>
</tr>
</tbody>
</table>
PPP Track record in North and Central Asia

- Over $100 billion mobilized since 1995 (mainly driven by Russian Federation)... but limited deal flow in recent years.

World Bank PPI Database
## PPP Legal & Regulatory Frameworks

*North and Central Asia*

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulatory Framework</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>No PPP Law / Guidelines</td>
<td>Procurement Law covers PPP calls for open bidding or competitive dialogue</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>No PPP Law / Guidelines</td>
<td>Law on Public Procurement sets the basis for procurement, rules of tenders, selection of contractor, etc.</td>
</tr>
<tr>
<td>Georgia</td>
<td>No PPP Law / Guidelines</td>
<td>PPPs are governed by general public procurement and investment laws</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>PPP Law</td>
<td>Law on PPPs and Law on Concession (2015)</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>PPP Law</td>
<td>PPP law from 2012</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>PPP Law</td>
<td></td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>Concession Law</td>
<td></td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>Concession Law</td>
<td>Law on Foreign Concession is the most relevant for PPPs, but needs improvements</td>
</tr>
</tbody>
</table>
Good practices:

- Assessment of long-term financial implications (prior MoF approval)
- PPP project prioritized along other public investment (planning process)
- Project justified in terms of socioeconomic analysis, market assessment, procurement method, etc. (legal requirements + methodology)
- Standardized contracts / consistency
Infrastructure financing needs for CSN countries

- Large infrastructure financing needs: 10.5% of GDP annually
- A major portion is in the transport sector, but needs are growing for ICT and energy
Domestic public finance
- Traditional sources of finance
- Expected to remain a significant source
- Should be used to crowd in private investment

Private sector participation
- Concentrated in a few mega energy projects and privatization of ICT infrastructure
- Has potential to play a bigger role but requires a stable “investor-friendly” climate
“Willingness of banks to advance the funds based on the agreed risk share amongst the project participants”

- Risk allocation is key
  - Land acquisition
  - Demand risks
  - Currency risks
  - Repatriation
Main risks (1): Land acquisition

- **Banks are unlikely to provide loans before land is secured**
- **Government might be in a better position to acquire land**
- **Securing land before launching tenders**
Main risks (2): Demand risk

- Demand is extremely difficult to forecast
- Strong feasibility analysis required
- Government have provided guarantees in some countries
Main risks (3): Currency risk

- Private sector cannot control this risk
- Ideally, loans should be in local currency
- Guarantees?
Main risks (4): Repatriation

- Pay back is often outside the country
- Capital controls can represent a risk for foreign lenders
Some reform efforts

Projects should be based on appropriate processes and due diligence from the prefeasibility study stage onwards

- **Philippines**: Government’s commitment to introduce well-prepared projects through the establishment of the Project Development and Monitoring Facility

- **India**: Strengthened its policy framework by issuing a PPP toolkit, guidance papers, and enhanced selection procedures

- **Indonesia, China, Bangladesh and Pakistan**: Amended PPP policies to streamline procurement and bidding processes

- **PNG, Thailand and Viet Nam**: Refined alternative dispute mechanisms by including mediation and arbitration procedures

- **Kazakhstan**: Established independent PPP units dedicated to providing project guidance and technical support
Financing Infrastructure

*Financing*

**Public (domestic and foreign)**
- Government budget
- Public borrowing
- International grants

**Private (domestic and foreign)**
- PPP
- Infrastructure companies
- Commercial banks
- Capital markets
The role of private sector: Key issues

- Private financing and innovative instruments are important where the private sector carries the majority of the risk, e.g. concession contract, where more complex financing instruments are required.
- In general, infrastructure projects tend to be highly leveraged, with equity accounting for only 25% of total capital on average (ADB, 2017).
- Limitations of bank dominant system
  - increase the risk of an overexposed banking system
  - Inherently short-term nature of deposits
  - Basel III regulations will increase capital buffer and require better asset-liability mismatch risk management
- Capital markets would reduce the pressure on the banking system while also making available fresh equity to finance / refinance infrastructure projects.
Challenges of private financing

- Large international commercial banks, which had previously provided a significant portion of infrastructure financing have been deleveraging.
- Institutional investors allocate a very small fraction of their investments to infrastructure assets in both developed and developing countries.
- Most institutional investors continue to invest in liquid assets, often with a short-term investment horizon.
- Situation is worsened by the lack of bankable projects
Private sector and capital market

- Stock market
- Corporate Bond
- SPV Listing
- Project Bond
Investment Modalities
(Infrastructure Companies-Stock Market)

- Stock Market Capitalization of Domestic Listed Companies To GDP%-2015

- Stock Market Turnover Ratio (2015)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Stock Market Turnover Ratio (Domestic Shares) (2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyrgyz Republic (2012)</td>
<td>3.3</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>7.6</td>
</tr>
<tr>
<td>Georgia (2012)</td>
<td>0.2</td>
</tr>
<tr>
<td>Armenia (2012)</td>
<td>0.8</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>29.8</td>
</tr>
<tr>
<td>Indonesia</td>
<td>21.2</td>
</tr>
<tr>
<td>Euro Area (2014)</td>
<td>87.9</td>
</tr>
<tr>
<td>India</td>
<td>50.9</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>149.8</td>
</tr>
<tr>
<td>Philippines</td>
<td>480.2</td>
</tr>
<tr>
<td>World</td>
<td>162.9</td>
</tr>
</tbody>
</table>

Source: World Bank, 2016, Global Financial Database
Investment Modalities (Infrastructure Companies-Bond Market)

- While US and Europe have $22 and $18 trillion outstanding corporate bond issues respectively, Asian has only $3 trillion outstanding bond issues as of 2014.

**Corporate Bond Outstanding (GDP%-2015)**

- Percentage of total corporate bond issuance in Asia

Source: World Bank, 2016, Global Financial Database and Sub-Regional Study North and Central Asia Financing Infrastructure, David Lezhava
## Infrastructure Projects

### SPV Listing

- Establish a dedicated project company known as a “Special Purpose Vehicle (SPV)” to acquire financing and implement project activities.
- This legally isolates the parent organization from direct exposure to the financial risks associated with a project.
- If the SPV is listed on the stock exchange, investors can invest directly in the project.

### Project Bond

- Project bonds are a debt instrument used for financing stand-alone infrastructure projects, issued by SPV.
- The creditworthiness of this bond depends on the cash flow performance of the underlying infrastructure project.
- The volume of project bonds is $36 billion in the world (2013). In Asia, the volume ranged between $1 billion and $3 billion.
- Average maturity of the bonds is 8 years in Asia, compared to 15 years in advanced economies.
Infrastructure Funds

- Another intermediary mechanism between investors and infrastructure projects.
- Serve as a vehicle to pool resources, skills and experiences from different investors while achieving economies of scale.
- Specialized skills are required for structuring and assessing infrastructure investments.
Municipal Infrastructure Bonds

- With rapid urbanization, municipalities are under strong pressure to deliver infrastructure services.
- Municipal bonds are debt instruments issued by local governments to finance infrastructure projects.
- These bonds normally attract funding at low cost given the implicit government guarantee and are subject to less stringent level of oversight than the corporate bond market.
International Collaboration

- ESCAP is an active partner in the PPP Knowledge lab together with 11 international organizations
- ESCAP contributed to the 3rd edition of the Reference Guide published in 2017
- Experts contributing to the activities organized by the different partners
- Joint research with the Korean Development Institute (KDI)
Experience sharing
PPP and infrastructure financing Network

- Promote exchange of information / best practices among the countries of the region

PPP Ministerial Conferences

Financing for Development,
(Yearly regional consultation since 2014)

Sub-regional and national workshops
Way forward: Private sector engagement

- Private sector engagement has been severely hampered
  - Risk-return profile needs to be adjusted by Government support measures
- Governments can also
  - Enhance coordination across Government agencies to establish a bankable infrastructure project pipeline
  - Facilitate innovative PPP
  - Develop capital market
- Governments and SDGs
  - Ensure infrastructure development gains are shared in an equitable and sustainable manner
- ESCAP upcoming activity
  - PPP and infrastructure financing network in Asia and the Pacific (tentatively Q3/2018, Beijing, China)
Thank you