Understanding the benefits and challenges of further involving the private sector in public infrastructure development
PUBLIC-PRIVATE PARTNERSHIPS
Training Modules

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These modules are part of online training materials developed by ESCAP to support countries in the Asia-Pacific region to further involve the private sector in infrastructure development. The full set of training materials can be accessed on http://www.unescap.org/our-work/transport/financing-and-private-sector-participation/public-private-partnership-course
The first Module outlines the main features of Public-Private Partnerships (PPPs) and highlights the differences between PPP and traditional procurement of public infrastructure. The key benefits, but also the risks and limitations, of the PPP procurement mechanism are presented.

Objectives

Why PPPs?

- Long term solution for public infrastructure
- More efficient delivery of public services
- Lower funding pressure on the government
- Private sector capacity to deliver services more efficiently and cheaply than the public sector
- Poor quality construction
- Inadequate maintenance
- Lack of available budget

Definition

Public Private Partnerships

"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"
Introduction to PPPs

**Funding**

- Public Private Partnerships (PPP)
- Traditional

**Private**
- No payment upfront
- Payment over the lifetime of the project

**Public**
- (National budget)
- Large upfront payment

**Private Sector Remuneration**

- **User fees**
- **Availability payments**

- **Check against performance indicators**
  - availability of all lanes
  - minimum travel time
  - limited number of road crashes

Notes:

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Benefits

- Accessing Private Capital
- Realizing Efficiency Gains
- Risk Transfer

**Life-cycle cost**

- **Cost**
- **Option 1**
- **Option 2**

- **Construction Cost**
- **Maintenance Cost**
- **Time**

In PPP: both construction and operation costs are taken into consideration.

Option 2 = cheapest over the life of the asset.

Limitations

- Not suitable for all projects
- Complex / High transaction costs
- Fiscal direct and indirect liabilities
- Political and social sensitivity
- "user-pay principle"
- Limited flexibility
The Module details the various possibilities to involve the private sector in infrastructure development and presents the different risk and responsibilities that can be shifted to the private sector. It also describes the key benefits and limitations that can be expected from each model.
**Building / Rehabilitation**

The private sector might be entrusted with the responsibilities of building and financing a new public asset that it will have to operate / maintain.

"Availability" model

- Hospital
- Regular payments from the government if infrastructure is available
- Monitoring against performance indicators

"User fees" model

- Toll road Project
- Right to collect fees from users

Private investment

- Significant risk transfer to the private operator
- Potential for efficiency gains in all phases of the project

**Ownership**

*No asset transfer back to public authorities* ...

*... but critical role for the public sector*

- Main "client" of the infrastructure built (e.g. Off-take agreement)
- Regulatory role (e.g. ensuring sufficient competition)
The Module presents the different elements that are necessary to enable the emergence of PPP projects. It also explains the important role that the Government has to play in order to create the right conditions for the successful development of a PPP programme.
Policy Formulation

- “Politics is (and will always be) the main cause of death for transactions” (IPC)
- Objectives: which sectors? what type of PPPs?
- Strategy / long-term vision?
- To build consensus internally
- To send a signal to the private sector
- Proven track record
- High level politician championing PPP solutions?
- Pipeline of projects with adequate preparations?

Legal Framework

- Clear legal basis
- Competent authorities
- Private participation (sector eligibility)
- Foreign Investors?
- Dispute-resolution mechanisms
  - (e.g., arbitration)
  - Fair compensation
- Security regimes
- Procurement principles
  - Transparent and competitive process
  - Fairness (e.g., post-award contract changes)
  - Unsolicited proposals
  - Need for Value for Money assessment

Institutional Capacity

- Who is approving what and when?
- Who is in charge of promoting PPP solutions?
- Monitoring / Regulation during implementation?
- Where is the expertise located in the government?

PPP Units - Functions

- Supervision
- Facilitation
- Promotion
Government Role

PPP Enabling Environment

Policy Formulation
Legal Framework
Institutional Capacity
Financial Support

Economic and Business climate

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Thank you
http://www.unescap.org/transport/transport-sector-participation

escap.4554@un.org
The Module outlines the key principles for allocating risks in a PPP project and presents the main types of risk that need to be considered. It also gives some guidelines in terms of which partner should support which type of risks.
1. Supply

Land Acquisition & Site Conditions

Construction

PPP Risks

- Supply
- Demand
- Financial
- Legal & Political
- Force Majeure

Allocation

- Public
- Private

Cost Overruns

- Delay
- Inadequate design

Is it a significant risk?

Public Infrastructure Projects:

86% of projects are above budget

Is the private sector better at managing that risk?

Comparison (Australia)

More Discipline in cost estimates for PPP projects

Strong incentive to deliver on time

Source: Infrastructure Partnerships Australia (IPA); Asia-Pacific PPP projects and 32 traditionally procured infrastructure projects
Operational

Allocation

Public

Private

Tariff Adjustment to Inflation

Long-term input supply agreement

Asset Handover

Allocation

Public

Private

Specific handover requirements?

Linking payment to asset condition?

Demand 2

Is it easy to estimate the future demand?

NO!

Forecasting

General Economic Downturn

Optimistic Bias

Overestimated "willingness to pay"

Demographic change

Competition

Lower demand than projection

Financial distress

What is demand risk?
What's the best allocation?

Too difficult to forecast demand --> the private sector will charge a lot for covering the risk.

Strong incentive for the operator to attract users

Notes:

3

Financial

Currency

Availability

Repatriation

Convertible rules

Conversion after devaluation
Political, Legal & Regulatory

Why is it important?
- Potential impact on Project viability

Private Sector has no control on these risks

Protection / Compensation?

If risk deemed too high... no private sector interest

Political risks
- Government Contracting Agency
- Expropriation
- Early Termination

Legal risks
- Taxation rules

Regulatory risks
- "Change in Law" provision in the concession contract
- Unilateral tariff revision

Private Company

Force Majeure

Political & Natural Events
- Compensation?
- Termination?
- 6 - 12 months

Insurance

Public

Allocation

Private

Risk Matrix

<table>
<thead>
<tr>
<th>Risk</th>
<th>Description Likely Effect</th>
<th>Mitigation Measures</th>
<th>Allocation</th>
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<tr>
<td>Construction</td>
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<td>public/private</td>
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<td>Operation</td>
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Key Document

Influence Pricing

Early in project development

Notes:
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Private Company
The Module presents the basic structure of a PPP project while reviewing the key stakeholders involved in this type of project. The Module also introduces some basic financial indicators to assess the profitability of PPP projects and to calculate the cost of the different sources of funding.
Basic Project Finance Structure?

Is the project profitable?

Revenues vs. Costs

Cash Flows

Assumptions Projections

Internal Rate of Return (IRR)

A good estimation of the cash flows is required

Notes:

Can be translated into cash flows

In practice: Financial Model

What does it mean to have IRR = 8%?

is equivalent to:

108

100

One year later
How much does it cost to finance a project?

Leverage
Ratio between debt and equity

Funding cost?
Weighted Average Cost of Capital (WACC)

25% Return requested = 15%
75% Interest rate = 5%

Ratio Equity
20%
Financing risk
80%
Debt

Financing mix
3:1

More debt means lower cost
...but higher risk of failure!

Limiting leverage allowed?
(e.g. if government is providing some guarantee)

Financing source

How much does it cost to finance a project?

Tradeoff between risk, cost, and bankability

Weighted Average Cost of Capital (WACC) = Indicator of Cost of Funding

Equity providers
Debt providers (e.g. banks)

Government Implementing Agency

Concession / PPP contract
EPC Contractor
O&M Contractor

Is the project attractive for a private investors?

If Project Profitability (IRR) > Cost of Funding (WACC)

Is the project profitable?
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