Private Investment in Infrastructure: Dealing with uncertainty in contracts

June 2018, Paris

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What was the WG’s objective?

• Clarify basics – what is the role of with PI?
• Take stock of most recent evidence (does it work?)
• Map how uncertainty matters in contracts
• See how private finance approaches handle uncertainty
• Provide guidance to policymakers
What is the role of PI? (I)

The state

- Share capital
  - State Owned (infra) Company

Lenders
- Repayment
- Loan

State Owned (infra) Company
- Tolls/ fares

Road/Railway users

Performance Contracts

- Construction contractors
- Maintenance contractors
When the state is judge and party

Road maintenance trends in selected countries, 2005-2014, (2005=100)
Evidence about PI in transport infrastructure

Mixed/limited experience

“Positive” is subject to conditions
What is the role of PI in transport? (II)

<table>
<thead>
<tr>
<th>Efficiency type</th>
<th>Relevance</th>
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<tbody>
<tr>
<td>Productive (cost efficiency)</td>
<td>✔️</td>
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<tr>
<td>Allocative (preventing bridges to nowhere)</td>
<td>❌</td>
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<tr>
<td>Dynamic (extending the public borrowing constraint)</td>
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Pursuing PI on the right merits matters!

- Competition for the contract
- Credible commitment to the contract
- Proven superior performance
- Public acceptance of the approach
Why is it important to know what PI can do?

• Making choices about PI on the wrong merits will lead to adverse outcomes.
• Choosing PI on the right merits is still unsustainable, if we can’t explain them to the civil society or provide evidence!
PI is concentrated in a few countries

Cumulative Private investment in transport infrastructure per European OECD country and mode, 1995-2016, US$ million
How uncertainty affects contracts?
The nature of any contract is risk transfer

\[ \text{Transferred Risk} \times \text{Efficiency gains} - \text{Transferred Risk} \times P = \text{Value for Money} \]

Project phase bundling (life-cycle costing), less cost overruns/delays, …
When is the price of risk “efficient”

Two conditions for efficiency:
1. Credible commitment
2. Competition
3. Information (about risk)
How does uncertainty matter?
Uncertainty matters beyond finance

Source: International Advisory & Finance 2014
Short-term contracts and complexity (I)

• Observed (median) construction risk for the SPV (outturn cost vs. contract value at financial close) is **zero**.

• “Insurance” against construction risk is effective.

High-powered incentives and risk?

What if we place a very strict requirement (e.g. 100 % insurance) on an agent (contractor) with limited risk info?
Short-term contracts and complexity (II)

Applying a fixed price contract on a complex project

• Construction risk: risk premium in roads above ex-post risk (+20% in EU), LCC does not explain diff.)

Source: Makovšek & Moszoro 2018.
Long-term contracts – disruptive events

The accessibility to jobs within 30 minutes in Lisbon – current and in the “taxi-bot” model

ITF (2016).
How does uncertainty matter - competition

What happens if more information is made available to the bidders? (e.g. publication of a detailed cost estimate)

Additional info (less uncertainty)

The market (bidders)

New market entrants
- 20% of them now offered lower bids (bid more aggressively)
- On average they stayed longer in the market (+37%).

Uncertainty in contracts matters beyond risk pricing!

- Risk pricing
- Project: \( \uparrow E(\text{revenues}) \), \( \downarrow E(\text{cost}) \)
- Competition
- Contract signature
- LT contract execution
- Circumstance surprises

Uncertainty
LT contracts, complexity, and unknown unknowns

Year 20
End of contract

Competition for the contract

Market type A
Roads, hospitals, railways, schools…

Market type B
Sea ports, airports, …
Reducing risk pricing inefficiency in the construction phase

• Greater information provision upfront (e.g. fully costed reference design)

• Use of select collaborative principles during bid preparation (e.g. joint-risk register)

• A critical need to build in-house capacity (e.g. IPA/UK, Sund&Belt Partner/DK...)

• ....
How to ensure continuous pressure for efficiency in a monopoly?

PPP

Traditional procurement/management

Competition for the contract

Outturn efficiency

A bet on the future

RAB

Traditional procurement/management

Incentives (targets/resets)

Outturn efficiency

A series of smaller/short term bets on the future
Thank you!

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