Finance and Public-Private Partnerships

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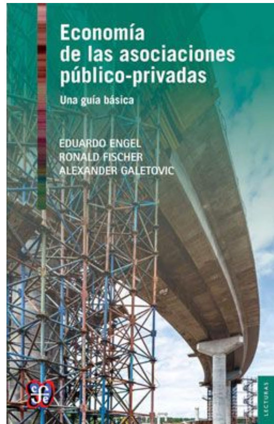
Joint work with Eduardo Engel (FEN-U. de Chile) and Alexander Galetovic (U. Andes)

Forthcoming book: The Economics of Public Private Partnerships: A Basic Guide, CUP, June 2014.



The spanish translation.

The promise of PPPs for developing countries

Mozambique's Trac 1 highway

Apparently there are funds

PROJECT FINANCE
(US$350-400 bn/yr)

Telecomms
Energy
Water
Oil & gas

Telecomms (12%)
Energy (40%)
Environment (2%)

Oil and gas
(20%)

PPPs
(US$60-100 bn/yr
Transport (20%)
Gov. services
(6%)

PRIVATE
INFRASTRUCTURE

Source: Blanc-Brude
and Ismail (2013)

Infraestructure Provision

- Conventional: State delegates on private firm construction, provides finance, operation and maintenance separate.
- PPP: State delegates on a private firm to finance, construct, operate and maintain a project.

PPP can be financed from:

- User fees, or
- From periodic fiscal payments.

Question: Do PPPs release public funds?

“PPPs Release Public Funds” (Public Funding)

- PPP:
  - Now: “save” 100 in debt.
  - Now: spend 100 in infrastructure
  - Tomorrow: raise 100 in taxes
  - Tomorrow: pay 100 to private firm
- Conventional Provision
  - Now: Issue 100 in debt
  - Now: Spend 100 in infrastructure (by hiring a firm).
  - Tomorrow: raise 100 in taxes
  - Tomorrow: pay 100 to debt holders.

“PPPs Release Public Funds” (User Funding)

- Conventional Provision:
  - Now: issue 100 in debt.
  - Now: spend 100 in infrastructure.
  - Tomorrow: collect 100 in user fees
  - Tomorrow: pay 100 in debt
- PPP
  - Now: “save” 100 in debt
  - Now: Spend 100 in infrastructure
  - Tomorrow: Relinquish 100 in user fees.

Additional Fiscal Tricks

- Without proper accounting, PPPs are off-budget, off balance sheet vehicles.
- They can be used to anticipate spending and elude fiscal constraints.
- Renegotiations are expensive –bilateral negotiations– and should be supervised by independent agency.
- Asset sales and brownfield PPPs can lead to fiscal losses if little competition.

The PPP Premium

Yescombe (2007): financial cost of PPPs are 200–300 points above public cost of funds.

Thus

Recommendation: Use a PPP only if efficiency gains compenste for PPP premium.

But,

How do you measure these gains? VFM shenanigans.

A Real Motive for PPPs

- Efficiency gains from bundling.
  - In the case of roads: continuous maintenance and operations.
  - In the case of hospitals et al: delays less likely, smaller cost overruns (usually).
  - More likely to charge user fees (and in real terms).

Rik: Bundling can lead to a design that lowers service quality if quality standards are not established and enforced. (Hart 2003).

To create incentives to effort, risk is necessary ⇒ incentives explain part of PPP Risk premium.

Exogenous Risk and Contracts

Exogenous risk should be borne by party best able to bear it (or insure against it)

The party that best bears exogenous risk should "sell" insurance.

- Exchange and interest rate risk, yes. Earthquake risk -insure in international markets.
- Demand risk: buy, with a contract that transfers it to the public.
- A PVR contract, which replicates the risk profile of government provision.

Equivalence of Risk Profiles: Exogenous Risk

- Conventional Provision (v: Demand Realization)
  - Government spends 100
  - Government receives $R(v)$ in user fees.
  - Net: $ER(v) - 100$.
- PVR Contract
  - Bid PVR =100 by competition among bidders.
  - Term extends until revenues are 100.
  - Government receives $R(v) - 100$ in user fees.
  - Net: $ER(v) - 100$.

Exogenous risk and the fixed term contract

In some projects, once built, demand is mostly exogenous (highways).

A fixed term contract:

- Bid T such that $\mathrm{ER}(v, T) = 100+$ risk premium.
- Term lasts until T.
- Cost of project to society: $ER(v) - 100-$ risk premium.

A fixed term contract is inappropriate.

Complementary explanation for PPP premium.

Experience with PVR: The case of Chile

Project	*Month/year auctioned*	*Winning bid (million USD)*
Ruta 68 (Stgo-Valparaíso-Viña)	02/1998	513
Ruta 160, Coronel-Tres Pinos	04/2008	342
Acceso Aeropuerto AMB	07/2008	56
Melipilla-Camino de la Fruta	08/2008	46
Ruta 5, Vallenar-Caldera	11/2008	288
Concepción-Cabrero	01/2011	318
Acceso alternativo, Iquique	01/2011	167
Ruta 5, La Serena-Vallenar	12/2011	323
Diego Aracena airport	11/2007	15

Source: Dirección de Concesiones.

Useful Lessons

- PPPs do not liberate public funds.
- PPP benefits from bundling (if quality standards enforced):
  - Continuous maintenance, specially highways.
  - Better enforcement of toll collection.
- The PPP premium partly reflects:
  - Wrong contractual form (fixed term contracts with exogenous demand).
  - The need for incentives that are missing under conventional provision.