NOTES ON PPP POLITICS

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I. INTRODUCTION

✓ Discuss link between PPP and political incentives

[series of thoughts and suggestions for research rather than well-structured speech].

✓ PPP
- Long-term relationship (focus of most of literature).
- Increased private involvement

  [private financing and ownership, not only private builder or operator].

II. COSTS AND BENEFITS OF PPPs

Most models are *multi-tasking* ones [Holmström-Milgrom 1991]

[other aspects: decision rights: see Dewatripont-Legros 05 for a discussion]

- ✓ Two periods:
  - $t = 1$ build infrastructure
  - $t = 2$ operate.
- ✓ Date-1 investment(s) affect:
  - date-2 operating cost, and/or
  - date-2 quality of service.

Laffont-Tirole 88: cost-reducing investment (positive externality).

[related: Stein 89 on "myopia" in corporate finance]

✓ Only observables: total costs C_1, C_2, C_2'

$$C_1 = \beta - e_1 + i$$

multi-tasking: incentives for e_1 also make i costly for firm.

$$C_2 = \beta - e_2 - s(i) \quad \text{if incumbent}$$

$$C_2' = \beta' - e_2' - ks(i) \quad \text{if entrant}$$

k $\in$ [0,1] measures transferability.

✓ One methodological restriction: incumbent's contract not contingent on C_2' if breakout.

- *Iossa-Legros* 04: if i observable, then entrants' bid transferred as compensation to builder (solves externality problem)
- Motivations for incumbent's lack of accountability for C_2':
  (a) accounting manipulations against incumbent;
  (b) *Martimort-Pouyet* 05: incumbent is risk-averse; hence some, but limited scope for internalization.

✓ *Results* (for transferable case: $k = 1$)

Cost & benefits of PPPs

- Gain from PPP/bundling: internalization

  Breakout iff $\beta' \leq \beta^*(\beta) < \beta$

  [can be implemented through auction with cancellation fee.]

- Cost of PPP: forgoes potentially superior operator [$\beta' < \beta$].

Risk bearing

- Time-increasing incentives for incumbent

  [tradeoff between building cost reduction and investment at date 1].

- "PPPs" covary with high powered incentives.

- ✓ *Adding quality shading: Hart 03 (building on Hart-Shleifer-Vishny 97), Martimort-Pouyet 05, Bennett-Iossa 04*
  - Example (Hart): fixed-price contracts (unobservable cost)

$$C_1 = i + j$$

$$C_2' = C_2 = -s(i) - r(j)$$

$$B = B_0 - j.$$

Investments *i* and *j* and quality *B* unobservable.

PPP cost is now quality shading (quality increases operating cost)

[builder not dominated in management].

  - Martimort-Pouyet adds:
    - quality incentives
    - observability of costs.

✓ *Other alleged costs of PPPs*

- insourcing bias [ongoing work Caillaud-Martimort-Pouyet]
- large negotiation costs

  [Bolton-Faure Grimaud 05: LT contracting calls for more "search".]

- most common argument against PPPs in policy circles:
  trick to de-budgetize (hidden deficits)

  [indeed move to PPPs around the world motivated by insufficient financing capability of states].

  Need to introduce politics.

III. POLITICS

PPP literature mostly assumes benevolent regulator. Hazards associated with political process:

(1) *Capture*: Interest group promises bribe (in broad sense) to regulator

[e.g.,Chicago School, Laffont-Tirole, Grossman-Helpman, Laffont-Martimort].

Two results on increased scope for capture under PPP:

- ✓ Martimort-Pouyet 05: Unbundling tends to be chosen when negative externality (quality shading), hence co-varies with low-powered incentive scheme, hence less prone to capture.
- ✓ Laffont-Tirole 93 (chap. 16): ST commitment may be optimal (complete) contract despite reduction in cost-reducing investment. Future government (itself may be corruptible) may undo part of the collusive pact under ST commitment.

(2) *Electoral pandering*: politician in office signals congruence with voters

[e.g., Dewatripont-Seabright 05, Maskin-Tirole 04.]

Illustration

[ongoing research with Eric Maskin]

- ✓ Continuum of interest groups $i \in [0, 1]$ (mass 1).
- ✓ Two dates $t = 1, 2$.

Date-1 policy y: $y_i \in \{0, 1\}$.

$y_i = 1$ yields B to i, costs L to everyone.

Interest group i's welfare: $\boxed{w_i = y_i B - yL}$

where

$y = \int_0^1 y_i di$ is pork-barrel intensity.

Politician's objective function: $\boxed{U(y_.) + p(y_.)\,R}$

- ✓ *Intrinsic*:

$$U(y_.) = \int_0^1 (\alpha + \beta x_i)\, w_i di$$

where $x_i = \begin{cases} 1 & \text{if favored (known only to politician)} \\ 0 & \text{otherwise} \end{cases}$

$$x = \int_0^1 x_i di < \frac{1}{2}.$$

- ✓ Assume

$$\frac{\alpha + x\beta}{\alpha + \beta} L \quad < \quad B \quad < \quad L$$

independent official (not reelection-driven) would distribute pork to fraction *x* of favored interest groups

inefficient pork-barrel

- ✓ *Reelection concerns:* $p(y_\cdot) = \Pr(\text{reelection})$

  $R = \text{total payoff to reelection}$

- ✓ *Election at end of date 1:*
  - simplest version (pocketbook voting): interest group *i* votes for incumbent if $\widehat{x}_i \geq x$ ($\widehat{x}_i$ is posterior probability that incumbent favors interest group *i* and *x* is probability that challenger will favor the group).
  - generalization: mixture of pocketbook and other considerations (ideology, character and appearance of candidates,...).

Key determinants of pork-barrel spending

- Liabilities (*yL*) transparent or opaque? On or off government balance sheet?

  Interest group *i* observes y_i and, if *transparency*, *y* before election.

- Distinction matters only if spending propensity (*x*) unknown to electorate.

(a) *Known spending propensity*

[under pure pocketbook voting]

$y = 1/2$ (overspending result)

(b) *Unknown spending propensity* $\left(x_L < x_H < \frac{1}{2}\right)$

- opaque: still $y = 1/2$
- transparent + assumption that high spender not reelected:
  fiscal restraint: $y_H = x_H$ and $y_L < x_L$

  [in Cho-Kreps separating equilibrium].

(c) *Assessment*: pandering effect probably more important than disciplining effect under current public accounting rules.

Heterogeneous projects

Bias towards:

(1) Visible projects

(2) Projects for which responsibility not shared

[(1) and (2) familiar from career concerns models. Application: greenfield projects vs maintenance.]

(3) Projects benefitting groups that vote non-ideologically/on pocketbook grounds

[Lindbeck-Weibull 87]

(4) Projects with hidden, delayed costs.

IV. THOUGHTS ABOUT PPPs

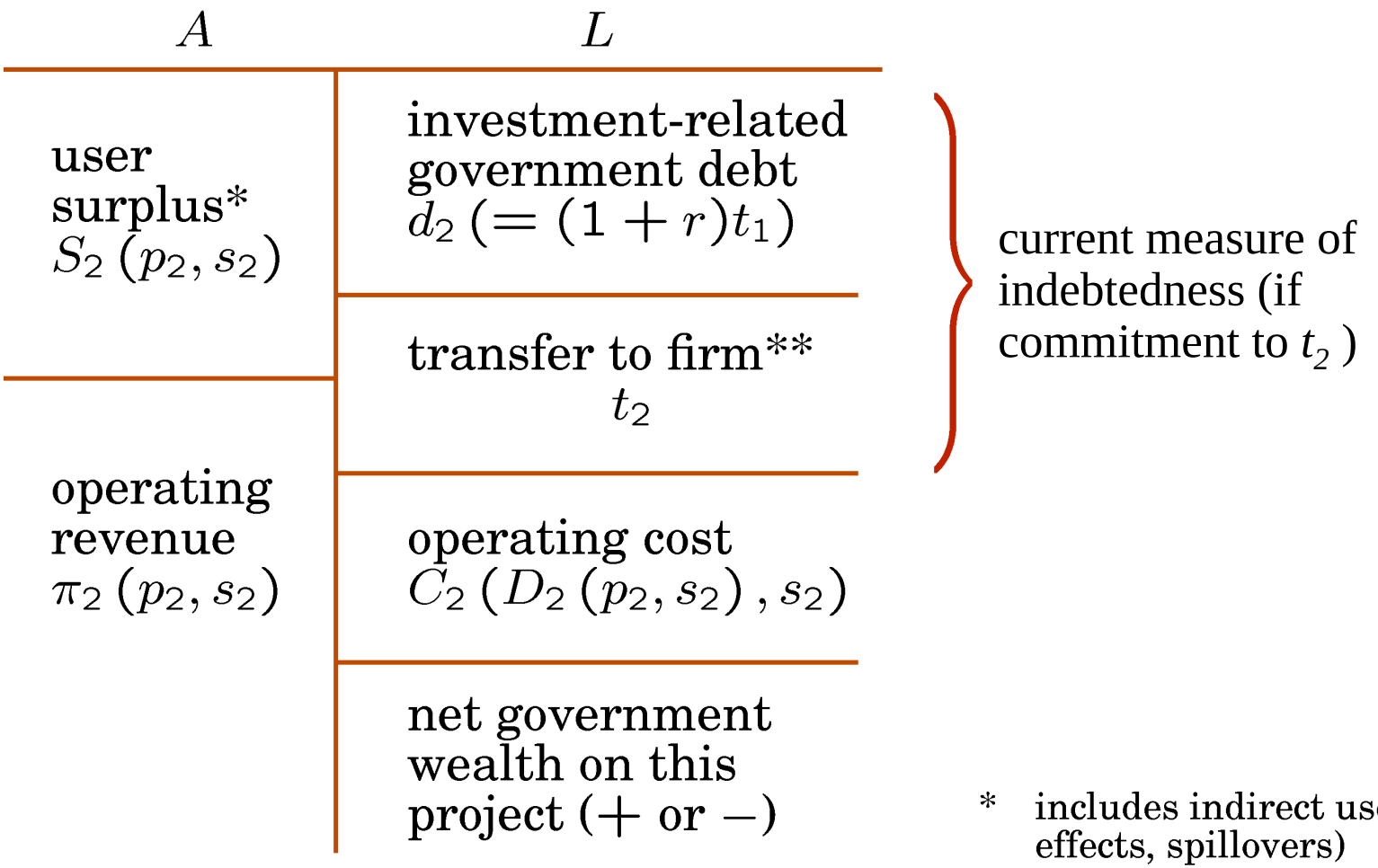
Non-benevolent regulator raises issue of performance measurement.

Hidden liabilities exert three externalities:

- on future taxpayers (part III above)
- on future governments (blame sharing reduces acountability)
- on other regions/countries (stability pact, federal rules, ...).

Project's *economic* balance sheet under perfect foresight

[$t = 1$: building ; $t = 2$: operations ; p_2 = price ; s_2 = quality]



* includes indirect users (external effects, spillovers)

** off-balance proportion depends on
- ✓ guarantees,
- ✓ scope for renegotiation.

Public finance literature

[e.g.: discussion on Stability Pact prior to Maastricht treaty:
UK rule on deficit $\leq$ net capital formation over the business cycle;
Blanchard-Giavazzi 04 on "golden rule approach"]

- ✓ Focus on government *net wealth*, not only debt.
- ✓ Standard criticisms:
  - nonfinancial returns to government investments
  - creative accounting [current deficit vs capital investment]
  - other investments [human capital].
- ✓ Hard to quantify future consumer surplus. Perhaps question is therefore: "For a given signal S_2 sent to interest group, is there more scope to hide liabilities under PPP or under unbundling?"
  Conventional wisdom: "under PPP".

✓ Warning: I here include "non-commitment to future policies" in meaning of unbundling (U).

✓ Basic effect of PPP: *frontloading* of information held by firms and official, but not by electorate and government accountants

⇒ makes government more accountable for date-2 outcomes
[early performance measurement]

⇒ good and bad effects
[analogy: corporate finance literature on posturing/myopia under stock-based incentives].

✓ *PPP makes future costs more transparent:*

- Example: $C_2 + \varepsilon$ (ε known at date 1 by firms, official).
  High operating cost $\Rightarrow$ firms demand high subsidy or high price
  [reduced ability for government to select high-operating-cost projects].
- Similar point for design choices that increase operating costs in ways accountants cannot detect.

✓ *PPP creates incentives to manufacture (hidden) future user or taxpayer liabilities to the firm:*

(a) *Strategic contract incompleteness to create franchisee rents and lowball bidding*

- Renegotiation

  [shrouded attributes à la Gabaix-Laibson 05].

- Opaque pricing (S_2 poorly understood by consumer, π_2 higher than appears)

  [Engel et al 03: location of toll booths left to the discretion of franchise holder in Argentina].

(b) *Guarantees* (users/taxpayers face adverse selection on level of implicit value)

- backed by taxpayers

  [minimum income guarantees for highway franchisees],

- backed by users

  [Engel et al 03: PVR auctions].

V. CONCLUSION

Assuming benevolent politicians is too simplistic.

✓ Regardless of choice between PPP and traditional procurement:

- predictable biases in spending pattern

  [towards certain types of projects and interest groups],

- firms and politicians collude to backload and hide user and taxpayer liabilities.

✓ What is perceived as contractual difficulties/failures may actually be in part engineered (contracting design or strategic overlook).

✓ Suggests key role for independent ex ante evaluations.
Hazards/focus of attention differ between PPP and traditional procurement.