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].
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.

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

$$C'_2 = \beta' - e'_2 - ks(i) \text{ if entrant}$$

$k \in [0,1]$ 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:

\[
\omega_i = y_i B - y L
\]

where

\[
y = \int_0^1 y_idi \text{ is pork-barrel intensity.}
\]
Politician's objective function: \[ U(y.) + p(y.) \cdot R \]

✓ **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**

\[ \frac{\alpha + x \beta}{\alpha + \beta} L < B < L \]

- independent official (not reelection-driven) would distribute pork to fraction \( x \) of favored interest groups
- inefficient pork-barrel
✓ **Reelection concerns:** \( p(y_1) = \Pr(\text{reelection}) \)

\[
R = \text{total payoff to reelection}
\]

✓ **Election at end of date 1:**

- simplest version (pocketbook voting): interest group \( i \) votes for incumbent if \( \hat{x}_i \geq x \) \((\hat{x}_i \) 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]

\[ y = \frac{1}{2} \quad \text{(overspending result)} \]

(b) Unknown spending propensity \( x_L < x_H < \frac{1}{2} \)

- opaque: still \( y = \frac{1}{2} \)
- 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 accountability)
- on other regions/countries (stability pact, federal rules, ...).
Project's *economic* balance sheet under perfect foresight

\[ t = 1: \text{building} ; \ t = 2: \text{operations} ; \ p_2 = \text{price} ; \ s_2 = \text{quality} \]

<table>
<thead>
<tr>
<th>( A )</th>
<th>( L )</th>
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</thead>
<tbody>
<tr>
<td>user surplus* ( S_2(p_2, s_2) )</td>
<td>investment-related government debt ( d_2 \equiv (1 + r)t_1 )</td>
</tr>
<tr>
<td>operating revenue ( \pi_2(p_2, s_2) )</td>
<td>transfer to firm** ( t_2 )</td>
</tr>
<tr>
<td></td>
<td>operating cost ( C_2(D_2(p_2, s_2), s_2) )</td>
</tr>
<tr>
<td></td>
<td>net government wealth on this project (± or −)</td>
</tr>
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* includes indirect users (external effects, spillovers)

** off-balance proportion depends on

- guarantees,
- scope for renegotiation.

current measure of indebtedness (if commitment to \( t_2 \))
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: $C_2 + \varepsilon$ ($\varepsilon$ known at date 1 by firms, official).
  High operating cost $\implies$ 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, $\pi_2$ 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.