Third-Party Opportunism and the (In)Efficiency of Public Contracts

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Characteristics of Public Contracts

- inefficient
- low quality
- delays
- expensive
- corruption, favoritism
- bureaucratic, red tape

- politics
- intricate, convoluted
- scrutiny, regulation
- controls, inspections
- protests, courts
- ...

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Characteristics of Public Contracts (cont.)

- ... third parties...
... third parties...

Figure: Monster-in-Law
Characteristics of Public Contracts (cont.)

- ... third parties...

Figure: Monster-in-Law

... not necessarily interested in the success of the relationship (political opponents, excluded bidders, and interest groups)
What is the impact of third parties in public procurement and acquisition?
Third-party opportunism (TPO) as key hazard of public transactions

Specificity and rigidity in public contracting are a political risk adaptation by public agents

- Public agents limit the risk of third parties’ challenges through formalities and rigidities
- ... externalizing the associated costs to the public at large

Scrutiny increases public contracting efficiency in costly litigation environments, concentrated (politically) contestable markets, and with upwardly biased beliefs about benefits of challenge
Preliminaries:

- Public agent’s perspective
- Simple short-term contract for standard good/service
- Ignore sunk costs to abstract from governmental opportunism

Four agents explicitly and implicitly involved in public contracting:

1. Incumbent public agent
2. Private contractor
3. Third-party challengers, i.e., political opponents to the incumbent public agent, competitors to the contractor, and interest groups ("anti-arbitrators")
4. Public at large, i.e., voters and courts
Signaling Process: Hazards into Rigidity—Timing

Public agent:
1. Receives project features and budget $P_{bud}$
2. Perceives threat of potential TPO challenges
3. Minimizes political risks by contract specificity and rigidity $R^*$

Private contractor:
4. Observes contract specificity and rigidity $R^*$
5. Less adaptability equals higher contracting and implementation costs, and hence higher final price $P_{min}$

Third parties:
6. Privately perceive benefits from potential challenge
7. Contract features $R^*$ affect third parties’ strategies, thereby affecting political outcomes
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>( f(R) )</th>
<th>In Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \tau )</td>
<td>Likelihood of success of TPO challenge</td>
<td>( \leftarrow )</td>
<td>Assumption 1</td>
</tr>
<tr>
<td>( c )</td>
<td>Litigation costs</td>
<td>( \leftarrow )</td>
<td>Assumption 2</td>
</tr>
<tr>
<td>( K )</td>
<td>Private ( K_{pr} ) and public ( K_{pu} ) adaptation costs to TPO: \textit{ex ante} contracting and \textit{ex post} penalties, implementation, and enforcement costs (time, lawyers, documentation, and control)</td>
<td>( \uparrow )</td>
<td>Assumption 3</td>
</tr>
<tr>
<td>( \rho )</td>
<td>Likelihood of TPO challenge</td>
<td>( \leftarrow )</td>
<td>Proposition 1</td>
</tr>
<tr>
<td>( \mathbb{E}(T) = T_0 \rho \tau )</td>
<td>Expected political costs of the loss of office, reputation, and support</td>
<td>( \leftarrow )</td>
<td>Definition 1 &amp; Proposition 2</td>
</tr>
</tbody>
</table>
We define the following objective functions for the agents:

\[
\begin{align*}
\text{Incumbent public agent:} & \quad \text{minimize } & \mathbb{E}[T(R) \mid \tau] + K(P, R) \\
& \quad \text{subject to } & K = K_{pr}(R) + K_{pu}(P, R), P^{bud} \geq K_{pr} \\
\text{Private contractor:} & \quad \text{maximize } & (P - K_{pr}) \mid R \\
& \quad \text{subject to } & P^{bud} \geq P \geq K_{pr} \\
\text{Third-party challengers:} & \quad \text{maximize } & q \in \{0, 1\} \left[ \tilde{T}_0 \zeta \tau - c \right] \mid R
\end{align*}
\]

where \( \zeta \in (0, 1] \) is the political (market) concentration and \( \tilde{T} = \tilde{T}_0 \zeta \tau \) reflects opportunistic third party’s beliefs about her potential internalization of the incumbent public agent’s costs.
Endogeneity of Opportunistic Challenge

High rigidity: litigation cost $c = 16$, $\rho = 0.1$

Low rigidity: litigation cost $c = 12$, $\rho = 0.5$

Cumulative Probability $1 - \rho$

Third Parties’ Benefits From an Opportunistic Challenge
Scrutiny: Calibration of Beliefs

High litigation cost, high scrutiny: $\rho = .1$

High litigation cost, low scrutiny: $\rho = .3$

Low litigation cost, low scrutiny: $\rho = .7$

Low litigation cost, high scrutiny: $\rho = .8$

Cumulative Probability $1 - \rho$

Third Parties’ Benefits From an Opportunistic Challenge
Scrutiny with Biased Third Parties’ Expectations

High scrutiny reduces challenges in high litigation cost environments

High scrutiny increases challenges in low litigation cost environments

Upwardly biased third parties’ expectations $T_0$

Downwardly biased third parties’ expectations $T_0$
Scrubtiny: A Two-Sided Sword

- On the one hand, better informed third parties due to scrutiny may increase or decrease the likelihood of TPO, depending on calibration and update of beliefs.
- On the other hand, scrutiny increases the level of internalization of adaptation costs by the public agent.

⇒ It is equivocal whether open information policies (as the case of California or Berlin) lead to more efficient public contracts.

Proposition

Assuming away administrative scrutiny costs, an increase in scrutiny reduces contract rigidity $R^*$ only if the internalization of adaptation costs effect is larger than the increase of political costs due to calibration and update of beliefs by opportunistic third parties.
If the political opposition is fragmented, benefits from a challenge can go to any of the political competitors, not necessarily to the challenger who bears costs $c$

As $\zeta \approx 0$ (atomized political opposition), there will be no TPO challenges (mono-partisan or autarky system)

Analogically, a loser bidder will challenge a contract output only if benefits $\tilde{\mathcal{T}}$ are higher than litigation costs $c$

In this case, $\zeta$ describes the challenger’s market structure: $\zeta = 1$ for symmetrical Bertrand duopolies (one’s contractor losses are the gains for the other), $\zeta < 1$ for oligopolies, and $\zeta \approx 0$ for perfect competition, where an individual competitor has no incentives to challenge a public tender outcome
Applications

- Bureaucracies
- Fixed-Price vs. Cost-Plus Contracts
- Public-Private Partnerships
- External Consultants and Certification of Contractors
- Efficient Small Communities and Authoritarian Regimes
- Privatization of Government-Owned Companies
Fixed-Price vs. Cost-Plus Contracts

- In theory, fixed-price better when adverse selection < moral hazard
  - Fixed-price: standardized goods, low informational asymmetry
  - Cost-plus: complex projects, i.e., technological uncertainties > inefficiencies from incomplete monitoring

- In practice, cost-plus subject to more TP challenges
  - GAO 2008 on defense acquisition: cost overruns of 26% ($295B)
  - More adaptable, but also abusable (“blank check”)

- Under TPO, fixed-price preferred where cost-plus more efficient
  - Fixed-price does not provide adaptable risk-sharing mechanisms
  - Costs underestimation in 9/10 of transport projects
  - Event study—Poland: 29% of contracts to lowest price bidder in 2004; 91% in 2010: EU increased frequency and depth of controls
Public-Private Partnerships

- **PPPs**: *ex ante* flexibility in contracting to gain efficiency
- *Ex ante* flexibility makes PPPs vulnerable to TPO ($↑ ρ$) $→ ↑ P$
- **Response**: KPIs as *ex post* quality control and signal that service remains publicly accountable
  - Australia (2001): the PPPs inferior—more expensive or lower quality of services—than the standard model of public procurement
  - **Response**: formal procedures for *ex ante* assessment using the Public Sector Comparator (PSC) and Value-for-Money (VfM), i.e., more contractual *ex ante* specificity and costs
  - New Zealand (2009): “there is little reliable empirical evidence about the costs and benefits of PPPs” and that “the advantages of PPPs must be weighed against the contractual complexities and rigidities they entail”
- **TPO → PPPs** only when gains from contract flexibility and better private management $> $ costs of compliancy with *ex ante* cost-benefit assessment and *ex post* KPIs
TPO theory combines political hazards and adaptation costs to explain apparent inefficiencies in public contracts

- High *ex ante* payment volatility or *ex post* flexibility in implementation may trigger drawbacks, leading to contract failure or costly adaptation by the public official, whether in terms of time or political career.

- High specificity and rigidity, and high prices of public contracts is a sequential equilibrium: public agents minimize political third-party costs with contract specificity and rigidity, which induce high contracting prices.

- True inefficiency in public contracting should pass Williamson’s (1999) remediableness test.
DAD, I'M CONSIDERING A CAREER IN ORGANISED CRIME.

GOVERNMENT OR PRIVATE SECTOR?