Discussion of

Demand Risk Allocation in Incomplete Contracts: The Case of Public Private Partnerships

Laure Athias and Raphael Soubeyran

Sergi Saurí

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The paper deals with an interesting and very often problem in PPP: allocation risk with incomplete contracts.

- Long-term projects/services
- Uncertain future (demand)
- Public authority wants to introduce a change in the services in order to adapt the concession to a new situation (renegotiation)

Research question: private provider: effort to get a cost advantage (e)

public authority: effort to adapt the service to the demand (j)

How should the demand risk be allocated?

Examples: School dinners (UK) / “Shipwrecked Men of the Road” (France)
SUMMARY

- Methodology:
  - Private provider: effort $e$ to cost advantage
  - Public authority: effort $j$ to adapt the service to the demand
    - Private has the rights $\rightarrow$ renegotiation to apply $j$
  - Demand:
    \[ D(j) = \begin{cases} Q(j) \text{ for } j \geq j_0 \\ \varepsilon \text{ for } j < j_0 \end{cases} \]
  - Utility function of private and public in two scenarios: a) private bears the demand risk and b) the public bears the demand risk
  - Optimization according to $e$ and $j$ and results compared with the first best
### CONTRIBUTIONS

<table>
<thead>
<tr>
<th>Demand allocation</th>
<th>Public Authority</th>
<th>Private provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in adaptation</td>
<td>Sub-optimal</td>
<td>Sub-optimal but higher (better) than the first</td>
</tr>
<tr>
<td>Investment in cost reduction</td>
<td>OPTIMAL</td>
<td>Sub-optimal</td>
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</tbody>
</table>

**Best risk allocation as function of how important is one type of investment compared to the another one.**

**A case of counter-incentive**
A deeper analysis of how the results are affected by the level of risk aversion

\[
D(j) = \begin{cases} 
Q(j) & \text{for } j \geq j_o \\
\varepsilon & \text{for } j < j_o 
\end{cases} \quad \sigma^2_{\varepsilon}
\]

\[
\frac{\partial \rho}{\partial \sigma^2_{\varepsilon}} > 0 \quad \text{Sensitivity with } \Delta \rho
\]

Assumed solution of renegotiation: Nash bargaining solution (with equal bargaining power) (Edlin and Reichelstein, 1996)

Which is the influence of solution of renegotiation on the final results?

Aghion, Dewatripont, and Rey (1994) “renegotiation design”
MARKET STRUCTURE. No comments are made about how competition can affect the efforts (private and public). *Competition is an incentive*

- Provide real examples to validate the results.

- A deeper analysis of *what type of public services* the results can be better applied to. *Urban transport concessions*

- More references on risk allocation in the literature section.
Paper deals with a key topic in PPP with long-term relationship and incomplete contract. Ex: urban transport concessions.

The contribution is worthwhile, but some issues should address/commented better (risk aversion, validate results with some real examples, market structure and more examples in the literature/introduction).
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