Contracting Out Public Service Provision to Not-for-profit Firms

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BACKGROUND

Recent years: dramatic change in the way many public services are provided

UK *Private Finance Initiative* (PFI)

(PFI-like schemes also in EU countries, US, Canada):

- Contracting out public services provision to consortium that designs, builds,manages and finances facilities for provision of public service
- Government specifies output
- Firm has control rights over how to deliver output

Traditional procurement (TP):

- Government specifies inputs and retains control rights

Increasing role for not-for-profit firms (NPs)

This paper: comparison contracting out to NP and to FP, under TP and PFI

- Incomplete-contract approach
- Firm may make uncontractible investment, researching innovative approaches
- Control rights give power to veto implementation of innovation

We consider three alternative scenarios

- *No conflict:* innovation increases both profit and social benefit
- *Conflict of type 1*: innovation increases social benefit but unprofitable
- *Conflict of type 2*: innovation increases profit but reduces social benefit

RESULTS

The appropriate institutional arrangement depends on

1) scenario

2) relative importance of investment on social benefit and profit

3) firm's bargaining power and power non-distribution constraint in NPs

4) difference care for social benefit between NP and FP

5) nature of investment: monetary or nonmonetary

RELATED LITERATURE

On public service provision

Hart, Shleifer and Vishny (1997), Schmitz (2000), King and Pitchford (2001)

Hart (2002), Bennett and Iossa (2004)

Bentz, Grout and Halonen (2001)

On NPs

Rose-Ackerman, (1996), and Weisbrod, (1998)

Hansmann, (1980), (1996)

Glaeser and Shleifer (2001)

Besley and Ghatak (2001)

THE MODEL

G and NP/FP agree on a contract that specifies verifiable basic standards

NP/FP may make investment, researching innovative approaches

x : level and cost, in terms of disutility of effort, of the investment made

x uncontractible

Ownership of project gives veto power on implementation of innovation (control rights)

Under TP, G has control rights

Under PFI, NP/FP has control rights

Social benefit from innovation (if implemented)

$$B_0 + B(x)$$

Profit from innovation (if implemented)

$$\pi_0 + \pi(x),$$

$B(x),\ \pi(x)$ are observable but uncontractible

- NO CONFLICT SCENARIO: $B_x, \pi_x > 0$
- CONFLICT OF TYPE 1 SCENARIO: $B_x > 0 > \pi_x$
- CONFLICT OF TYPE 2 SCENARIO: $\pi_x > 0 > B_x$.

Assumption 1. $B_x + \pi_x > 0$

FP/NP ($j = FP, NP$) maximizes

$$\Omega^j = \alpha^j B(x) + \delta^j [\pi(x) + z] - x, \quad 0 < \alpha^j < 1,$$

$$\alpha^{NP} \geqslant \alpha^{FP}; \delta^{FP} = 1, \delta^{NP} < 1$$

z , monetary transfer received from the government

$1 - \delta^{NP}$,'power' of non-distribution constraint (NDC)

Local Government maximizes: $B(x) - z$

Timing:

G chooses FP or NP and PFI or TP, and specifies basic standards

NP/FP undertakes investment x

Renegotiation between G and NP/FP may occur. If renegotiation, γ: bargaining power of firm

INVESTMENT UNDER ALTERNATIVE REGIMES: THE ROLE OF THE NDC (Let $\alpha^{NP} = \alpha^{FP} > 0$)

Traditional procurement

G has control rights

Gains from implementation $\implies$ renegotiation occurs (bargaining) and NP/FP receives

$$\delta^j s^j = \gamma \delta^j B(.) - (1 - \gamma)(\alpha B(.) + \delta^j \pi())$$

NP/FP chooses

$$\gamma \alpha B_x(x^j_{TP}) + \gamma \delta^j \left(B_x(x^j_{TP}) + \pi_x(x^j_{TP}) \right) = 1$$

Under TP, an FP invests more than an NP

NDC makes an NP 'softer' in the negotiation with G

$\implies$ *No conflict or of Conflict of type 1:* B *greater with FP*

    Conflict of Type 2, B greater with an NP

PFI

NP/FP has control rights $\Longrightarrow$ can implement innovation straightaway

$$\alpha B_x(x^j_{PFI}) + \delta^j \pi_x(x^j_{PFI}) = 1$$

If $\pi_x > 0$ (No conflict or Conflict of type 2) FP invests more than NP, and vice versa (Conflict of type 1) if $\pi_x < 0$

$$\Downarrow$$

No Conflict: FP max B

Conflict of type 1 or 2: NP max B

COMPARISONS

Under PFI, firm internalizes profit effect fully but no internalization G's social benefit effect

Under TP, firm shares social and profit effect with G

$$\Downarrow$$

The highest investment is achieved by

(i) No Conflict: TP-FP (if B_x and/or γ high), otherwise PFI-FP

(ii) Conflict of type 1: TP-FP (if B_x and/or γ high), otherwise PFI-NP

(iii) Conflict of type 2: PFI-FP

The highest social benefit is achieved by

(i) No Conflict: as above

(ii) Conflict of type 1: as above

(iii) Conflict of type 2: TP-NP

EXAMPLES

No conflict: $B_x(.), \pi_x(.) > 0$

Investment in building quality that raises social benefits and reduces maintenance costs and firm in charge of maintenance

- School buildings with less frequent need for repairs $\Rightarrow$ fewer disruptions and good learning environment

- Higher-quality hospital buildings $\Rightarrow$ fewer disruptions and good healing environment

Free-standing projects, such as leisure centres and nursing homes, where users are willing to pay for higher quality of service

Prison design, and roads and bridges managed by contractor

FP will always invest more than an NP, under both PFI and TP

If B effect large and/or if γ high, TP-FP max investment, otherwise PFI-FP does

Conflict of type 1: $B_x(.) > 0 > \pi_x(.)$

Investment in building quality that raises social benefits but expensive to implement and/or no internalization of maintenance costs

Accommodations

Lack of competition and rigid demand may make increase in quality unprofitable

PFI-NP max investment and B, if B effect low, γ low and power NDC high. Otherwise TP-FP

In no case PFI-FP desirable: NHS Confederation in the UK reported that PFI hospitals failed to create good healing environment because of noise and lack of daylight

Conflict of type 2: $\pi_x(.) \; > 0 > B_x(.)$

Investment that decrease costs, often come at the expense of lower benefits

Cost-cutting activities that compromise safety/quality

Railways maintenance and air traffic control

FP always invests more than an NP. Moreover the highest investment and lowest B is achieved under PFI-FP. TP-NP best at safeguarding social benefit

Difference in care for social benefits

Let $\alpha^N > \alpha^F$, due to presence of stakeholders on Board of Trustee in NPs

$$\Downarrow$$

More scope for NPs as a means to max social benefit

Now, NP may be desirable also if No Conflict

If B_x high, use NP or TP-FP

MONETARY INVESTMENT

The payoff function of the firm becomes

$$\Omega^j = \alpha B(x) + \delta^j [\pi(x) + z - x]$$

$\Longrightarrow$ cost of innovation has now a weight δ^N in NP's payoff

$$\Downarrow$$

NDC no longer works against incentives to invest

NDC results in greater relative weight attached to social benefit under NP

$$\Downarrow$$

(i) Under TP and PFI, NP (FP) max investment if $B_x > (<) 0$

(ii) NP always better at safeguarding social benefits. If $B_x > 0$, TP-NP max B, but if $B_x(x) < 0$, PFI-NP max B

CONCLUSIONS

Contracting out to an NP versus FP, under PFI and TP

Even if NP cares more than an FP about B, B may be greater with FP

PFI increases scope for NP

Crucial role played by correlation effects of investment on B and π:

    Positive correlation favours FP

    Negative correlation: FP or NP, but NP provision helps to safeguard B

Bargaining power, power of NDC in NP, and difference in care for B matter

More scope for NP if monetary investment

Next: governance of NP versus FP