Contracting Out Versus In-House Provision

Aim. To review the main arguments for and against contracting out the provision of public services to private profit-maximizing firms, focusing on incentives issues.

Hart, Oliver, **Shleifer**, **Andrei and Vishny**, **Robert W.** (**1997**), '**The proper scope of government**: **theory and an application to prisons**,' **Quarterly Journal of Economics**, **112**: **1119-58**.

Focus: non-contractible investments

a) cost reducing innovation e with adverse impact on quality

b) quality enhancing innovation i

e, i noncontractible

If complete and comprehensive contract are possible then form of public service provision does not matter. Replication argument.

Approach here: incomplete contracts

Implementation of innovation requires approval of owner of an asset

Ownership of asset gives residual control rights

Players: Manager: M; Government G

Benefits from service provision
$$B = B_0 - b(e) + \beta(i)$$

Cost of service provision

Total cost:
$$C = C_0 - c(e)$$

e, i observable but nonverifiable ex ante (noncontractible ex ante) - cannot foresee innovative ideas. Costs $e + i$

verifiable ex post (contractible ex post) - once innovation has been thought, it can be described in a contract

no alternative use for asset

no alternative job for M and M can be partially substituted. Efficiency of substitution is $1 - \lambda$

Basic service verifiable and price P_0 paid for basic service

First best: Max $B - C - i - e,$ which implies

$$-b'(e^*) + c'(e^*) = 1$$
$$\beta'(i^*) = 1$$

Both i and e types of innovation are welfare improving (i.e. generate gains) and therefore ideally should be implemented.

PRIVATE OWNERSHIP

With private ownership, M has control rights and therefore he can implement innovations straightaway$\Rightarrow$

M will implement e since direct gains $(c(e))$ from implementation $\Rightarrow$

$$c'(e_M) = 1$$

M will not implement i since no direct gain. But government wants i to be implemented, since direct gains $(\beta(i))$, so M and government will bargain to find an agreement.

$\Rightarrow i$ is implemented through negotiations between G and M, Nash bargaining, leading to 50:50 split of gains from trade. Anticipating this, M chooses i so that

$$\frac{1}{2}\beta(i_M) = 1$$

PUBLIC OWNERSHIP

With public ownership, government has control rights and thus the power to allow implementation of innovations, but for that he needs the manager or a substitute. G has also the power to veto the implementation of an innovation wanted by M

$\Rightarrow e, i$ are implemented through negotiations between G and M, Nash bargaining, leading to 50:50 split of gains from trade.

(Nash Bargain: Default Payoff $+ \frac{1}{2}$ gains). Thus G gets (note that the possibility that M is replaced affects the bargaining between M and the government)

$$(1 - \lambda)(-b(e) + c(e) + \beta(i)) +$$

$$+ \frac{1}{2}[(-b(e) + c(e) + \beta(i)) - (1 - \lambda)(-b(e) + c(e) + \beta(i))]$$

$$i.e.$$

$$\left(1 - \frac{\lambda}{2}\right)(-b(e) + c(e) + \beta(i))$$

and M gets the rest

$$\frac{\lambda}{2}(-b(e) + c(e) + \beta(i))$$

Therefore, M chooses e and i so that

$$\frac{\lambda}{2}(c'(e_G) - b'(e_G)) = 1$$

$$\frac{\lambda}{2}\beta(i_G) = 1$$

COMPARISON

Comparing investment under the two ownership structures with first best investment we have

$$e_M > e^* > e_G$$

$$i^* > i_M \geq i_G$$

Proof: Let $H(e^*) = -b(e^*) + c(e^*) - 1$. Then note that $H'(e^*) = 0$, $H'(e^M) < 0$ and $H'(e^G) > 0$. Since $H'(e) < 0$, the result follows. Similar reasoning for i.

• Private ownership leads to excessively strong incentive for cost reduction and to too weak incentives for quality improvement

• Public ownership leads to weak incentives for cost reduction and for quality improvement

- Optimal ownership depends on relative importance of i and e
- Private ownership (Contracting out) unambiguously better if
  – deterioration of quality from cost reduction is small
  – opportunities for cost reduction are small
  – Inefficient incentives for public employees (λ small) $\Rightarrow e_G, i_G$ very small
  – investment in cost reduction is verifiable

Public ownership (In-house) unambiguously better if
- deterioration of quality from cost reduction is high and
- quality improvement unimportant or
- incentives for public employees are efficient (λ close to 1)

- opportunities for cost reduction are high

Overall C always lower under private ownership, whilst B may be higher or lower under private ownership.