

Discussion of
**Unification versus Separation of
Regulatory Institutions**

by Dana Foarta and Takuo Sugaya

Ali Shourideh

Carnegie Mellon University

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University

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Introduction

- Question: How should government organize its function across divisions?
 - Do we need 17 different agencies involved in national security?
 - Should the Fed be involved in regulating the banks?

- This paper: information sharing and its interaction with incentives of regulators
 - Key trade-off:
 - unification creates more accurate information and allows for reaction to adverse shocks
 - separation provides better incentives

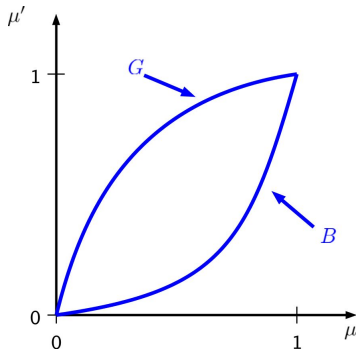
The Model

- Principal-agent embedded in a dynamic reputation model (Milgrom-Roberts, Kreps-Wilson, Mailath-Samuelson)
- Regulator:
 - Strategic type: exerts effort and gets utility from being in office (cannot be paid)
 - Inept type: no effort
 - Incentivized via learning and replacement
- Overseer:
 - Separate institution: does nothing
 - Unified institution: sees signal of the outcome and intervenes if signal is bad
- Public: Replaces the regulator (same payoff with O)

Learning under Separation

- Without any action from O - separation:

$$\mu'(G) = \frac{\mu q(e)}{\mu q(e) + (1 - \mu)q(0)}$$

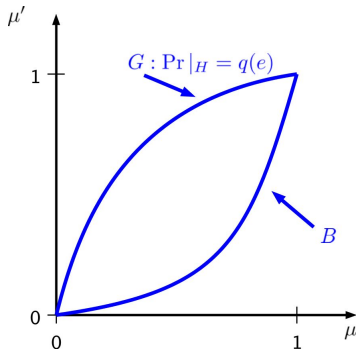


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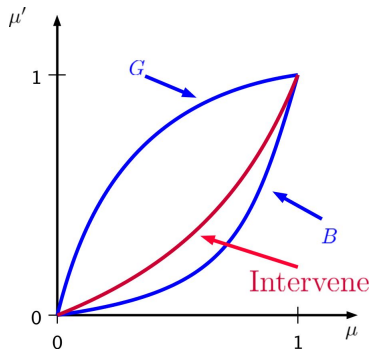
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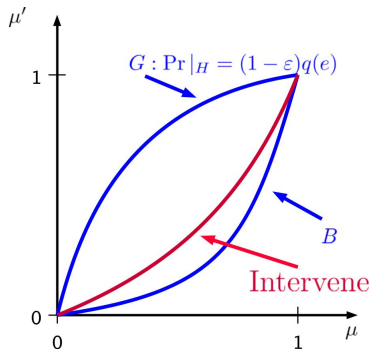
Learning under Unification

- Unification: O observes a signal of likely state (noise: ϵ); intervenes when signal is bad
- Public only sees the action and their payoff (e.g.: whether crisis occurred or not)



Learning under Unification

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- Less likely upside \Rightarrow less incentive to exert effort

Trade-off

- Separation: better incentives
- Unification: better information
- Determinant: cost of intervention vs cost of crisis
- Why can't we support unification (better information) and provide efficient incentive? Answer: without payments trade-off between current and future incentives

Dynamic Game

- Dynamic game with beliefs evolving
 - Value of staying in power for regulator is 1; common discount rate δ
- Usually need to know the best and worst equilibrium
- Neat tricks to make best and worst equilibrium (for R) easy to characterize:
 - public randomization device with a uniform distribution
 - any deviation by P ex-post is measure zero and does not affect the incentives of R

Best and Worst Equilibrium for R _____

- For R and any beliefs: Worst: $V = 0$; Best: $V = 1$.
 - W: replace R for sure; draw from a pool of R's (Note: beliefs are not a martingale)
 - B: never replace R; no effort;
- Worst for both: $V = 0$; no effort by R
- Trade-off between current and future incentives

Value of Best Equilibrium for the Public _____

$$J(\mu, V) = \max \int_z \left\{ p_z \bar{J} + (1 - p_z) \left[(1 - \delta) u^P(\mu, \psi, e) + \delta \sum_o \Pr(o|\psi, e, \mu) J(\mu', V') \right] \right\} dz$$

subject to

$$V = \int_z \left\{ (1 - p_z) \left[(1 - \delta)(1 - c(e)) + \delta \sum_o \Pr(o|\psi, e) V'(o) \right] \right\} dz$$

$$e \in \arg \max_e (1 - \delta)(1 - c(e)) + \delta \sum_o \Pr(o|\psi, e) V'(o)$$

$$V' \in [0, 1]$$

My Heuristic Understanding

- Provision of incentives: If $V_{t+1} \in (0, 1)$, then $J_{V,t+1}(G) < J_{V,t} < J_{V,t+1}(B)$.
- μ_t conditional on staying is a martingales.
- Seems like either converge to $V_t = 1$ or replacement almost surely.
- Typical dynamics:
 - Hire a new regulator
 - For intermediate values of reputation: separation
 - Following good outcomes: reputation and V increase eventually reach retirement! + Unified inst.
 - Following bad outcomes: reputation and V decrease eventually replace + Unified

Discussion

- Key assumption: cannot pay R
- Not a crazy assumption for government employees
- Caveat: Potential rewards exist following exit from government
 - If an SEC chairman's reputation affects his/her salary at Blackrock afterwards, then potentially the trade-off disappears. Evidence for this?

Discussion

- Key assumption: cannot pay R
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 - Still could be OK: potentially rewarding connections as opposed to effort!

Discussion

- Key assumption: Public and Overseer's motives are aligned
- Potential friction between the public and overseer
 - Example: industry groups can lobby with the overseer at the expense of the public
- Question: How does this affect the institutional design?

Conclusion

- Very elegant model of institutional design based on information sharing
- Not only government: applies to other settings where there are limits to monetary rewards:
 - A financially constrained manager that needs delegate and incentivize a worker
- Would be interesting to see how mechanism stands relative to other mechanisms in explaining fluctuations in institutions in the data: could simply come from rational inattention