Teams of Rivals: Learning the Cabinet and its Shadow

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"Since party leaders will often be uncertain as to which politicians have the technical expertise and skills necessary to do their jobs well, a process of trial and error occurs to discover the best talent. This can only occur by getting rid of some ministers, bringing in new faces, and reshuffling individuals from one post to another." (Huber and Martinez-Gallardo, APSR, 2008)

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Does cabinet enhance accountability through learning?

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- Does cabinet enhance accountability through learning?
- Our model has the following ingredients
 - 1 A team of decision makers
 - 2 A policy that reveals member's competence
 - 3 A cabinet
 - 4 Electoral competition between a Cabinet and a Shadow
 - 5 A benchmark (appointment)

Formal Models of Policy Learning (Callander (2008,2011), Volden, Ting and Carpenter (2008), Lizzeri and Persico (2009))

Multi-armed Bandits (Aghion et al (1991), Strulovici (2010))

Elections may Cause Inefficiencies (Canes-Wrone, Herron and Shotts (2001), Maskin and Tirole (2004))

The Role of an Active Challenger (Ashworth and Shotts (2011))

Selection and Incentives in Elections (Fearon (1999), Ashworth et al (2011))

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Reform policy is succesful only if competent

Decision Making in Teams

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- Each agent is *competent* or *not competent* (prior *p*)
- 2 periods, in each period an agent chooses safe or *reform* policy
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Timing

- Agents choose 1st period policy, outcome revealed
- Agents choose whether to remain in the team (or delegate)
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Timing

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Payoffs

- Safe action yields a constant payoff 1
- Reform action yields r > 1 if successful and 0 otherwise
- Agent's payoff is the average policy payoff obtained by the team



- Left figure first best (RGB, n=1,3,10)
- Right figure individual incentives (RGB, k=1,3,10)
- To the right of each curve the region where n (at most k) experiment
- Learning is subject to free-riding (specially for high *p*) Bolton-Harris '99

Players and Actions

- A team of *n* **politicians** choose policy under **unanimity**.
- Each agent is *competent* or *not competent* (prior *p*)
- 2 periods, in each period an agent chooses safe or *reform* policy
- Reform policy is succesful only if competent

Timing

- Cabinet chooses 1st period policy, outcome revealed
- Cabinet chooses 2nd period policy, outcome revealed

Payoffs

- Safe yields a constant **payoff** 1 to politician; Reform yields **payoff** r > 1 if successful and 0 otherwise
- Voter's payoff is the average policy payoff obtained by the team



Actions of an appointed cabinet (RGB, n=1,3,10)To the right of each curve the region where reform occurs

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- Actions of an appointed cabinet (RGB, n=1,3,10)
- To the right of each curve the region where reform occurs
- We eliminate free riding (unique equilibria is in symmetric strat)

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But less reform for large teams (specially for low *p*)

The Hold-up Problem

- A politician revealed as incompetent vetoes further reform
- Benefits from learning only when *all* revealed as competent
- Reduces value of first period investment in reform Strulovici 2010

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Remove the cause of the Hold-up Problem

- Suppose party (or leader) can **remove** incompetent politicians
- Politicians receive 0 when out of office
- Then cabinet only invests when pr > 1 eradicates learning

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Players and Actions

- Two teams of *n* politicians choose policy and a voter
- Each agent is *competent* or *not competent* (prior *p*)
- 2 periods, in each period incumbent cabinet chooses safe or *reform*
- Reform policy is succesful only if agent is competent

Timing

- Cabinet chooses 1st period policy, outcome revealed
- Shadow cabinet chooses platform, outcome revealed with prob. *q*_s
- Voter selects team
- Cabinet chooses 2nd period policy, outcome revealed

Payoffs

- Safe yields a constant payoff 1
- Reform yields r > 1 if successful and 0 otherwise
- If not in office, politician receives 0 (possibility of replacement)

Role of Shadow Cabinet

- After period 1 policy outcome revealed
- Shadow cabinet decides whether to stand on safe or *reform* platform
- During campaign voter learns about opposition
- When reform, competence of shadow members is learnt with prob *q*_s

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• We look at two extreme cases: NCE $(q_s = 0)$ and CE $(q_s = 1)$

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Optimal behavior of voter

- Elect team with higher (posterior) prob. of being competent
- When indifferent, incumbent reelected with probability 0.5 we relax this assumption in the paper

A Cabinet with an Inactive Shadow



Cabinet implements reform policy when to the right of curve

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Comparison with appointment:

- too much reform for high *p showcasing talent*
- too little reform for low p

Optimal Retention Rule with an Inactive Shadow

- Voter is *indifferent* when:
 - Cabinet plays safe
 - Cabinet plays reform and all non-competent (replaced)

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... many sequentially rational strategies

Optimal Retention Rule with an Inactive Shadow

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 - Cabinet plays reform and all non-competent (replaced)
- ... many sequentially rational strategies
- Voter can
 - Punish cabinet that plays safe vote for shadow (when low *p*)

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2 Reward cabinet plays safe–vote for cabinet (when high *p*)

Optimal Retention Rule with an Inactive Shadow

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 - Punish cabinet that plays safe vote for shadow (when low *p*)
 - 2 Reward cabinet plays safe–vote for cabinet (when high *p*)

Proposition

When pr < 1 and voters use their votes to both select incumbents and to sanction their performance then noncompetitive elections are equivalent to the efficient benchmark. When pr > 1 non-competitive elections are strictly welfare improving with respect to the benchmark case.

A Cabinet with an Active Shadow



- Cabinet implements reform policy when to the solid right of curve
- Shadow cabinet to the right of dashed curve
- Comparison with appointment:
 - too much reform for high *p showcasing talent*
 - too little reform for low p

Optimal Retention with Active Shadow



Red shading: inferior to app. Green shading: superior to app

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- Left hand panel where voter does not use incentives
- Right hand panel depicts optimal retention scheme
- Competition induces too much risk at high levels of *p*

- Voter can not commit to rewarding safe behavior
- Instead she can *punish* risk when evenly matched competence
- Event increasingly unlikely as cabinet grows large

Proposition

When teams have strictly more than one member, inefficiencies in competitive elections can not be totally eradicated. In the limit, as the team size grows large, these inefficiencies occur for $p > \frac{1}{2}$ and pr < 1.

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- Free-rider problem in teams when high p
- Cabinets resolve this issue but induce hold-up problems
- Elections with optimal retention alleviate hold-up problems
- But elections introduce "showcasing": over investment in reform

A more important application

- Team members value their position
- Team can play safe tactics or adopt reform

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- Sucessful reform yields higher payoff
- Outcome of reform reveals competence
- Some team members can veto reform

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