

Informative Lobbying and Agenda Control

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- Special Interest Politics: Studying the role of Special Interest Groups (SIGs) in the political process
- SIGs exert *extra-electoral* influence on policy-making process
- Pre-electoral
 - Campaign contributions
 - Endorsements
 - Voter mobilization
- Post-electoral
 - Lobbying

- Lobbying is the act of attempting to influence decisions made by officials in the government, most often legislators or members of regulatory agencies
- Applicable to other contexts as well (in a university dept., which field to recruit in)
- Lobbying firms form an important part of the landscape in political capitals around the world
 - K Street in Washington D.C.
 - approx. \$3.35 billion spent by lobbying firms in 2017
 - returns to lobbying can be substantial (high lobbying firms outperformed S&P 500 by 11%)

- Who forms lobby groups (more generally, SIGs)
- How and under what conditions lobbying affects policy outcomes
- What are the welfare and distributional consequences of lobbying

Approaches to Modeling Lobbying

Two strands in the literature

I. Lobbying as "buying a policy"

- Lobby groups offer policy contingent contributions
- Can be interpreted as plain bribes or as campaign funds/endorsements for reelection
- Lobbying distorts policies away from general interest; leads to lower welfare

II. Lobbying as information transmission

- Lobby groups are better informed but may have divergent preferences
- Lobbying provides information to the policy maker (directly/indirectly)
 - Cheap-talk game
 - Signaling game: (Differentially) costly lobbying serves as a signal about the information [Lohmann, 1995]: greater lobbying expenditure only makes sense if the gains from the policy are sufficiently high
 - Persuasion games

“The currency of lobbying in the European Union is information. Information plays an important role in shaping an interest group’s organisation and behaviour, its day-to-day activities, and even the extent to which it can affect decisions in its own favour. At root, information defines how interest groups interact with EU decision-makers. Groups are relative experts on the policy issues affecting their interests most and have access to considerable technical, specialist and politically salient information on these topics. EU decision-makers, woefully understaffed and pressed-for-time, find it helpful, if not necessary, to draw on this information in order to reduce uncertainties about potential policy outcomes. Importantly, interest groups find themselves in a good position to take advantage of this informational asymmetry. They thus supply information in exchange for legitimate access to the policy-making process with the goal of having their voices heard at the EU level and, ultimately, steering the EU policymaking process.”

— *Lobbying in the EU*, C. Chalmers

Our Approach

- IGs possess potentially verifiable, policy-relevant information
- IGs offer to provide the relevant information to the PM (Lobbying)
 - *Lobbying is costly*
- However, PM needs to spend time/resources to verify the information provided (Access)
 - *Access is costly: PM cannot grant access to all lobby groups*

Lobbying \implies Access \implies Information

- Two sources of information:
 - 1 Hard information: Lobbying + Access
 - 2 Soft information: Act of lobbying could acts a as signal that there is IG-favorable information

Model

- N issues indexed $i = 1, \dots, N$
- Policy on issue i is

$$p_i \in \{0, 1\}$$

1 (reform), 0 (status-quo)

- State of the world on issue i is

$$\begin{aligned}\theta_i &\in \{0, 1\} \\ \Pr(\theta_i = 1) &= \pi_i\end{aligned}$$

SoW is either 1 (pro-reform) or 0 (pro-status-quo)

- Policy Maker (PM)

$$U^{PM} = \alpha_1 \cdot u_1(p_1, \theta_1) + \dots + \alpha_N \cdot u_N(p_N, \theta_N)$$

$$u(p_i, \theta_i) = \begin{cases} 1 & \text{if } p_i = \theta_i \\ 0 & \text{if } p_i \neq \theta_i \end{cases}$$

- Interest Groups (IGs)

N interest groups, one per issue

$$v^i(p_i) = \begin{cases} 1 & \text{if } p_i = 1 \\ 0 & \text{if } p_i = 0 \end{cases}$$

Interest Group i prefers policy 1 irrespective of SoW

Four stage game

Interaction between PM and IGs modeled as follows:

- 1 **[Lobby Formation Stage]** Each IG simultaneously decides whether to organize as lobby (at cost c_i)
If organized, nature reveals θ_i to group i
- 2 **[Lobbying Stage]** Each organized IG $_i$ simultaneously decides whether to lobby the policy maker (at cost $f_i < 1$)
 - Let $\ell_i = 1(0)$ denote IG $_i$'s action to lobby (not lobby)
- 3 **[Access Stage]** PM decides which IG(s) to grant access to;
If granted access, IG $_i$ reveals θ_i to the policy maker
 - Let $a_i = 1(0)$ denote PM's action of granting (not granting) access to IG $_i$
- 4 **[Policy Choice Stage]** PM chooses p_1, \dots, p_N

Main Innovation of the Paper

We incorporate two realistic features of the policy making process: Granting access to IGs and implementing reform are resource/time intensive processes

- Access Constraint: PM can grant access to at most K IGs
 - Formally, $\sum a_i \leq K$
- Agenda Constraint: PM can implement reform on at most M issues
 - Formally, $\sum p_i \leq M$
- Interesting case: $K \leq M \leq N$ (with at least one strict inequality)

Except for these constraints, the set-up is most conducive to information transmission via lobbying

Solving the Model

- Solve using backward induction
- (Weak) Perfect Bayesian Equilibrium

- β (beliefs), λ (lobbying strategy), γ (access strategy), ρ (policy choice)
- Elements of an equilibrium
 - $\beta_i(a, \ell; \theta) : \text{PM's posterior beliefs, } \Pr(\theta_i = 1)$
 - $\beta = (\beta_1, \dots, \beta_N)$ where $\beta_i \equiv \beta_i(a, \ell; \theta)$
 - $\rho_i(a, \ell) : \text{policy choice rule, } \rho_i = \Pr(p_i = 1)$
 - $\gamma_i(\ell) : \text{policy maker's access strategy}$
 - denotes Prob that IG_i is granted access
 - $\lambda_i(\theta_i) : \text{lobbying strategy}$
 - denotes Prob that IG_i lobbies
 - $\beta_i^0(\ell_i) : \text{policy maker's interim beliefs after observing lobbying actions but before access}$
 - $E_i : \text{lobby formation decision}$

- IG formation stage not modeled
 - Consider the case where all N groups have formed lobbies (for all $i, E_i = 1$)
 - check robustness later
- Symmetric case:
 - $\alpha_1 = \dots = \alpha_N = \alpha$
 - $f_1 = \dots = f_N = f$
 - $\pi_1 = \dots = \pi_N = \pi$
- Status-quo is ex-ante optimal policy ($\pi < 1/2$)
- Solve for a symmetric equilibrium

No Agenda Constraint

$$1 \leq K < M = N$$

Policy making stage

- Let $\beta = (\beta_1, \dots, \beta_N)$ denote the posterior beliefs of the policy maker given information I

$$\beta_i = \Pr(\theta_i = 1)$$

- Consider a policy rule: $\rho(\beta) = (\rho_1(\beta), \dots, \rho_N(\beta))$
 ρ_i denotes the probability of choosing policy 1

- Lemma 1: Optimal policy rule is

$$\rho_i^*(\beta) = \begin{cases} 1 & \beta_i > 1/2 \\ [0, 1] & \beta_i = 1/2 \\ 0 & \beta_i < 1/2 \end{cases}$$

- Value of information on issue i

$$\alpha_i \cdot [1 - \max\{\beta_i^0, 1 - \beta_i^0\}]$$

- Lemma 2: Optimal access strategy is grant access to issue i over j if

$$\alpha_i [1 - \max\{\beta_i^0, 1 - \beta_i^0\}] > \alpha_j [1 - \max\{\beta_j^0, 1 - \beta_j^0\}]$$

i.e. in the symmetric case ($\alpha_i = \alpha_j$)

$$\max\{\beta_i^0, 1 - \beta_i^0\} < \max\{\beta_j^0, 1 - \beta_j^0\}$$

- Intuitively, PM grants access to those K groups with β^0 s close to $1/2$

Lobbying Stage

- In symmetric equilibrium, each group lobbies with probability $\lambda_1(\lambda_0)$ when $\theta_i = 1(0)$
- Symmetric access strategy: If I groups lobby, each group granted access with equal probability $\gamma = \min\{1, \frac{K}{I}\}$
- Denote the probability of each group lobbying by δ

$$\delta \equiv \pi \cdot \lambda_1 + (1 - \pi) \cdot \lambda_0$$

- $\Gamma(\delta)$: probability of group i being granted access upon lobbying

$$\Gamma(\delta) \equiv \sum_{n=0}^{K-1} \binom{N-1}{n} \cdot \delta^n \cdot (1-\delta)^{N-1-n} \cdot 1 + \sum_{n=K}^{N-1} \binom{N-1}{n} \cdot \delta^n \cdot (1-\delta)^{N-1-n} \cdot \frac{K}{n+1}$$

Characterizing Symmetric Eqm.

- Policy maker's beliefs:
 - $\beta_i(1, 1; \theta_i)$: beliefs when i lobbies, and is given access \Rightarrow learns the true state
 - $\beta_i(1, 0; \theta_i)$: beliefs when i lobbies but not given access
 - $\beta_i(0, 0; \theta_i)$: beliefs when i does not lobby
 - $[\beta_i(0, 1; \theta_i)$: relevant in the case of an extension with subpoena powers]

For simplicity let's suppress i

- Using Bayes rule

$$\beta(1, 0) = \frac{\lambda_1 \cdot \pi}{\delta}$$
$$\beta(0, 0) = \frac{\lambda_0 \cdot (1 - \pi)}{1 - \delta}$$

- Policy rule can be denoted by $\rho(1, 1)$, $\rho(1, 0)$ and $\rho(0, 0)$

- Denote each group i 's expected payoff in state θ_i by $EV^i(\theta_i)$

$$EV^i(1) = \lambda_1 \cdot [\Gamma(\delta) \cdot 1 + (1 - \Gamma(\delta))\rho(1, 0) - f] + (1 - \lambda_1)\rho(0, 0)$$

$$EV^i(0) = \lambda_0 \cdot [\Gamma(\delta) \cdot 0 + (1 - \Gamma(\delta))\rho(1, 0) - f] + (1 - \lambda_0)\rho(0, 0)$$

- Optimal lobbying strategy is given by the FOCs

Proposition 1:

Suppose $1 \leq K < M = N$. There exists a unique equilibrium in symmetric strategies wherein we have

- 1 $\delta^* \in (0, 1)$
- 2 $\lambda_1^* > \lambda_0^*$
- 3 $\beta^*(0, 0) < \frac{1}{2} \leq \beta^*(1, 0)$

Furthermore, the equilibrium **MUST** be one of two types:

- Full Information Equilibrium: $\lambda_1^* = 1, \lambda_0^* = 0$
- Overlobbying Equilibrium: $\lambda_1^* = 1, \lambda_0^* \in (0, 1)$

Proposition 2:

For a given K , the equilibrium is

- 1 fully informative if and only if $1 - \Gamma(\pi) \leq f < 1$
- 2 involves overlobbying if and only if $f < 1 - \Gamma(\pi)$

Proposition 2':

For a given f , there exists $\bar{K}(f)$ such that , the equilibrium is

- 1 fully informative if and only if $K \geq \bar{K}(f)$
- 2 involves overlobbying if and only if $K < \bar{K}(f)$

Intuition behind Prop. 2, 2'

- Our model combines signaling and screening
 - lobbying signals favorable information
 - access screens the information
- Lobbying and access are complements
 - greater access improves the value of the signal
- Lobbying can be susceptible to congestion externalities
 - while lobbying, each group ignores the opportunity cost of access denied to other groups with better information
 - this can lead to overlobbying

$$1 \leq K \leq M < N$$

Agenda constraint could be due to time constraint or as a policy choice

- Effects of agenda constraint
 - Negative effect: fewer policies to choose
 - Ambiguous effect: more/less information transmission?
- Lower M reduces the payoff from lobbying: even if the state is favorable, reform may not be implemented
- However, reduced incentives to over-lobbying also solve the congestion externalities \Rightarrow improves the quality of screening!

Analysis of the Agenda Constrained Game

- Characterize the symmetric equilibrium of the " M -agenda constrained game"
- Find conditions under which the equilibrium leads to full information, over/under-lobbying
- We show that, for a given M there exist cost cut-offs $\underline{f}(M)$ and $\bar{f}(M)$ such that
 - $\underline{f}(M) < \bar{f}(M)$
 - Full information equilibrium if $f \in [\underline{f}(M), \bar{f}(M))$
 - Overlobbying if $f \in [0, \underline{f}(M))$
 - Underlobbying if $f \in [\bar{f}(M), 1)$

Main Result

Consider a given f .

Proposition 3:

$\exists M^* \in \{K, \dots, N\}$ such that the equilibrium associated with M^* is a full information equilibrium.

Proposition 4: There exists a range of parameter values for which the equilibrium of the agenda constrained game Pareto dominates the equilibrium of the unconstrained game.

- A practical way to constraint M : restrict the frequency and duration parliamentary session

"HYPERACTIVITY is not a virtue in a legislature. Winston Churchill thought Parliament should meet for no more than five months a year. Texas enjoys relative freedom from red tape partly because its state legislature meets only every other year. If the European Parliament sat only once every two years, the continent's regulation-infested economy might well be healthier."

("Britain's Lethargic Parliament", Leaders Section, The Economist, April 5-11, 2014 issue)

- <http://www.smh.com.au/federal-politics/political-opinion/the-less-parliament-sits-the-better-off-we-all-will-be-20111119-1nohw.html>

- Endogenous entry: We verify that equilibrium results are consistent with the lobby formation stage
- Solved the full model, with asymmetric environment, but $N = 2$
 - found qualitatively similar characterization of equilibria
 - the more salient the issue, lesser the extent of overlobbying

- Subpoena power: Suppose PM can mandate IGs to provide information, irrespective of whether they lobbied
- Subpoena power \rightarrow PM bears the cost of gathering information
 - No Agenda Constraint ($N = 2$)
 - Subpoena power weakly reduces PM's welfare
 - Agenda Constraint ($N = 1$)
 - Subpoena power may improve PM's welfare
 - IGs weakly better off with subpoena power (for $N = 1, 2$)

Contribution of the Paper

- Attempts to model both provision (lobbying) and processing (access) of information
- Accounts for transactions cost, esp. in information processing
- Overlobbying: even with verifiable information no full transmission of information due to congestion externalities
- Agenda control/constraint can improve welfare by reducing overlobbying

Doing robustness check

- continuous state space/ multiple reform options per issue
- imperfect signals
- (costly) cheap talk
- pro- and anti-reform lobbies
- continuous screening: quality vs quantity tradeoff