An informational theory of coalitional lobbying

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Introduction

Correlational evidence that lobbying coalitions are more effective when they are heterogeneous:

- In their bills being granted committee consideration in Congress (Lorenz 2020, JOP).
- In influencing the final rule in "notice-and-comment" rulemaking in federal agencies (Dwidar 2022, APSR; Policy Studies Journal).
- In implementing their preferred policy in five European countries (Junk 2019, AJPS).

The argument is that diverse coalitions moderate their demands and produce more reliable information.

Questions

1. Why are coalitions more persuasive than separate lobbyists?
2. When do interest groups choose to form coalitions?
3. What are the welfare consequences?

The Model

Two interest groups lobby a policymaker.

Proposals are two-dimensional, (x, y), where

- $x \in \mathbb{R}$ is a positional or distributive dimension that the groups care about,
- $y \in \{0, 1\}$ is the value for the policymaker (e.g., "quality").

The quality of a proposal x, y_x, is unknown.

The lobbies can choose x, gather information about y_x, and communicate it to the policymaker if convenient.

There is a status quo policy with value $q \geqslant 0$ for the policymaker, and 0 for the groups.

The groups agree that any change over the status quo has value 1, but disagree about x.

Policy choice

For any x, the common prior belief is $\Pr(y_x = 1) = \mu \in (0, 1)$.

Let (x, m) be a proposal, where m is a verifiable message.

Let $\mu_m = \Pr(y_x = 1 \mid m)$ be the posterior belief upon observing m.

The policymaker implements (x, m) if $\mu_m \geqslant q$.

Assumption 1. $\mu < q$. The policymaker needs information in order to be convinced.

Information structure

Given x, each group can observe a realization $s \in \{0, 1\}$ of a signal $\sigma(y_x)$ at cost $c > 0$.

The signal is such that s shifts the prior from μ to μ_s, where

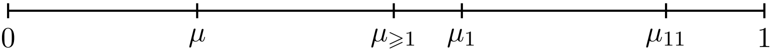
$$0 < \mu_0 < \mu < \mu_1 < 1.$$

If they lobby independently, they can send $m \in \{0, s\}$.

If they lobby together and observe signal realizations s_1, s_2 they can send $m \leqslant s_1 + s_2$.

$\mu_{11} = \Pr(y = 1 \mid s_1 + s_2 = 2)$ and $\mu_{\geqslant 1} = \Pr(y = 1 \mid s_1 + s_2 \geqslant 1)$.

Example: $\mu = .25$, $\mu_0 = .1$, $\mu_1 = .6$, $\mu_{11} \approx 0.87$, $\mu_{\geqslant 1} \approx 0.51$.



Interest groups' preferences

Group i's payoff is

$$u_i = a(1 + v_i(x)) - ce_i,$$

where

- $a \in \{0, 1\}$ is whether any proposal is implemented,
- $v_i(x) = -(x - \hat{x}_i)^2$, and $\hat{x}_i \in \mathbb{R}$ is the group's ideal point,
- $c > 0$ is the cost of information gathering effort,
- $e_i \in \{0, 1\}$ is the effort decision.

Let $h = |\hat{x}_2 - \hat{x}_1|$ the distance between the groups' ideal points. Measure of **heterogeneity**.

I normalize $\hat{x}_2 = h/2$ and $\hat{x}_1 = -h/2$.

Assumption 2

Assumption 2.

$$\min\{\Pr(s=1)(1-\Pr(s=1)), \Pr(s_1=s_2=1)\} \geqslant c$$

The value of their ideal proposal is large enough relative to the cost of gathering information.

The groups lobby separately

Timing of interaction:

1. Groups $i \in \{1, 2\}$ choose $x_i \in \mathbb{R}$ and $e_i \in \{0, 1\}$ simultaneously.
2. If $e_i = 1$, i observes $s_i \sim \sigma(y_{x_i})$ and otherwise $s_i = 0$. They choose messages $m_i \in \{0, s_i\}$.
3. The policymaker observes (x_1, m_1), (x_2, m_2) and chooses $x \in \{x_1, x_2\}$ and $a \in \{0, 1\}$, whether to implement a proposal or not. If indifferent between x_1 and x_2, she chooses one uniformly at random.

Equilibrium concept: PBE in pure strategies.

CASE 1: $\mu_{11} \geqslant q > \mu_1$

The policymaker is hard to convince. She needs two positive signal realizations.

The groups have to lobby for the same policy, or do nothing.

Multiple equilibria: they can coordinate on any $x \in \mathbb{R}$ such that

$$\Pr(s_1 = s_2 = 1)(1 + v_i(x)) - c \geqslant 0$$

for both i.

If $h > \tilde{h}$, the set of compromise policies is empty, hence they don't lobby.

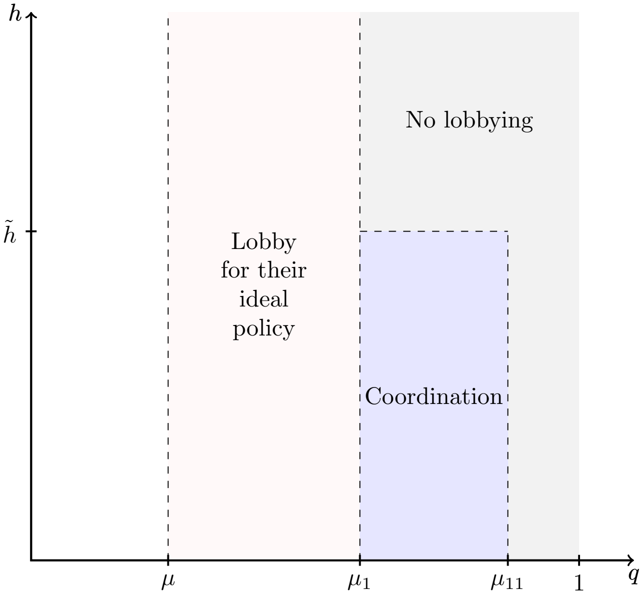
Assumption 3. They coordinate on $x = 0$ (focal) if $h \leqslant \tilde{h}$.

Case 2: $\mu_1 \geqslant q > \mu$

One positive signal is enough to convince the policymaker.

They lobby for their ideal policy.

Summary



h
$\tilde{h}$
No lobbying
Lobby for their ideal policy
Coordination
μ
μ_1
μ_{11}
1
q

Coalitional lobbying

Suppose that the groups can form a coalition and lobby together.

Simplest possible bargaining protocol:

- one group, $i \in \{1, 2\}$, is chosen at random,
- she proposes $x_c \in \mathbb{R}$ or not to form the coalition,
- the other, j, accepts or not,
- if both agree, the proposer chooses $e_i \in \{0, 1\}$ and both observe s_i,
- the other group chooses $e_j \in \{0, 1\}$ and both observe s_j,
- i chooses $m \leqslant s_1 + s_2$ and proposes (x, m) to the policymaker.

If they don't agree to form a coalition, we are back in the previous environment.

The outcome in the lobbying independently subgame determines the groups' outside options.

Case 1: $\mu_{11} \geqslant q > \mu_1$

The outside option if $h \leqslant \tilde{h}$ is $x = 0$ and $e_1 = e_2 = 1$, and if $h > \tilde{h}$ is no lobbying. Expected payoff:

$$\underline{u} = \begin{cases} \Pr(s_1 = s_2 = 1)(1 + v_i(0)) - c, & \text{if } h \leqslant \tilde{h}, \\ 0 & \text{otherwise.} \end{cases}$$

Strategy available (**pooling resources**):

- proposer chooses x_c and $e_i = 1$,
- follower chooses $e_j = \mathbb{1}(s_i = 1)$,
- they report $(x_c, s_i + s_j)$.

They don't waste effort.

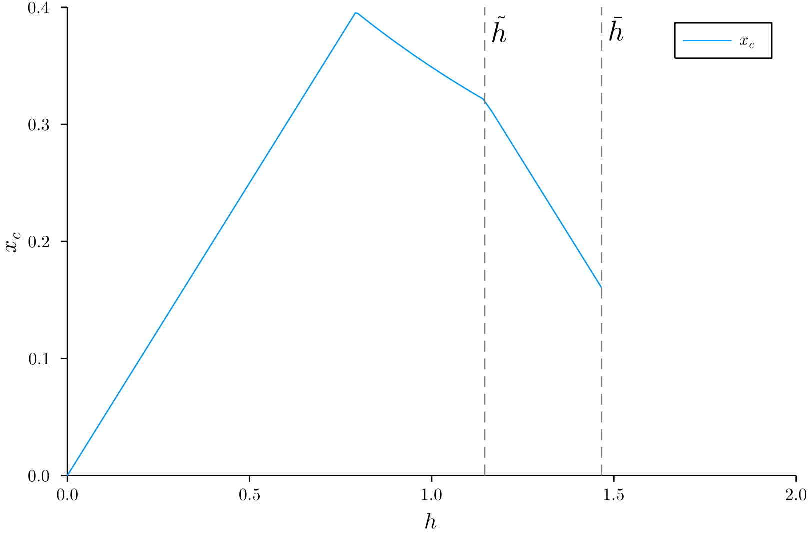
Proposer's problem

The proposer i chooses x_c to

$$\begin{aligned} &\text{maximize } v_i(x_c) \\ &\text{subject to } \Pr(s_i = s_j = 1)(1 + v_i(x_c)) - c \geqslant 0, && (\mathrm{IC}_i) \\ &\Pr(s_j = 1 | s_i = 1)(1 + v_j(x_c)) - c \geqslant 0, && (\mathrm{IC}_j) \\ &\Pr(s_i = s_j = 1)(1 + v_i(x_c)) - c \geqslant \underline{u}, && (\mathrm{IR}_i) \\ &\Pr(s_i = s_j = 1)(1 + v_j(x_c)) - \Pr(s_i = 1)c \geqslant \underline{u}. && (\mathrm{IR}_j) \end{aligned}$$

Proposition 1. *There is $\bar{h}_1 > \tilde{h}$ such that if $\mu_{11} \geqslant q > \mu_1$ then there is coalitional lobbying for $h \leqslant \bar{h}_1$ (the groups pool resources), and no lobbying for $h \geqslant \bar{h}_1$.*

Policy when $\mu_{11} \geqslant q > \mu_1$



Case 2: $\mu_1 \geqslant q > \mu_{\geqslant 1}$

The outside option is lobbying for their ideal policies, so

$$\underline{u} = \Pr(s_i + s_j \geqslant 1) + \left(\frac{1}{2}\Pr(s_i = s_j = 1) + \Pr(s_j = 1, s_i = 0)\right) v_i(\hat{x}_j).$$

Strategy available (**moderating coalition**):

- proposer i chooses x_c and $e_i = 1$,
- follower chooses $e_j = 0$,
- they report (x_c, s_i).

They agree not to compete.

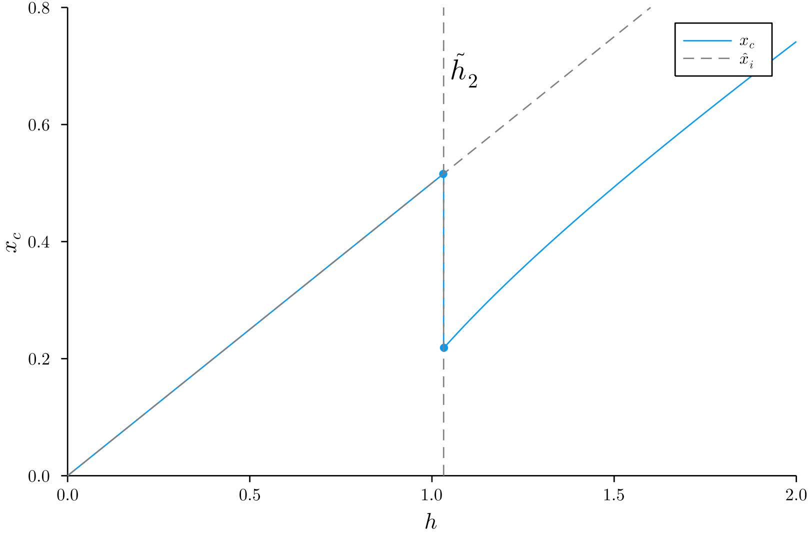
Proposer's problem

The proposer i chooses x_c to

$$\begin{aligned} \text{maximize } & v_i(x_c) \\ \text{subject to } & \Pr(s_i = 1)(1 + v_i(x_c)) - c \geqslant 0, & (\mathrm{IC}_i) \\ & \Pr(s_j = 1 | s_i = 0)(1 + v_j(x_c)) - c \leqslant 0, & (\mathrm{IC}_j) \\ & \Pr(s_i = 1)(1 + v_i(x_c)) - c \geqslant \underline{u}, & (\mathrm{IR}_i) \\ & \Pr(s_i = 1)(1 + v_j(x_c)) \geqslant \underline{u}. & (\mathrm{IR}_j) \end{aligned}$$

Proposition 2. *There is $\tilde{h}_2 > 0$ such that if $\mu_{11} \geqslant q > \mu_1$ then there is coalitional lobbying for $h \geqslant \tilde{h}_2$, and otherwise the groups lobby for their ideal policy.*

Policy when $\mu_{11} \geqslant q > \mu_1$



Case 3: $\mu_{\geqslant 1} \geqslant q > \mu$

The outside option is again lobbying for their ideal policies, so

$$\underline{u} = \Pr(s_i + s_j \geqslant 1) + \left(\frac{1}{2}\Pr(s_i = s_j = 1) + \Pr(s_j = 1, s_i = 0)\right) v_i(\hat{x}_j).$$

New strategy available (**persuasive coalition**):

- proposer i chooses x_c and $e_i = 1$,
- follower chooses $e_j = \mathbb{1}(s_i = 0)$,
- they report $(x_c, \max\{s_i, s_j\})$.

If the policymaker observes $m = 1$, she knows that at least one signal realization was positive, i.e., $s_i + s_j \geqslant 1$.

Hence her posterior is $\mu_{\geqslant 1}$. This is enough to induce $a = 1$.

Proposer's problem

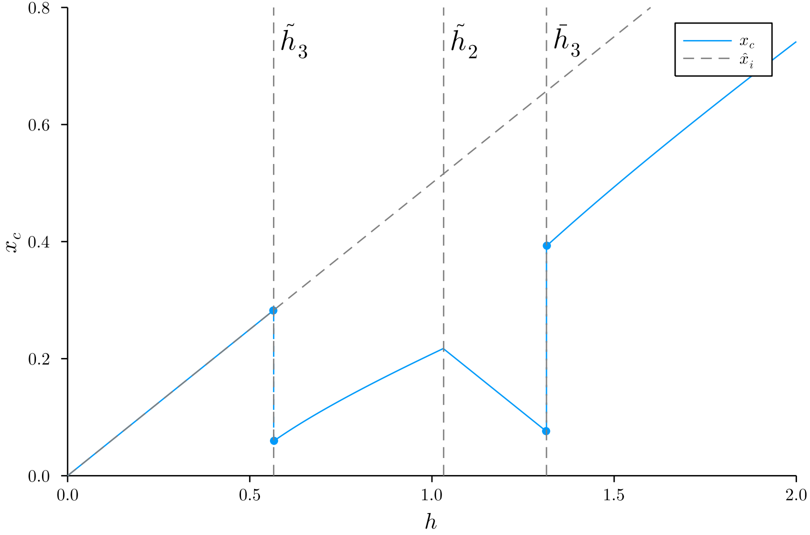
The proposer i chooses x_c to

$$\begin{aligned}
\text{maximize } & v_i(x_c) \\
\text{subject to } & \Pr(s_i + s_j \geqslant 1)(1 + v_i(x_c)) - c \geqslant \Pr(s_j = 1)(1 + v_i(x_c)), && (\mathrm{IC}_i) \\
& \Pr(s_j = 1 | s_i = 0)(1 + v_j(x_c)) - c \geqslant 0, && (\mathrm{IC}_j) \\
& \Pr(s_i + s_j \geqslant 1)(1 + v_i(x_c)) - c \geqslant \underline{u}, && (\mathrm{IR}_i) \\
& \Pr(s_i + s_j \geqslant 1)(1 + v_j(x_c)) - \Pr(s_i = 0)c \geqslant \underline{u}. && (\mathrm{IR}_j)
\end{aligned}$$

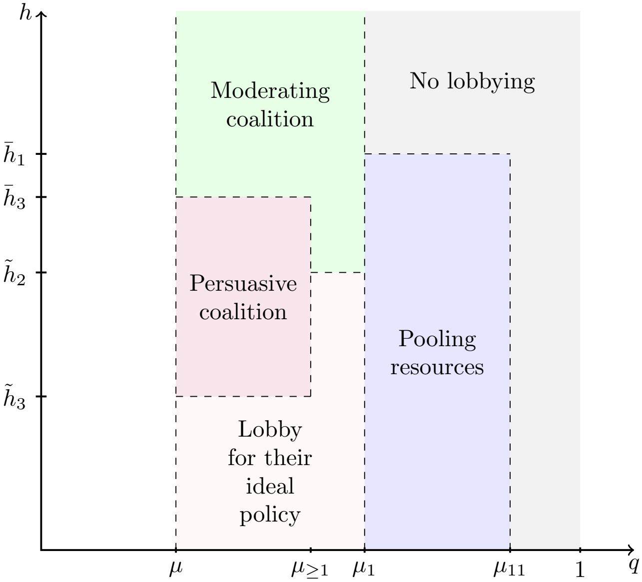
Proposition 3. *If $\mu_{\geqslant 1} \geqslant q > \mu$, there are $\tilde{h}_3 < \tilde{h}_2 < \bar{h}_3$ such that*

- *if $h \leqslant \tilde{h}_3$, each group lobbies for her ideal policy,*
- *if $\tilde{h}_3 \leqslant h \leqslant \bar{h}_3$, they form a coalition to persuade,*
- *if $\bar{h}_3 \leqslant h$, they form a coalition to moderate.*

Policy when $\mu_{\geqslant 1} \geqslant q > \mu$



Summary



h
$\bar{h}_1$
$\bar{h}_3$
$\tilde{h}_2$
$\tilde{h}_3$
Moderating coalition
No lobbying
Persuasive coalition
Pooling resources
Lobby for their ideal policy
μ
$\mu_{\geq 1}$
μ_1
μ_{11}
1
q

Takeaway

Three reasons to form a coalition:

1. To pool resources. Occurs when

   - the policymaker has a very valuable outside option ($\mu_{11} \geqslant q > \mu_1$), hence hard to convince, and
   - heterogeneity is not too large.

2. To moderate and agree not to compete. Occurs when

   - the policymaker has a moderately valuable outside option ($\mu_1 \geqslant q > \mu$), and
   - heterogeneity is high.

3. To moderate in order to be more persuasive by filtering information. Occurs when

   - the policymaker has a low value outside option ($\mu_{\geqslant 1} \geqslant q > \mu$), hence easy to convince, and
   - heterogeneity is intermediate.

Welfare

From the point of view of the policymaker, is it good that the groups "collude"?

We can look at the ex ante welfare of the policymaker.

1. Lobbying to pool resources benefits the policymaker, since she has more information.
2. Lobbying to moderate and lobbying to persuade harm the policymaker, relative to lobbying separately, since the policymaker receives less information.
3. Lobbying to persuade is worse than lobbying to moderate.

A policymaker with low bargaining power would be better off with competition between lobbies.

A policymaker with high bargaining power is better off by letting the groups form a coalition.

Future work

Extensions:

1. Let the policymaker care to some extent about x.
2. Let the policymaker have access to another source of information ex post.
3. Access costs?
4. Study a more general information structure.
5. Empirical implications?

Literature

Interest group literature: Hojnacki (1997, AJPS), Hula (1999), Hansen et al (2005, AJPS), Drope & Hansen (2009, PRQ), Nelson & Yackee (2012, JOP), Barber et al (2014, Business and Politics), Junk (2019, AJPS), Lorenz (2020, JOP), Dwidar (2022, APSR), etc.

Other informational theories about the organization of interest groups: Battaglini & Bénabou (2003, JEEA), Martimort & Semenov (2008, JPubE).

Lobbying with verifiable information: Austen-Smith & Wright (1992, Soc. Choice Welf.), Bennedsen & Feldman (2002, JPE; 2006, JPubE), Cotton (2012, JPubE), Ellis & Groll (2020, APSR), etc.

Thanks!