The larger the better?
The role of interest-group size in legislative lobbying

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Motivation

- Most political decisions taken in legislatures and committees.
- Legislative lobbying models with exogenous policy proposal.
- In reality, proposals made by one or several members of the legislature
  - party in government in parliamentary democracies
  - member of Congress in U.S.

- This paper:

- Research question:
  How does policy outcome depend on interest group strength?
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Results

- An increase in size of one interest-group may lead to an adverse policy change in favor of opposed interest-group.

  **Intuition:**
  - More expensive for pro-change lobby to win lobbying game
  - but higher payments to legislators associated with policy change.

  - Same mechanism can lead to status-quo persistence:
    larger pro-change lobby induces agenda-setter to propose non-implementable policy rather than a (more moderate) implementable one.
Results

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  ▶ but higher payments to legislators associated with policy change.

▶ Same mechanism can lead to status-quo persistence:

larger pro-change lobby induces agenda-setter to propose non-implementable policy rather than a (more moderate) implementable one.
Results

- In G/S-type framework, adverse effect of size only present for second-mover lobby.
  ⇒ Second-mover advantage may become second-mover disadvantage when proposal endogenous.

- With endogenous interest-group size:
  'swinging' of politically moderate individuals depending on policy proposal can lead to extreme policy changes to their disadvantage.
Empirical Observation

Baumgartner et. al. (2009) following 98 policy issues in U.S. Congress betw. 1999-2002 report:

“a surprisingly large number of issues consist of a single side attempting to achieve a goal to which no one objects or in response to which no one bothers to mobilize. Ironically, the lack of counter-mobilization is a good predictor of failure. [...] One might think that with no opposition, those lobbyists working on behalf of the issues with only one side would rule the day in Washington. Reality is far from this, even when the “lobbyist” in question is the Defense Department.”\(^1\).

\(^1\)Baumgartner et. al. (2009), p. 57.
Empirical Observation

“although uncertainty no doubt increases when advocates face greater active opposition, it would be premature to conclude that policy success is less likely when there is greater opposition. Just as resources are not clear predictors of policy success, the presence of active opposition is likely to be a similarly inadequate predictor.”
Related Literature

- Legislative Lobbying:
  Groseclose/Snyder (1996), Diermeier/Myerson (1999),
  Dekel/Jackson/Wolinsky (2008, 2009),
  Le Breton/Zaporozhets (2010).

- Empirics:
  Baumgartner/Berry/Hojnacki/Kimball/Leech (2009).
Outline of Presentation

Introduction

The Model

Equilibrium
  Equilibrium in the Lobbying Subgame
  Partitions of the Policy Space
  Decision Problem of the Policy Proposer

Results

Conclusions
The Model – General Set-up

- Continuous Legislature with measure $S$ of seats.
- Policy $t$ chosen from set $\tau \subset \mathbb{R}$.
- Status quo $t_s \in \tau$.
- Two types of individuals: type $X$ and $Y$:
  - $u_i(t)$: utility of individual of type $i \in \{X, Y\}$ from policy $t$.
  - $u_i(t)$: strictly concave and bounded in interval $\tau$.
  - Most preferred policy of $X$-type: $t_X^* = \min t \in \tau$.
  - Most preferred policy of $Y$-type: $t_Y^* = \max t \in \tau$.
- Define $v_i(t) := u_i(t) - u_i(t_s)$.
- $\tau_i := \{t : v_i(t) > 0\}$.
- Total utility of an individual of type $i$:
  $$U_i(t) = u_i(t) + d$$
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  \[
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  \]
Graph of Utility Gains
The Model – Lobbying

▷ Measure $l_i$ of individuals of type $i$ organized in interest group $i \in \{X, Y\}$.

▷ Maximal budget of lobby $i$: $B_i(t) = l_i |v_i(t)|$.

▷ $b_i(k, t)$: offer of interest group $i$ for legislator $k \in S$ given policy proposal $t$.

▷ Budget constraint: $\int_S b_i(k, t) \, dk \leq B_i(t)$. 
The Model – Voting by Legislators

- Legislators are either of type X or Y.
- Share of Y-type legislators: $\lambda_Y > \frac{1}{2}$.
- Legislators have preferences over policy outcomes rather than act of voting.
- Legislators’ votes are not pivotal (continuous legislature).
  \[ b_i(k, t) \geq b_j(k, t), \quad (1) \]
  where $i, j \in \{X, Y\}, i \neq j$, and $t \in \tau_i$. 
The Model – The Political Game

1. **Policy proposer** is randomly drawn among majority type (Y) of legislators and decides on a policy proposal $t_g$ to put up for a vote against $t_s$.

2. **Interest group** $X$ offers a payment schedule $\{b_X(k, t_g)\}_{k \in S}$ to the legislators for a vote pro $t_g$ if $t_g \in \tau_X$ and for a vote in favor of the status quo if $t_g \notin \tau_X$.

3. **Interest group** $Y$ offers $\{b_Y(k, t_g)\}_{k \in S}$ for a vote pro $t$ if $t_g \in \tau_Y$ and for a vote in favor of the status quo if $t_g \notin \tau_Y$.

4. **Legislators vote**
   The policy proposal will be implemented if a majority of legislators votes in favor of it.
Equilibrium in the Lobbying Subgame

Proposition (Equilibrium in the lobbying subgame)

*Given policy proposal, t, there exists a unique equilibrium in the lobbying subgame implying that*

(i) if $B_X(t) \geq T_X(t)$

**Stage 2** $X$ makes payments $b_X(k, t) = \frac{2B_Y(t)}{S}$ to all of the legislators for a vote in its favor.

**Stage 3** $Y$ does not make any payment offer.

**Stage 4** All legislators vote in favor of $X$. Hence, if $t \in \tau_X$, $t$ will be implemented, otherwise the status quo prevails.
Equilibrium in the Lobbying Subgame

Proposition (Equilibrium in the lobbying subgame, cont’d)

(ii) \( B_X(t) < T_X(t) \)

Stage 2  \( X \) makes no payment offers.
Stage 3  \( Y \) makes no payment offers.
Stage 4  All legislators of type \( X \) vote in favor of \( X \) and all legislators of type \( Y \) vote in favor of \( Y \). If \( t \in \tau_Y \), \( t \) will be implemented, otherwise the status quo prevails.

where \( T_X(t) = 2l_Y |v_Y(t)| \), (hurdle factor \( h = 2 \))
Four Partitions of the Policy Space

Define $F(t) = l_X v_X(t) + 2l_Y v_Y(t)$.

If and only if $F(t) \geq 0$, policy $t$ is implementable.
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**Case 1:** $B_Y(t)/B_X(t)$ very high: $\tau^I_Y = \tau_Y, \tau^I_X = \emptyset$
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If and only if $F(t) \geq 0$, policy $t$ is implementable.

Case 2: $B_Y(t)/B_X(t)$ high: $\emptyset \neq \tau^I_Y \subsetneq \tau_Y$, $\tau^I_X = \emptyset$
Four Partitions of the Policy Space

Define \( F(t) = l_X v_X(t) + 2l_Y v_Y(t) \).

If and only if \( F(t) \geq 0 \), policy \( t \) is implementable.

**Case 3:** \( B_Y(t)/B_X(t) \) low: \( \tau^I_Y = \emptyset, \emptyset \neq \tau^I_X \subsetneq \tau_X \)
Four Partitions of the Policy Space

Define $F(t) = l_X v_X(t) + 2l_Y v_Y(t)$.

If and only if $F(t) \geq 0$, policy $t$ is implementable.

Case 4: $B_Y(t)/B_X(t)$ very low: $\tau^I_Y = \emptyset$, $\tau^I_X = \tau_X$
Decision Problem of the Policy Proposer

\[
\max_{t \in \tau} V_Y(t) := U_Y(t) - U_Y(t_s) = 1_{t \in \tau} v_Y(t) + 1_{t \in \tau_X \cup \tau_{\neg Y}} b(t).
\]

If \( \emptyset \neq \tau_X \subset \tau_X \), choose \( t_X \) instead of \( t_Y \) if and only if
\[
V_Y(t_X) > V_Y(t^*_Y) \iff b(t_X) - b(t^*_Y) > -v_Y(t_X)
\]
\[
\iff \frac{2l_Y}{s} [v_Y(t_X) + v_Y(t^*_Y)] < v_Y(t_X).
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Decision Problem of the Policy Proposer

\[
\max_{t \in \tau} V_Y(t) := U_Y(t) - U_Y(t_s) = 1_{t \in \tau^I} v_Y(t) + 1_{t \in \tau^I_X \cup \tau^I_Y} b(t).
\]

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If \( \emptyset \neq \tau^I_X \subsetneq \tau_X \), choose \( t^I_X \) instead of \( t^*_Y \) if and only if

\[
V_Y(t^I_X) > V_Y(t^*_Y)
\]

\[
\iff b(t^I_X) - b(t^*_Y) > -v_Y(t^I_X)
\]

\[
\iff \frac{2l_Y}{S}[v_Y(t^I_X) + v_Y(t^*_Y)] < v_Y(t^I_X)
\]
Decision Problem of the Policy Proposer

$$\max_{t \in \tau} V_Y(t) := U_Y(t) - U_Y(t_s) = 1_{t \in \tau^I} v_Y(t) + 1_{t \in \tau^I \cup \tau^{-I}} b(t).$$

If $\emptyset \neq \tau^I_X \subsetneq \tau_X$, choose $t^I_X$ instead of $t^*_Y$ if and only if

$$V_Y(t^I_X) > V_Y(t^*_Y) \Leftrightarrow b(t^I_X) - b(t^*_Y) > -v_Y(t^I_X) \Leftrightarrow \frac{2l_Y}{S} [v_Y(t^I_X) + v_Y(t^*_Y)] < v_Y(t^I_X).$$
Role of Interest-Group Size  (pro-X partition)

Effects of $l_Y$: (1) $\tau^I_X$ smaller (as $T_X(t) = 2l_Y v_Y(t)$ increases with $l_Y$).

(2) utility from payments increases

(as $b(t) = \frac{2l_Y}{S} |v_Y(t)|$ increases with $l_Y$).

Strong second effect can result in $V_Y(t^I_X) > V_Y(t^*_Y)$. 
Role of Interest-Group Size (pro-X partition)

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Role of Interest-Group Size (pro-X partition)

Policy changes induced by greater opposition:

Proposition (Policy change)

Suppose $\tau^I_X \neq \emptyset$. The policy proposer will introduce the pro-$X$ policy $t^I_X \in \tau^I_X$ if and only if

(i) $-v_Y(t^I_X) > v_Y(t^*_Y)$ and

(ii) $l_Y \geq \frac{S v_Y(t^I_X)}{2[v_Y(t^I_X) + v_Y(t^*_Y)]}$.
Role of Interest-Group Size  (pro-Y partition)

Effects of $l_Y$: (1) $\tau^I_Y$ larger (as $T_X(t) = 2l_Y |v_Y(t)|$ increases with $l_Y$).

(2) utility from payments increases
   (as $b(t) = \frac{2l_Y}{S} |v_Y(t)|$ increases with $l_Y$).

Strong second effect can result in $V_Y(t^*_Y) > V_Y(t^I_Y)$. 

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Role of Interest-Group Size (pro-Y partition)

Persistence of status quo induced by stronger lobby in favor of policy change:

Proposition (Status Quo Persistence)

Suppose $\emptyset \neq \tau_Y^I \subsetneq \tau_Y$. The policy proposer will introduce the non-implementable pro-$Y$ policy $t_Y^*$ if and only if

$$l_Y > \frac{S v_Y(t_Y^I)}{2 v_Y(t_Y^*)}.$$
What drives the results?

- For an interest group, adverse effects of size only possible if:
  1. bribes paid by opposing lobby increase with own strength
  2. preferences of agenda-setter are sufficiently aligned with this lobby’s preferences.

- In G/S-type setting:
  1. (1) applies to second-mover but not to the first-mover lobby
  2. Situations with second-mover disadvantage can occur.
Further Results and Extensions

- Different lobbying subgames.
- Endogenous interest-group size.
- Lobbying at proposal stage.
- Efficiency/welfare.
Conclusions

Main result
- Increase in interest-group size may have adverse effects on policy outcome:
  - adverse policy changes,
  - status-quo persistence.
- Second-mover disadvantage.

Future research
- Empirics, Lobbying at proposal stage, Dynamics.