Selected Issues of the Public Sector: Special Interest Politics

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What is a SIG?

In the idealized democracy, public policy is guided by the principle of "one man, one vote".

However, in all real polities, special interest groups participate actively in the policy-making process.

What is a Special Interest Group (SIG)?

There is little consensus among social scientists, e.g.,

(i) Subset of voters with similar characteristics, beliefs, policy preferences.

(ii) Membership organizations that engage in politicy-related collective activities.

We will restrict ourselves to broad definition:

Any organized group that **can** engage in a given policy-relevant **activity**.

Some researchers have estimate that in the 2000 there were circa 7000 Special Interest Groups in the United States.

Most of the SIGs are organized around economic concerns, e.g.,

- trade associations (e.g., the Semiconductor Industry Association, American Iron and Steel Institute),
- labor unions (e.g., the American Postal Workers Union, American Federation of Teachers),
- professional associations (e.g., American Medical Association, National Bar Association).

There are SIGs who pursue noneconomic policy objectives, e.g.,

- drug and alcohol policy (Mothers Against Drunk Driving, National Organization for the Reform of Marijuana Laws),
- capital punishment (Citizens for Law and Order, National Coalition to Abolish the Death Penalty),
- gun control (National Rifle Association, Handgun Controls, Inc.),

Interest groups engage in a variety of **activities and tactics** to promote their political objectives:

(i) SIGs as **information providers**, (i.e., **lobbying activities**)

- Source of intelligence for lawmakers.

(ii) SIGs as **education providers**

- Incentive to shape public opinion to their favour.

(iii) SIGs as **resource providers**

- Campaign contributions.
- Buying a chance to meet with a lawmaker.
- Buying credibility.
- Buying influence.

Questions addressed

One would like to provide **answers** to the following **questions**:

(i) What determines the **extent** to which SIGs are able to affect **policy outcomes**?

(ii) Which **channels (activities and tactics)** do they exploit to bias policy outcomes to their favour?

(iii) What happens when SIGs with different objectives **compete** for influence?

This lesson aims at providing a partial answer to the first point, considering SIG as information provider.

Methodology and Assumptions

Which tools to analyze interactions policymakers and SIGs?

- Actors are **self-interested** and behave **rationally**.
- **Game-theoretical approach**: in search for an equilibrium.
  - Actors operate in a **strategic** (intra-stage) environment.
  - **Forward-looking** (inter-stage) **behavior**.
  - **Learning** from observables in an **imperfect information world.**

$\rightarrow$ **Coherent analytical framework(s)** to study policy issue, both economic and noneconomic.

What's lobbying?

- **Lobby:** organized group serving SIG's purposes.
- **Lobbying:** (collection and) strategic dissemination of information.
- More narrowly: lobbying as an attempt at **persuading** policymakers about importance of lobby's interests.
- Need to take care of (i) **informativeness** of lobbying (ii) **verifiability** of information.

Basic framework of analysis

(i) **One lobby (L), one policymaker (P)**.

(iia) P's welfare (objective) as a function of **policy** p (endogenous, controlled) and **state-of-the-world** θ (exogenous, unknown).

(iib) Ranking of policy options depends on underlying state-of-the world. For simplicity $G(p;\theta) = -(p-\theta)^2$.

Remarks:

1. policymaker's preferences might represent for example, the welfare of the members that are residents in the policymaker's district, and they will vote in the next election.

2. The pertinent facts are described by the variable θ. It might indicate the tightness of the labor market, which would affect a policymaker's evaluation of alternative interest rates.

(iiia) L's welfare (objective) as a function of policy p (endogenous, not controlled) and state-of-the-world θ (exogenous, known).

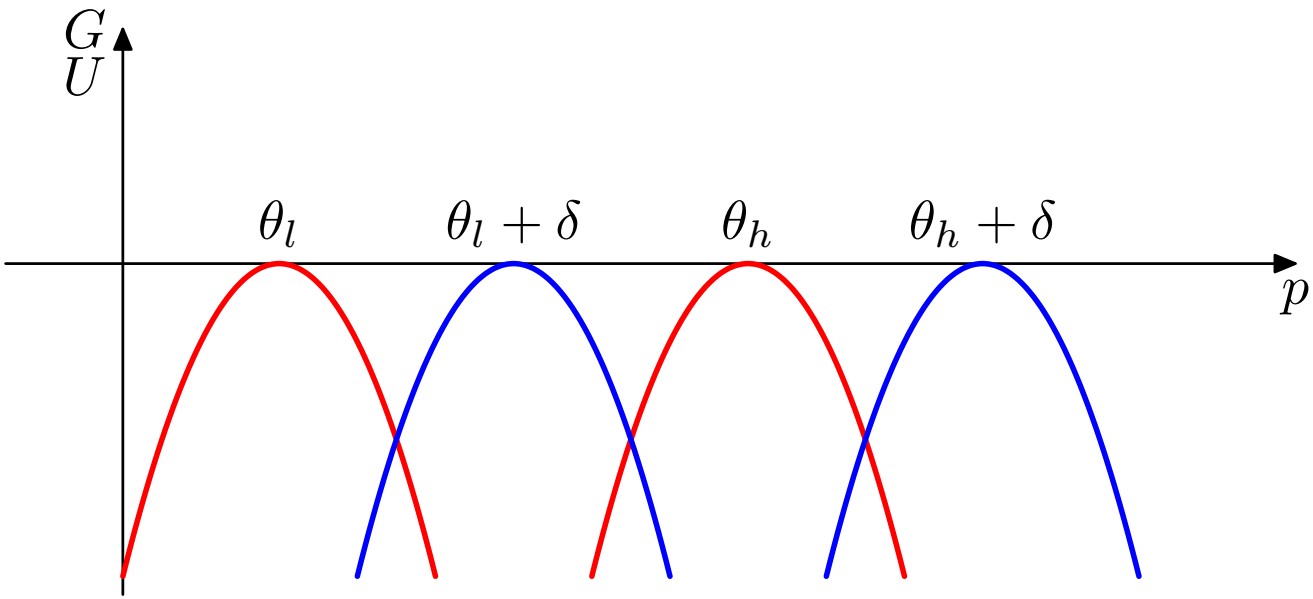
(iiib) Preferred policy outcomes depend on underlying state-of-the-world. For simplicity $U(p;\theta) = -(p - \theta - \delta)^2$, with $\delta > 0$.

(iv) **Asymmetric information**: L knows θ, P has prior beliefs on its possible values (i.e., probability distribution over r.v. θ)

(v) Preference structure (i.e., quadratic) and preference misalignment (i.e., δ) are common knowledge.

Two states of the world

- Suppose that there are only two states of the world: $\Theta = \{\theta_l, \theta_h\}$, with $\theta_l, \theta_h \in \mathbb{R}$ and $\theta_l < \theta_h$.



- The policymaker initially regards the two values as equally likely, i.e., $\text{Prob}(\theta = \theta_h) = \frac{1}{2}$.
- If L reveals the true state of the world, then a trusting policymaker solves

$$\max_{p \in \mathbb{R}} -(p - \theta)^2$$

  which implies $p = \theta$.
- If no information is disclosed, then the policymaker solves

$$\max_{p \in \mathbb{R}} \left\{ \text{Prob}(\theta = \theta_l)[-(p - \theta_l)^2] + \text{Prob}(\theta = \theta_h)[-(p - \theta_h)^2] \right\}$$

  which implies $p = \mathbb{E}_p(\theta)$ according to **ex-ante beliefs**, where $\mathbb{E}_{ea}(\theta) = \text{Prob}(\theta = \theta_l)\theta_l + \text{Prob}(\theta = \theta_h)\theta_h$.
- Similarly, if P remains uncertain, then $p = E_{ep}(\theta)$ according to **ex-post beliefs**.

Two states of the world: Equilibria

Our task: we want to investigate the conditions under which lobbying can be informative

Given $\theta \in \{\theta_l, \theta_h\}$, L can report two possible messages $m(\theta) \in \{\theta_l, \theta_h\}$.

We assume that the policymaker takes the lobbyist's claims at face value.

- **Case 1.:** θ_h is the true state of the world.

  (i) If L reports $m(\theta_h) = \theta_h$, then a trusting policymaker sets $p = \theta_h$.

  (ii) If L reports $m(\theta_h) = \theta_l$, then a trusting policymaker sets $p = \theta_l$.

Remark: For simplicity of notation we will write p instead of $p(m(\theta))$.

Notice that: $U(\theta_h; \theta_h) \geq U(\theta_l; \theta_h)$ if and only if $\theta_l \leq \theta_h$. Prove it!

Thus, L has **no incentive** to misrepresent the fact when the state is θ_h.

- **Case 2.:** θ_l is the true state of the world.

  (i) If L reports $m(\theta_l) = \theta_h$, then a trusting policymaker sets $p = \theta_h$.

  (ii) If L reports $m(\theta_l) = \theta_l$, then a trusting policymaker sets $p = \theta_l$.

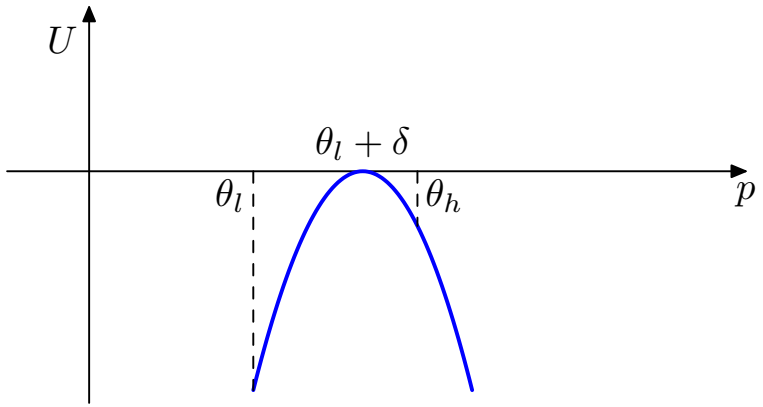
Notice that: $U(\theta_l; \theta_l) \geq U(\theta_l; \theta_l)$ iff $\delta \leq \frac{1}{2}(\theta_h - \theta_l)$. Prove it!

Summarizing:

(i) If $\delta \leq \frac{1}{2}(\theta_h - \theta_l)$ there exists an equilibrium with informative lobbying. The equilibrium is *fully revealing*.

(ii) If $\delta > \frac{1}{2}(\theta_h - \theta_l)$ the lobbyist's report lacks of credibility:

- The lobbyist has the incentive to announce the state θ_h no matter what the true state is.
- The policymaker do not care about the report of the lobbyist and sets $p = \mathbb{E}_{ea}\theta = \frac{1}{2}(\theta_h + \theta_l)$.



Babbling Equilibra: If $\delta \leq \frac{1}{2}(\theta_h - \theta_l)$ there exist equilibria in which, the policymaker do not care about the report of the lobbyist and sets $p = \mathbb{E}_{ea}\theta$.

Three states of the world

Assume that:

- Three states of the world: $\Theta = \{\theta_l, \theta_m, \theta_h\}$, with $\theta_l < \theta_m < \theta_h$.
- The policymaker perceives the three states of the world as equally likely.
- Given $\theta \in \Theta$, L can report three possible messages $m(\theta) \in \{\theta_l, \theta_m, \theta_h\}$.

When can the lobbyist advise the policymaker of the true state of the world?

- **Case 1.:** θ_l is the true state of the world.

(i) L prefers to report θ_l to θ_m if $U(\theta_l; \theta_l) \geq U(\theta_m; \theta_l)$. This leads to the condition

$$\delta \leq \frac{1}{2}(\theta_m - \theta_l) \tag{1}$$

(ii) Notice that a false report of θ_h is unattractive to L anytime it is unattractive to report state θ_m. Why?

- **Case 2.:** θ_m is the true state of the world.

  (i) L has no incentive to report state θ_l because L prefers a policy larger that θ_m, and a false report would induce the policymaker to choose a policy that is smaller than $p = \theta_m$.

  (ii) L prefers to report θ_m to θ_h $U(\theta_m; \theta_m) \geq U(\theta_h; \theta_m)$. This leads to the condition

$$\delta \leq \frac{1}{2}(\theta_h - \theta_m) \tag{2}$$

- **Case 3.:** θ_h is the true state of the world.

  - L has no incentive to report either the state θ_l or the state θ_m.

    Each of these false reports would induce the policymaker to choose a policy that is smaller than $p = \theta_h$, and the SIG regards this policy to be less than what it desires.

Therefore, conditions (1) and (2) are necessary and sufficient for an equilibrium with truthful report.

Equilibrium with limited communication

What will be happen when one of the previous conditions is violated?

Suppose that $\delta \leq \frac{1}{2}(\theta_m - \theta_l)$ and $\delta > \frac{1}{2}(\theta_h - \theta_m)$.

In this situation, given $\theta \in \Theta$, L can report two possible messages $m(\theta) \in \{\theta_l, \neg\theta_l\}$, where $\neg\theta_l = (\theta_m \vee \theta_h)$, i.e., θ_m or θ_h.

Then, a policymaker who takes the lobbyist's claim at face value sets $p = \theta_l$ when $m(\theta) = \theta_l$ and $p = \frac{1}{2}(\theta_h + \theta_m)$ when $m(\theta) = \neg\theta_l$. Why?

When does the lobbyist have incentive to report falsely in any of the three states?

- **Case 1.:** θ_h is the true state of the world.
  - L has no incentive to report falsely. If L claims $m(\theta_h) = \theta_l$, he would induce a policy of $p = \theta_l$. This is outcome is less desiderable than $p = \frac{1}{2}(\theta_h + \theta_m)$ since $\frac{1}{2}(\theta_h + \theta_m) > \theta_l$ and the SIG regards the policy $p = \frac{1}{2}(\theta_h + \theta_m)$ to be less than what it desires.

- **Case 2.:** θ_m is the true state of the world.
  - A truthful report report of $m(\theta_m) = \neg\theta_l$ will result in a policy level of $p = \frac{1}{2}(\theta_h + \theta_m)$, while a false report of $m(\theta_m) = \theta_l$ will result in a policy level of $p = \theta_l$.

    Thus, L will not report falsely if and only if $U(\frac{\theta_h+\theta_m}{2}; \theta_m) \geq U(\theta_l; \theta_m)$, which leads to the condition

$$\delta \geq \frac{\theta_h - \theta_m}{4} - \frac{\theta_m - \theta_l}{2} \tag{3}$$

    Notice that this condition is satisfied when condition (2) is violated.

- **Case 3.:** θ_l is the true state of the world.
  - A truthful report report of $m(\theta_l) = \theta_l$ will result in a policy level of $p = \theta_l$, while a false report of $m(\theta_l) = \neg\theta_l$ will result in a policy level of $p = \frac{1}{2}(\theta_h + \theta_m)$

    Thus L will not report falsely if and only if $U(\theta_l; \theta_l) \geq U(\frac{(\theta_h+\theta_m)}{2}; \theta_l)$, which leads to the condition

$$\delta \leq \frac{\theta_h - \theta_m}{4} + \frac{\theta_m - \theta_l}{2} \tag{4}$$

Therefore, when conditions (3) and (4) are satisfied, then there exists an equilibrium with partial transmission of the SIG's knowledge.

In the case in which conditions (1), (2), (3) and (4) are satisfied, we have three different kind of equilibria.

1. an equilibrium with truthful report;
2. an equilibrium with partial transmission of the SIG's knowledge;
3. Babbling equilibria.

Each of these reporting strategies may be justified by consistent beliefs of the policymaker.

Costly Lobbying

- So far, **no costs** for engaging in lobbying activities
- Reasonable?
  - Hiring lawyers, policy experts, high-priced spokespersons.
  - Advertising, entertaining policymakers.
- We study **incentives for SIGs to invest in lobbying**...
- ... and the effects of these costs on **lobbying efficacy**.
- Three costs' types:

(i) Exogenous: lobbying costs that are relatively fixed and outside the control of the SIG. They do not vary with the content of the SIG's message;

(ii) Endogenous: SIG may choose to run a costly advertising campaign rather than a more modest one. In this way, the SIG might be able to indicate something about the nature of the policy environment;

(iii) Access: these costs are imposed by the policymaker, e.g., the policymaker may insist that a SIG contribute to his campaign before to schedule a meeting.

Exogenous lobbying cost: two states of the world

(i) **One lobby (L), one policymaker (P)**.

(ii) P's welfare (objective) as a function of **policy** p and **state-of-the-world** θ

$$G(p;\theta) = -(p-\theta)^2$$

(iii) L's welfare (objective) as a function of policy p, state-of-the-world θ and fixed lobbying costs c

$$U(p,c;\theta) = -(p-\theta-\delta)^2 - c, \quad \delta > 0$$

where $c = 0$ if L chooses not to lobby, or $c = c_f > 0$ otherwise.

(iv) **Asymmetric information**: L knows θ, P has prior beliefs on its possible values (i.e., probability distribution over r.v. θ).

(v) Preference structure and preference misalignment (i.e., δ) are common knowledge.

Two states of the world: Timing

Assume $\Theta = \{\theta_l, \theta_h\}$ and $\text{Prob}(\theta = \theta_l) = 1/2$. Game unfolds as follows:

- L learns θ and chooses whether to bear the cost c_f or not.
- If so, P updates beliefs over θ conditional on L's message $m(\theta)$.
- If not, P may still update beliefs based on L's choice not to lobby.
- In any case, the game ends with P selecting p which maximizes his expected welfare, and payoffs are realized.

Equilibrium

- First, notice that incentives for truthful reporting are *not* altered by $c_f > 0$. Indeed,

(i) L will report truthfully when true state is θ_h (check it), yet might do so even when true state is θ_l.

(ii) Potential gain from false reporting might not overcome the lobbying cost: best not to lobby when true state is θ_l.

$\Longrightarrow$ SIG might do better when lobbying is costly!

- P would learn from this that the true state is θ_l indeed
- **Information conveyed by L's decision to show up, not by message's content.**

Let's construct an equilibrium according to which **lobbying** is observed iff θ_h **is the true state**.

- Failure to lobby makes P infer θ_l and viceversa.
- Such beliefs system must be **consistent in any PBE.** Therefore,

  (i) The SIG is willing to pay c_f when the state is θ_h if and only if $U(\theta_h, c_f; \theta_h) \geq U(\theta_l, 0; \theta_h)$, that is if and only if

  $$c_f \leq (\theta_h - \theta_l)(2\delta + \theta_h - \theta_l) =: \overline{k}$$

  (ii) The SIG prefers to refrain from lobbying when the state is θ_l if and only if $U(\theta_l, 0; \theta_l) \geq U(\theta_h, c_f; \theta_l)$, that is if and only if

  $$c_f \geq (\theta_h - \theta_l)(2\delta - \theta_h - \theta_l) =: \underline{k}$$

  Remark: $\underline{k} > 0$ if and only if $\delta > \frac{1}{2}(\theta_h - \theta_l)$. This makes sense, for it says that a positive lobbying cost is required for credibility if and only if the SIG has an incentive to report falsely when the state is θ_l.

- Since $\overline{k} > \underline{k}$, there exists range of c_f for which the previous inequalities are both satisfied. $\Longrightarrow$ **Such an equilibrium arises.**

Question 1.

Consider $\Theta = \{\theta_l, \theta_h\}$, and suppose that $\delta \leq \frac{1}{2}(\theta_h - \theta_l)$. If the lobbyist sends the message $m(\theta_l) = \theta_l$ to the policymaker, which of the following beliefs are consistent with the fully revealing equilibrium?

1. $\text{Prob}(\theta_l | m(\theta_l) = \theta_l) = \text{Prob}(\theta_h | m(\theta_l) = \theta_l) = \frac{1}{2}$;
2. $\text{Prob}(\theta_l | m(\theta_l) = \theta_l) = 0$ and $\text{Prob}(\theta_h | m(\theta_l) = \theta_l) = 1$;
3. $\text{Prob}(\theta_l | m(\theta_l) = \theta_l) = 1$ and $\text{Prob}(\theta_h | m(\theta_l) = \theta_l) = 0$;
4. $\text{Prob}(\theta_l | m(\theta_l) = \theta_l) = \frac{1}{3}$ and $\text{Prob}(\theta_h | m(\theta_l) = \theta_l) = \frac{2}{3}$.

Question 2.

Which of the following costs are endogenous?

1. Salaries of the technical experts;
2. To run a costly advertising campaign rather than a modest one;
3. A contribution to the policymaker's campaign;
4. Salaries of the lawyers.