Should Politicians be Informed?
Targeted Benefits and Heterogeneous Voters

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Motivation

Do voters benefit when politicians get their data?

- Benevolent policymaker could use data to help those most in need

Yet, in reality politicians are:

- office-motivated,
- competing,
- rent-seeking

$$\Rightarrow \text{ impact is less obvious!}$$

This paper

- Incumbent and Challenger compete by promising local public good provision to heterogeneous voters
- Having more information allows politicians to target swing voters in more efficient way to win election
- Implications of data access for voter welfare depend on size of budget
- Giving more information to politicians is bad for voter welfare when budget is large

Model

- **Set of voters** T and **two candidates** (Incumbent I and Challenger C)

Voters:

- Voter's type $t \sim \mathcal{U}[0,1]$
- Each voter t casts vote $\in \{I, C\}$

Candidates:

- Each candidate $i \in \{I, C\}$ chooses who to promise local public good to
- $S_i \subseteq T, i \in \{I, C\}$ - subsets of voters who got PG promise
- $s_i(S_i)$ - measure, $s_i(T) = 1$

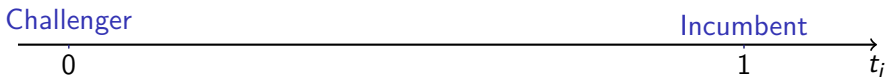
Model

Voter t's payoff:

$$\underbrace{-(1-t)}_{\text{ideology}} + \underbrace{\alpha \cdot (1-t) \cdot 1(t \in S_I)}_{\text{benefits}}, \quad \text{if the Incumbent wins,}$$

$$\underbrace{-t}_{\text{ideology}} + \underbrace{\alpha \cdot (1-t) \cdot 1(t \in S_C)}_{\text{benefits}}, \quad \text{if the Challenger wins.}$$

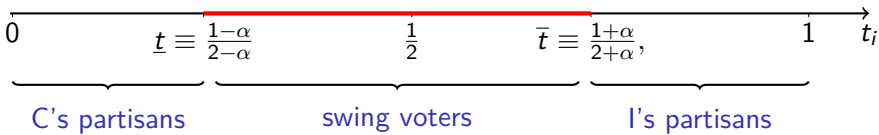
Ideology:



Benefits:

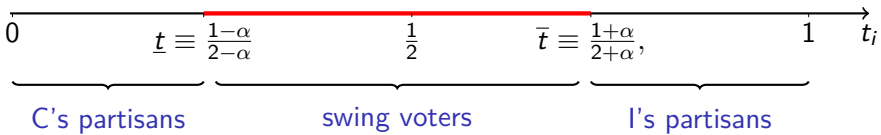
- t - wealth, more poor voter gets higher utility from targeted benefit

Model



$$\begin{cases} -(1-t) + \alpha(1-t) \cdot 1(t \in S_I), & \text{if the Incumbent wins} \\ -t + \alpha(1-t) \cdot 1(t \in S_C), & \text{if the Challenger wins.} \end{cases}$$

Model



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Incumbency advantage assumption:

- Tie-breaking: if both candidates get equal vote share of $\frac{1}{2}$, I wins

Model

Candidates prefer to spend less on PG, payoff of $i \in \{I, C\}$:

$$\pi_i = \begin{cases} v - s_i, & \text{if elected,} \\ 0, & \text{otherwise,} \end{cases}$$

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Timing if candidates are informed:

1. I and C observe voter types
2. simultaneous choice of S_I, S_C
3. voters observe S_I, S_C and vote
4. winner is determined & provides benefits

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Timing if candidates are uninformed:

1. I, C choose s_I, s_C simultaneously
2. voters get benefit promises at random, $\Pr(t \in S_i) = s_i, i \in \{I, C\}$, and vote
3. winner is determined & provides benefits

Informed politicians, small budget

Proposition (1, part 1)

Suppose that politicians are informed. Then, an equilibrium always exists, and all equilibria have the following properties.
If $v < \overline{t} - \frac{1}{2}$*, Incumbent offers public good to*

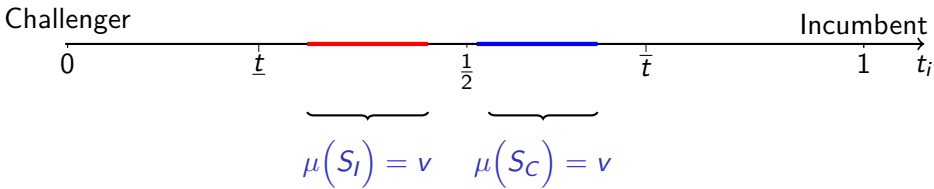
$$S_I \subset \left[\underline{t}, \frac{1}{2}\right] \text{ with } \mu(S_I) = v$$

and Challenger offers public good to

$$S_C \subset \left[\frac{1}{2}, \overline{t}\right] \text{ with } \mu(S_C) = v.$$

Voters with positions $t \in \left((0, \frac{1}{2}) \setminus S_I\right) \cup S_C$ *vote for the Challenger and voters with positions* $t \in \left((\frac{1}{2}, 1) \setminus S_C\right) \cup S_I$ *vote for the Incumbent. The Incumbent wins.*

Informed politicians, small budget



- I's vote share

$$(1 - \overline{t}) + \left(\overline{t} - \frac{1}{2}\right) - v + v = \frac{1}{2}.$$

- C can not win by deviating
- I can not deviate and win while paying less

Informed politicians, large budget

Proposition (1, part 2)

Suppose that politicians are informed. Then, an equilibrium always exists, and all equilibria have the following properties.
If $v > \overline{t} - \frac{1}{2}$*, Incumbent offers public good to*

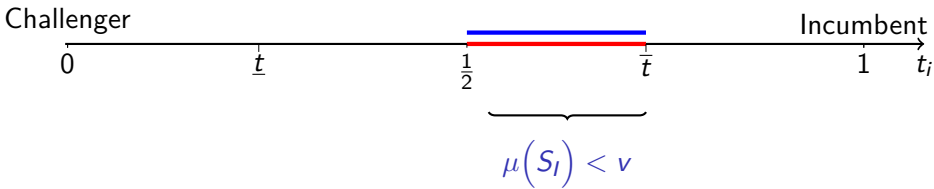
$$S_I = \left[\frac{1}{2}, \overline{t}\right]$$

and Challenger offers public good to

$$S_C : S_I \subseteq S_C \text{ with } \mu(S_C) \leq v.$$

Voters with positions $t < \frac{1}{2}$ *vote for the Challenger, and voters with positions* $t > \frac{1}{2}$ *vote for the Incumbent. The Incumbent wins.*

Informed politicians, large budget



- I's vote share
$$(1-\bar{t})+\left(\bar{t}-\frac{1}{2}\right)=\frac{1}{2}.$$
- C can not win by deviating
- I can not deviate and win while paying less

Uninformed politicians

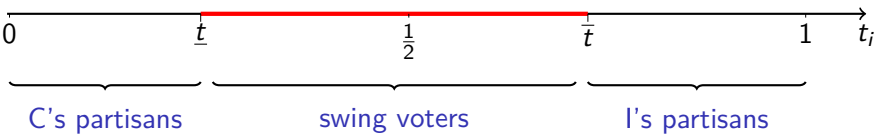
Proposition (2)

Suppose that politicians are uninformed. In the unique equilibrium

$$s_I = \frac{(2-\alpha)v}{\alpha(1-2v)+2}$$

and $s_C = v$. *The Incumbent gets* $1/2$ *of votes and wins.*

Uninformed politicians



- I's vote share

$$(1-\overline{t}) + \left(\overline{t} - \frac{1}{2}\right)(1 - s_C \cdot (1 - s_I)) + \left(\frac{1}{2} - \underline{t}\right)(1 - s_C)\, s_I,$$

- I sets s_I so that for $s_C = v$, I gets $\frac{1}{2}$ of votes

Voter welfare

Social welfare of voters:

$$\begin{cases} \int_0^1 -(1-t) + \alpha(1-t) \cdot 1(t \in S_I) dt, & \text{if the Incumbent wins} \\ \int_0^1 -t + \alpha(1-t) \cdot 1(t \in S_C) dt, & \text{if the Challenger wins.} \end{cases}$$

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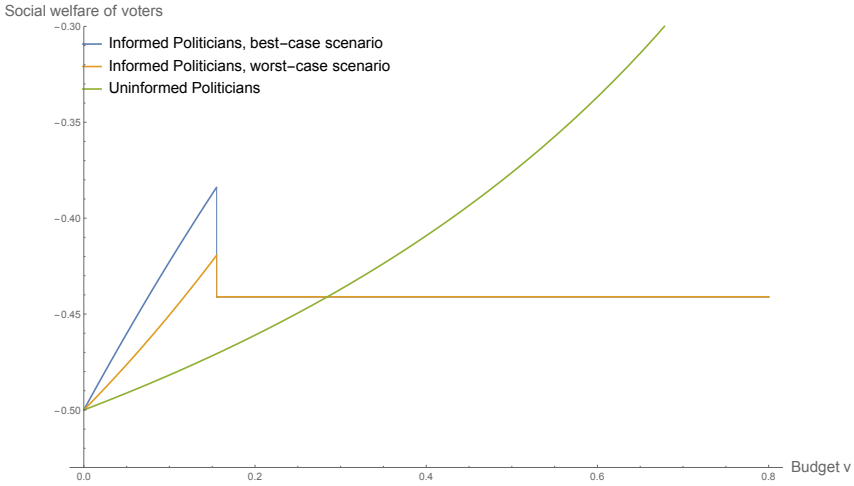
Proposition (3)

If

$$v > \frac{-\alpha^3 - 6\alpha^2 - 8\alpha}{2\alpha^3 - 16\alpha - 32},$$

then social welfare of voters is higher when politicians are uninformed. Otherwise, the social welfare is higher when politicians are informed.

Voter welfare



⏩ Case Study

Conclusion

- Incumbent and challenger compete for office by promising benefits provision to voters and prefer to win, while promising less
- We compare scenario in which I and C observe voters' ideology and wealth to scenario in which they do not
- Observing voters' types, I and C target only swing voters & do that in most cost-efficient way
- If budget is large, giving less information to politicians is better for voter welfare

Thank you for your attention!

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Literature

- **Distributive politics and pork-barrel spending**:
  Dixit and Londregan (1996), Dixit and Londregan (1998), Lizzeri and Persico (2001), Maskin and Tirole (2019)
- **Inequality-aware Market Design**:
  Akbarpour, Dworczak, and Kominers (2023)
- **Social implications of political microtargeting**:
  Prummer (2022), Titova (2022)

Case study

Belgian Vlaams Belang party:

- uses individual data to identify potential supporters and then target them with benefit offers
- economic policy is not well-defined and incoherent
- ranges from advocating deregulation favoring small business to demanding more social spending

Social-Democraticic party of Germany:
"His party [SPD] was busy knocking on 5 million doors, something unprecedented as far as German campaigns go. The only problem? They had no idea whose doors they were – supporters, opponents, swing voters – because Germany doesn't do microtargeting."
Olga Khazan, "Why Germany's Politics Are Much Saner, Cheaper, and Nicer Than Ours", the Atlantic.