Polarization and Issue-Selection in Electoral Campaigns

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Motivation

- Polarization has been a topic of increased public and scholarly interest.
- An extensive literature shows that parties selectively emphasize various policy issues in order to sway citizens to put more weight on those considerations when casting their votes (Stokes 1963; Riker 1996)
- Which policy issues are on the electoral agenda is likely to be an important determinant of polarization.

Question

Do parties have more incentives to promote policy issues on which voters are more polarized or issues on which parties are more polarized?

- We develop a two-dimensional model of electoral competition in which parties compete for electoral support by raising the electoral salience of various positional issues.
- Each voter elects the party that is closer to his/her policy position on the two issues; the proximity between a voter's and a party's policy position on the two issues is an aggregate of the difference between the voter's and the party's preferred policy on each issue, weighted by the salience of each issue.
- The relative salience of each issue is endogenously determined by the parties' campaign advertisement choices, and the salience vector determines the distribution of the electorate's preference regarding which party is more electorally desirable.

Model

- There are two issue dimensions, and the set of possible policy choices for each issue is $\mathbf{R}$.
- Each party k for $k \in \mathcal{M}$ has an ideal policy point, $p^k = (p_1^k, p_2^k) \in \mathbf{R}^2$.
- Parties' most preferred policies on each policy issue differ: $p_i^k \neq p_i^l$ for all i and k, l.
- $|p_i^k - p_i^l|$ measures the parties' policy polarization on issue i.

Model

- Each party chooses an amount of advertisement for each policy issue, a vector $\mathbf{a}^k = (a_1^k, a_2^k) \in \mathbf{R}_+^2$ at a cost $C^k(\mathbf{a}^k) = \sum_{i=1}^2 c^k(a_i^k)$.

- Party k's utility is as follows:

$$U_k(\mathbf{a}^k; \mathbf{a}^{-k}) = v^k(\mathbf{a}^k; \mathbf{a}^{-k}) - C^k(\mathbf{a}^k),$$

  where $\mathbf{a}^k$ is the vector of advertisement on the two issues by party k and v^k is party k's vote share.

Model

- Each voter has an ideal policy vector in $\mathbf{R}^2$.
- The location of the voters' ideal policies follows a multivariate normal distribution.
- The pair (μ_i, σ_{ii}) can be thought as characterizing the existing public opinion on policy issue $i \in \{1, 2\}$.
- σ_{ii} measures the voters' policy polarization on issue i.
- Each voter's utility function is as follows:

$$U_v = -\sum_{i=1}^{2} w_i(\mathbf{a})(p_i - x_i)^2.$$

Model

- Let $\mathbf{a} = (a_1, a_2)$ express the vector of advertisement on the two issues.
- The weight of an issue is $w_i(\mathbf{a}) = \frac{a_i + \alpha}{a_1 + a_2 + 2\alpha}$ where $\alpha > 0$.
- If an issue receives more advertisement than others, the relative electoral importance of that policy issue increases.

Two-Party Competition and Issue Selection

A voter with ideal policy x prefers party A to B and thus votes for party A if and only if

$$\sum_{i=1}^{2} w_i(a)(x_i - p_i^A)^2 < \sum_{i=1}^{2} w_i(a)(x_i - p_i^B)^2,$$

which is equivalent to

$$\sum_{i=1}^{2} w_i(a)d_i(x_i) > 0, \tag{1}$$

where $d_i(x_i) \equiv (p_i^A - p_i^B)(x_i - \frac{p_i^A + p_i^B}{2})$.

Two-Party Competition and Issue Selection

$d_i(x_i)$, which can be thought as a measure of whether and by how much a voter with ideal policy x_i prefers party A or party B on policy issue i.

Because the distribution of voters' policy positions follows a multivariate normal distribution, then $d(x) \equiv (d_1(x_1), d_2(x_2))' \sim N(\nu, \Lambda)$, where

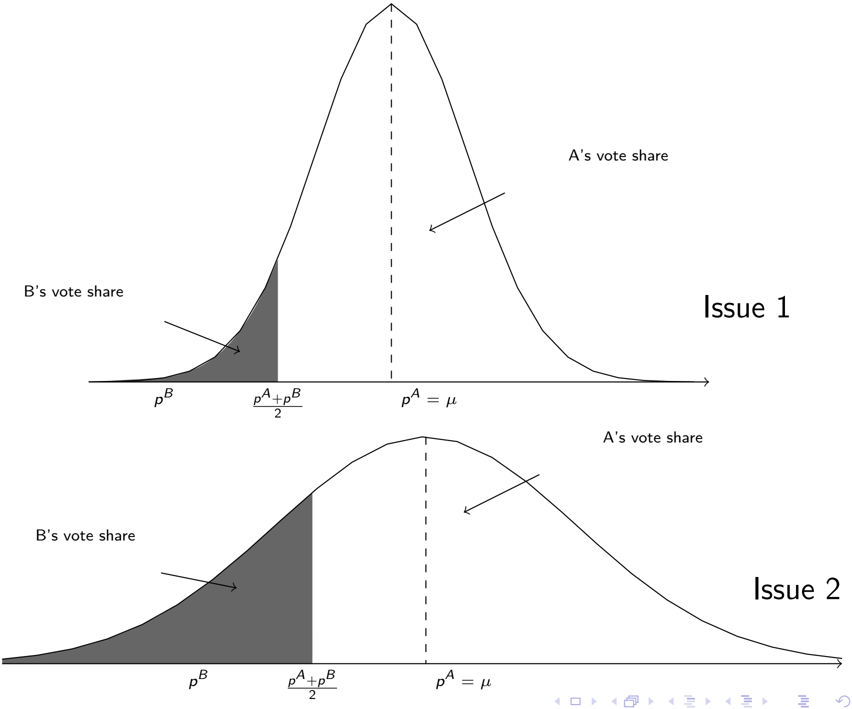
$$\nu_i = (p_i^A - p_i^B)(\mu_i - \frac{p_i^A + p_i^B}{2})$$

and

$$\lambda_{ij} = (p_i^A - p_i^B)^2 \sigma_{ij}.$$

Two-Party Competition and Issue Selection

- ν_i is a measure of party A's electoral popularity on policy issue i. Specifically, $\nu_i > 0$ implies that a majority of the voters prefers party A over party B on policy issue i.
- λ_{ij} for $i \neq j$ is as a measure of the correlation of a party's electoral popularity between issue 1 and issue 2.
- λ_{ii} is a measure of the electoral heterogeneity regarding which party is more desirable on issue i; a larger (smaller) λ_{ii} connotes a higher (lower) heterogeneity regarding which party is more desirable on policy issue i.



A's vote share
B's vote share
Issue 1
p^B
$\frac{p^A+p^B}{2}$
$p^A = \mu$
A's vote share
B's vote share
Issue 2
p^B
$\frac{p^A+p^B}{2}$
$p^A = \mu$

Two-Party Competition and Issue Selection

- The game to has a Nash equilibrium in pure strategies.
- The two parties do not advertise the same policy issue in a pure strategy equilibrium.
- We investigate whether parties have incentives to advertise issues on which there are no ideological differences between parties ($p_i^A = p_i^B$) or issues on which there are no ideological differences among voters ($\sigma_{ii} = 0$).

Analysis

Neither party has incentives to advertise an issue on which here are no ideological differences between parties $p_i^A = p_i^B$.

Proposition

Neither party advertises an issue on which there are no ideological differences between parties (that is, if $p_i^A = p_i^B$, then $a_i^{k*} = 0$ for $k \in \{A, B\}$).

Analysis

Parties have incentives to advertise an issue on which there are no ideological differences among voters, $\sigma_{ii} = 0$.

Proposition

A party advertises an issue on which there are no ideological differences among voters if that party has electoral advantage on that issue (i.e. if $\sigma_{ii} = 0$ and $\nu_i \neq 0$, then $a_i^{k*} > 0$ for $k \in \{A, B\}$ such that $\nu_i^k > 0$).

Analysis

We also investigate the strategies of parties regarding which issues to advertise when the issues only differs in terms of the voters' disagreement regarding which party is more electorally desirable.

For this analysis, we label the party with the higher equilibrium vote share as *the majority party* and the party with the lower equilibrium vote share as *the minority party*.

Analysis

We show that, in any pure strategy Nash equilibrium, it's not possible for the majority party to advertise the issue with higher heterogeneity and for the minority party to advertise the issue with lower heterogeneity.

Proposition

If $\nu_i = \nu_j$ *and* $\lambda_{ii} > \lambda_{jj}$*, then it's not possible to have* $a_i^{k*} > 0$ *and* $a_j^{l*} > 0$*, where* $k \in \{A, B\}$ *is the majority party and* $l \in \{A, B\}$ *is the minority party.*

Conclusions

- We developed a model of electoral competition in which parties compete for electoral support by raising the electoral salience of various position issues to analyze whether parties have more incentives to promote policy issues on which voters are more polarized or issues on which parties are more polarized.

- We show that parties have more incentives to advertise an issue on parties are more ideologically polarized rather than an issue on which voters are polarized. We also show that the minority party has more incentives to advertise issues on which parties are more polarized as compared to the majority party.