Can Democracy Cope With Extreme Views

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Motivation – Extremist Parties on the Rise

- Surge in **popularity of extremist views**
- Democracies around the world increasingly under threat
- Center parties in many European parliamentary democracies made election promises to not form a coalition government with parties at the extreme political fringes

$\Rightarrow$ termed "**Cordon Sanitaire**" or "**Brandmauer**"

- Research Question: **Can Coalition-Preclusion Promises prevent extreme policy shifts?**

What We Do

- Develop general two stage extensive form game with 2 conventional parties (center left and right) and 1 extremist party
  - Stage 1: Conventional parties make **Coalition Preclusion Promises** (CPP)
  - Stage 2: **Election** (and Government Formation)
- Multiple equilibria with coordinated strategic voting possible
- **Equilibrium Selection**:
  - Allow for **errors** in coordination of votes **independent** errors and **correlated** errors in coordination
  - Extend several equilibrium selection criteria established in the game theoretic literature

What We Do – 4 Equilibrium Selection Criteria

- Criteria 1 and 2: **Equilibrium Dominance in (un-)correlated errors**

  Dominance re incentives to **adhere** to a specific **equilibrium strategy** given that **other players deviate with a certain probability** from the equilibrium strategy profile

- Criteria 3 and 4: **Entropy in strategies/equilibria**

  Extension of the standard notion of **risk dominance** to voting game (i.e. game with more than 2 players)

Preview of Results (I)

- **Without CPPs**:

  $\Rightarrow$ sincere voting leads to **coalition of conventional and extremist party**

- If conventional parties make **CPPs excluding extremist party**

  $\Rightarrow$ unique (welfare optimal) equilibrium with **grand coalition**

- **CPPs** by conventional parties **only if** belief that **voters** will **coordinate** votes **in favor of party unilaterally making CPP**

Preview of Results (II)

- If **errors are independent**:
  - Equilibrium selection criteria predict **party unilaterally making CPP favored** by voters
  - $\Rightarrow$ **Unique equilibrium** selected where both conventional parties make **CPPs** and form **grand coalition**
- If **errors are perfectly correlated**
  - Equilibrium selection criteria predict **party unilaterally making CPP disfavored** by voters
  - $\Rightarrow$ **No CPPs** in equilibrium.

    Without CPPs, **strategic voting equilibria** and **single-party governments** selected over sincere voting equilibrium with extremists in government
- **CPPs welfare improving** (if they are credible)

Literature

- **Commitment to campaign promises**

  Gersbach/Schneider (2012); Gersbach/Schneider/Tejada (2019);

- **Equilibrium selection**

  Harsanyi/Selten (1988); Matsui/Matsuyama (1995); Kim (1996); Morris/Rob/Shin (1995);

- **Signalling devices for coordination**

  Andonie/Kuzmics (2012); Ekmekci (2009);

Model – Overview

- **Policy Space**: $\mathcal{P} = [0,1]x\{0,\bar{d}\}$, with policies $p = (t,d)$.
- **Parties**:
  - **conventional L**, $p_L = (t_L, 0)$, **R**, $p_R = (t_R, 0)$, and **extremist E**, $p_E = (t_m, \bar{d})$
  - **Coalition preferences**: $V_j^j > V_{jE}^j > V_{jk}^j > V_k^j > V_{kE}^j$, $j \neq k \in \{L, R\}$.
- n **Voters**:
  - $n - 2e$ **conventional**: vote for L or R to maximize $U_i(t,d,s_G) := u(|t - t_i|) - \delta_i d - \theta s_G$
  - $2e$ **extremist**: always vote for E.
- **Conventional voters**
  - want to prevent extremist policy $\bar{d}$, i.e. δ_i, d sufficiently large.
  - Conventional policy more important than perks, i.e. θ not too large.

Model – Political Game

Stage 1: Campaign with Coalition-Preclusion Promises

Stage 2: Election

Stage 3: Government formation

- **Coalition-Preclusion Promises**: Decision to preclude E from coalition government
- **Election**: Sincere voting profile: σ^{LR},
  Strategic voting for party j σ^{j}, $j \in \{L, R\}$.
- **Government Formation**:
  - Single party government: $p_j = (t_j, 0)$, $j \in \{L, R\}$.
  - Grand coalition: $p_{LR} = (t_{LR}, 0)$,
    where t_{LR} seat-share weighted average of t_L and t_R.
  - Coalition with extremist party E: $p_{jE} = (t_{jE}, \bar{d})$,
    where t_{jE} weighted average of t_j and t_E.

Model – Equilibria

Proposition

(a) *If* $C = (\emptyset, \emptyset)$*, equilibrium outcomes:* (σ^L, L)*,* (σ^{LR}, LE)*,* (σ^{LR}, RE)*, or* (σ^R, R)*.*

(b) *If* $C = (E, \emptyset)$*, equilibrium outcomes:* (σ^L, L) *or* (σ^R, R)*.*

(c) *If* $C = (\emptyset, E)$*, equilibrium outcomes:* (σ^L, L) *or* (σ^R, R)*.*

(d) *If* $C = (E, E)$*, equilibrium outcome will be* (σ^{LR}, LR) *.*

- **Welfare** ranking of equilibria:
  $(t_{LR}, 0) \succ_W (t_j, 0) \succ_W (t_{jE}, \bar{d})$, $j \in \{L, R\}$.
- Conventional party L only has **incentive** to make unilateral **CPPs** if equilibrium (σ^L, L) played when $C = (E, \emptyset)$.
  (and vice versa for R)

Criteria 1 + 2 for Equilibrium Selection

Definition (Immunity to (un)correlated errors)

Given $C = (C_L, C_R) \in \{\emptyset, E\}^2$, an equilibrium σ' of the (core) voting subgame is ***immune to (un)correlated errors at level*** $\varepsilon^* \in (0, 1)$ w.r.t. another equilibrium σ'', if **all players** prefer to **vote according** to their **equilibrium strategies in** σ'.

Definition (Equilibrium dominance in (un)correlated errors)

Given $C = (C_L, C_R) \in \{\emptyset, E\}^2$, an equilibrium σ' *(weakly) dominates an equilibrium* σ'' *in (un)correlated errors* if, for each $\varepsilon^* \in (0, 1)$,

$$\sigma'' \text{ is immune to correlated errors at level } \varepsilon^* \text{ w.r.t. } \sigma' \implies$$
$$\sigma' \text{ is immune to correlated errors at level } \varepsilon^* \text{ w.r.t. } \sigma''.$$

We use the notation $\sigma' \succsim_i^{\parallel} \sigma''$ to refer to this.

Criteria 3 + 4 for Equilibrium Selection

Definition (Dominance in entropy in equilibria)

An equilibrium σ' (weakly) dominates another equilibrium σ'' according to maximum entropy in equilibria, if all players, (weakly) **prefer to play** their **equilibrium strategy according to** σ' given **all other players coordinate** to play their **equilibrium strategies acc. to** σ'' **with probability** $1/2$.

Definition (Dominance in entropy in strategies)

We say that an equilibrium of the (core) voting subgame σ' weakly dominates another equilibrium σ'' according to maximum entropy in strategies, if all players (weakly) **prefer to play** their **equilibrium strategy according to** σ' given all **other players play** their **equilibrium strategies acc. to** σ'' **with probability** $1/2$.

Results – Equilibrium Selection for Voting Subgames without CPPs

Results focus on selection criteria 1+2.

Proposition (Selection of Voting Equilibria without CPPs)

(i) *Equilibria with **strategic voting** for one single conventional party σ^L and σ^R **strictly dominate the sincere voting equilibrium** σ^{LR} in the presence of **correlated errors**, if $n \geq 9$ and $e \geq 2$.*

(ii) *If n and e are large enough, **sincere voting equilibrium** σ^{LR} **strictly dominates strategic voting equilibria** σ^L and σ^R in the presence of **uncorrelated errors**.*

$\Rightarrow$ Without CPPs,

- sincere voting and **extremist party in coalition government** when **errors** are **uncorrelated**
- strategic voting and **single party government** when **errors** are **correlated**

Results – Equilibrium Selection for Voting Subgames with Unilateral CPPs

Party L makes CPP, R does not.

Proposition (Selection of Voting Equilibria with Unilateral CPPs)

(i) *The **strategic coordinated voting equilibria** σ^R and σ^L are **not comparable** (neither dominates the other) in the presence of **correlated errors**.*

(ii) *If n and e are large enough, σ^L **strictly dominates** σ^R in the presence of **uncorrelated errors**.*

$\Rightarrow$ With unilateral CPP by party L,

- **incentive to make unilateral CPP** when **errors** are **uncorrelated**
- **no incentive to make unilateral CPP** when **errors** are **correlated**

Results – Equilibrium Selection for Political Game with CPPs

Proposition (Equilibria in Political Game with CPPs)

(i) *In equilibrium, either both conventional parties make CPPs* $C = \{E, E\}$ *or no CPPs are made* $C = \{\emptyset, \emptyset\}$.

(ii) *If* n *and* e *are large enough, with selection criterion "Domination in the presence of* ***uncorrelated errors****", **CPPs prevent extreme parties from entering government**.*

Predicted unique equilibrium: $C = \{E, E\}$*, voters vote sincerely* σ^{LR}*, leading to grand coalition government.*

(iii) *Selection criteria "Domination in the presence of* ***correlated errors****" provide no clear prediction of equilibria.*

However, without CPPs $C = \{\emptyset, \emptyset\}$*, the selection criterion "Domination in the presence of correlated errors" predicts strategic coordinated voting equilibria,* σ^L *and* σ^R*, leading to single party government of either* L *or* R.

Welfare Effects of CPPs

Corollary (Welfare Consequences of Credible CPPs)

(i) *If n and e are large enough, and equilibria are selected according to one of the four criteria introduced, then the possibility to use (credible)* ***CPPs weakly welfare improving****.*

(ii) *If equilibria are selected according to "domination in the presence of* ***uncorrelated errors****" or "maximum entropy in strategies", CPPs are* ***strictly welfare improving****.*

(iii) *If equilibria are selected according to "domination in the presence of* ***correlated errors****" or "maximum entropy in equilibria",* ***CPPs may or may not be used****, depending on parties' beliefs about voter coordination.*

Conclusions

- Simple voting model to examine when **Coalition Preclusion Promises (CPPs)** like Cordon Sanitaire/Brandmauer can be **effective in keeping extremist parties out of democratic governments**
- If **errors** in strategic voter coordination are **uncorrelated**, conventional parties make CPPs $\Rightarrow$ **CPPs** are **strictly welfare improving**
- If **errors** in strategic voter coordination are **correlated**, conventional parties have **no incentive to make CPPs** $\Rightarrow$ **but without CPPs** strategic voter coordination on **single party governments predicted**
- **Similar results** with selection criteria **"Entropy in Strategies"** (similar to "Domination with uncorrelated errors") and **"Entropy in Equilibria"** (similar to "Domination with correlated errors")

Future Research

- Role of Social Media:
  Does it make coordination in strategic voting easier?
  Does social media lead to correlated errors or to uncorrelated errors?
- Endogenize voter coordination via coordination devices
- Asymmetry of Extremist policy platform on conventional policy dimension
- Endogenize vote share for extremist party, allowing conventional parties to win back extremist voters.