

Representation and Positioning in Political Bargaining

Pre-Analysis plan

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1 Hypotheses

1.1 Representation and Bargaining Outcomes

Hypothesis 1a. There is no significant difference in agreement rates between representative bargaining and individual bargaining.

Hypothesis 1b. There is no significant difference in agreement types (proportional, equal split, centrist dominance, etc.) between representative bargaining and individual bargaining.

Hypothesis 1c. There is no significant difference in bargaining outcomes across rounds between representative bargaining and individual bargaining.

For these hypotheses, we specify the following models:

$$AgreementRate_{gr} = \alpha + \beta_1 Representation_{gr} + \gamma X_{igr} + \delta_r + \varepsilon_{igr}$$

$$\Pr(AgreementType_{gr} = 1) = \text{logit}^{-1}(\alpha + \beta_1 Representation_{gr} + \gamma X_{igr} + \delta_r + \varepsilon_{igr})$$

$$AgreementRate_{gr} = \alpha + \beta_1 Representation_{gr} + \beta_2 Round_r + \beta_3 (Representation_g \times Round_r) + \gamma X_{igr} + \varepsilon_{igr}$$

$$\Pr(AgreementType_{gr} = 1) = \text{logit}^{-1} \left(\begin{array}{l} \alpha + \beta_1 Representation_{gr} + \beta_2 Round_r \\ + \beta_3 (Representation_g \times Round_r) + \gamma X_{igr} + \varepsilon_{igr} \end{array} \right)$$

Variable Definitions.

- $AgreementType_{gr}$: binary indicator for whether a specific agreement type occurred in trio g in round r (proportional, equal division, centrist dominance, real voting weights across teams, real voting weights across team members).
- $AgreementRate_{gr}$: numeric measure of the proportion of agreement in trio g in round r .
- $Representation_{gr}$: binary indicator for whether representation exists in trio g in round r .

- X_{igr} : individual characteristics (gender, risk aversion, fairness concerns, inequity aversion, etc.) of bargainer i in group g in round r .
- $Round_r$: numeric round index (1–4).

We rely on multiple regression, Mann–Whitney U tests, and t -tests for pairwise comparisons.

1.2 Bargaining Allocation

We investigate which agreement types dominate overall and across treatments. Agreement types include:

- Proportional division based on party size (Gamson’s Law).
- Equal division across parties.
- Centrist dominance.
- Real voting weights across teams (1:2).
- Real voting weights across individual members (1:2).

Hypothesis 2. Bargaining outcomes do not significantly align with equal division across teams.

The model is:

$$\Pr(\text{AgreementType}_{gr} = 1) = \text{logit}^{-1}(\alpha + \beta_1 \text{Treatment}_g + \gamma X_{igr} + \delta_r + \varepsilon_{igr})$$

Variable Definitions.

- $\text{AgreementType}_{gr}$: binary indicator for a specific agreement type in trio g , round r .
- Treatment_g : categorical variable for one of the four treatments.
- X_{igr} : individual characteristics of bargainers in trio g in round r .
- $Round_r$: numeric round index (1–4).

We use multiple regression, Mann–Whitney U tests, Fisher’s exact test, t -tests, and the Kruskal–Wallis test.

1.3 Centrist Payoffs

Hypothesis 3. The centrist party earns higher payoffs in later rounds.

$$\text{CentristPayoff}_{gr} = \alpha + \beta_1 \text{Round}_r + \gamma X_{igr} + \delta_{\text{Treatment}} + \varepsilon_{igr}$$

Variable Definitions.

- $\text{CentristPayoff}_{gr}$: payoff of the centrist party in trio g in round r .
- $Round_r$: numeric round index (1–4).

- $Treatment_g$: categorical treatment indicator.
- X_{igr} : individual characteristics of bargainers in trio g in round r .

We rely on multiple regression, parametric trend tests, and the Jonckheere trend test.

1.4 Coalition Formation

Hypothesis 4. Coalitions formed by a mainstream party and a small third party are more common than coalitions formed by two mainstream parties.

This hypothesis is tested using Fisher’s exact test for treatments 4–2–4 and 2–4–4.

We also estimate:

$$\Pr(CoalitionType_{gr} = 1) = \text{logit}^{-1}(\alpha + \beta_1 X_{igr} + \gamma Treatment_g + \delta_r + \varepsilon_{igr})$$

Variable Definitions.

- $CoalitionType_{gr}$: binary indicator for whether the coalition is between a team of 4 and a team of 2.
- $Round_r$: numeric round index (1–4).
- $Treatment_g$: categorical treatment indicator.

1.5 Fairness Preferences and Centrist Dominance

Hypothesis 5. Bargainers with stronger inequity aversion and fairness concerns are less likely to agree to centrist dominance outcomes.

$$\Pr(Centrist_{gr} = 1) = \text{logit}^{-1}(\alpha + \beta_1 Treatment_g + \gamma X_{igr} + \delta_r + \varepsilon_{igr})$$

Variable Definitions.

- $Centrist_{gr}$: binary indicator for whether the outcome follows centrist dominance.
- $Round_r$: numeric round index (1–4).
- $Treatment_g$: categorical treatment indicator.
- X_{igr} : individual characteristics (fairness, inequity aversion, etc.).

We rely on multiple regression, Mann–Whitney U tests, t -tests, and the Kruskal–Wallis test.