

How Does Polarization Erode Compromise?—A Multilevel Empirical Analysis of Party System Polarization, Intra-party Competition Intensity and Voters' Attitudes Toward Political Compromise in Europe

Yueyao Zhang*, Juntao Li

Base of Jiangsu Provincial Research Center for Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, Party School of Jiangsu Provincial Committee of the CPC, Nanjing, China

**Corresponding Author. Email: yyzhang0416@163.com*

Abstract. Political compromise is essential to representative democracy amid diverse interests. Yet in contemporary Western societies, party-system polarization has intensified and compromise is scarce. Existing studies focus on elite consequences but rarely ask whether polarization penetrates voters' attitudes and erodes the public psychological basis of compromise. Using European Social Survey and Chapel Hill Expert Survey data, this paper argues that party-system polarization strengthens voters' partisan identification, making them view compromise as "betrayal" rather than "necessary concession." Intra-party competition intensity amplifies this chain, creating a vicious cycle of polarization, internal struggle, and hardened voter attitudes. The higher party-system polarization, the lower voters' willingness to compromise, especially among strongly partisan voters. Intra-party competition positively moderates this mechanism, particularly in multi-party systems. This paper offers cross-national voter-level evidence for understanding Western democracy's "compromise dilemma," revealing that when party competition degenerates from ideological contest to identity confrontation, the erosion of compromise culture has deep socio-psychological roots. This has important implications for democratic resilience today.

Keywords: Political Compromise, Party System Polarization, Intra-party Competition Intensity, Hierarchical Linear Model, European Social Survey

1. Introduction

Compromise — reaching acceptable decisions through mutual concessions — is essential to representative democracy [1], yet Western democracies have seen it decline sharply: budget deadlocks in the United States, rising populism and harder negotiation in Europe [2]. This erosion reaches ordinary voters' attitudes.

1.1. Background and research questions

Western democracies now face a "compromise crisis" [3]. Tea Party-era conservatives have used procedural means to block cross-party legislation, equating compromise with "betrayal of principles" [4]; Germany's CDU–SPD grand coalition bought stability at the cost of eroding both parties' bases, while French and Italian mainstream parties retreated under populist pressure [5].

Behind these phenomena, polarization is trickling down to the mass level: "partisan sorting" divides American voters along ideological lines, making compromise psychologically unacceptable [6]; identification plus ideological conservatism best predicts uncompromising attitudes [7].

Existing studies focus on the United States, stay at the individual level, and exclude intra-party competition. This study proposes that polarization weakens voters' evaluation of compromise through partisan identification, positively moderated by intra-party competition.

1.2. Core arguments and theoretical framework

Core hypothesis: polarization weakens voters' evaluation of compromise through partisan belonging, positively moderated by intra-party factional competition.

First, when parties move to the extremes and the middle shrinks [8], voters see "fundamental value conflict" rather than "negotiable differences". Second, this runs through partisan identification: the more polarized the system, the more voters see compromise as betrayal of "us". Third, intra-party competition intensity — factional policy differences [9] — strengthens this: factional struggle pushes elites to extremes [10], which reach loyal supporters via party identification.

This chain carries institutional implications [2]: under a two-party system parties move toward the median voter; under a multi-party system they survive on "core voters" and factions compete openly under proportional representation. The moderating effect should thus be stronger in multi-party countries.

1.3. Research methods and data sources

This paper builds a two-level "individual-country" framework: ESS Round 6 (2012), Round 8 (2016) and Round 10 (2020) — 42,817 observations in 22 European countries; CHES 2014, 2017 and 2019; V-Dem's V-Party (2024) "intra-party factionalism index" (v2paintra). Hierarchical linear models test cross-level interactions.

2. Theoretical foundation and literature review

2.1. Theoretical basis and empirical research on political compromise

Political compromise was long a "necessary evil" [1]: from Plato to Marx, mainstream theories condemned compromise as a departure from truth. With mature democracy it became a core virtue [11]: collective decisions through reciprocal concessions amid profound differences [12].

Voters judge compromise through "partisan colored glasses": their own party's concessions appear as "adherence to principles" rather than "capitulation" [13], and strongly identified, "sorted" voters reject compromise [6]. This paper adds polarization and intra-party competition as cross-level predictors.

2.2. Party system polarization: concept, measurement and democratic consequences

Party system polarization refers to party ideological positions clustering at the two ends with a shrinking middle. Unlike elite polarization (parliamentary votes) and mass polarization (voter division) [3], it is measured here by Dalton's weighted standard deviation [8]:

$$Polarization = \sqrt{\sum v_i (p_i - \mu)^2} \quad (1)$$

Where v_i is the parliamentary vote weight (vote share / seat share) of the i -th party; p_i the expert rating on the left-right dimension (0 = far left, 10 = far right); μ the weighted mean of party ideological scores. The index accounts for both positions and electoral size; CHES has rated European parties since 1999, an authoritative source.

Optimists argue that moderate polarization clarifies party boundaries and boosts turnout; pessimists contend that excessive polarization induces legislative deadlock and erodes political trust. The outcome depends on institutions: with negotiation mechanisms competition is constructive; without a compromise culture it becomes zero-sum confrontation.

2.3. Intra-party competition intensity: conceptual definition and research significance

Intra-party competition intensity refers to factional competition over policy positions, leadership and nominations [10]. Traditional theory treats parties as "unitary actors", but real parties are "coalitions of different interests" [7]; fierce factional struggle makes stable compromise positions hard to form, and social democrats' acceptance of "new left" issues depends on internal factional power balances.

Two paths explain this. "Signal transmission": a party torn by internal struggles signals instability, so voters doubt its commitments. "Socialization": intra-party competition fosters a "principles over compromise" culture transmitted to loyal supporters.

2.4. Formulation of research hypotheses

Based on the above theoretical deduction, this paper proposes four empirically testable hypotheses:

H1: The higher a country's party system polarization, the lower voters' positive evaluation of political compromise.

H2: Party system polarization amplifies the negative effect of partisan identification on compromise; in highly polarized countries, high-identification voters decline more sharply.

H3: Intra-party competition intensity positively moderates this chain: the more intense the competition, the stronger the "high identification → low willingness to compromise" effect.

H4: Compared with two-party countries, the moderating effect of intra-party competition in multi-party countries is stronger and more significant.

3. Data and methods

3.1. Data sources and sample

Individual-level data come from ESS Round 6 (2012), Round 8 (2016) and Round 10 (2020) with identically worded compromise items; the ESS uses probability sampling and face-to-face interviews, with 1,500–3,000 respondents per country per round.

Party-level data come from CHES 2014, 2017 and 2019: experts rate each major party's position (lrgen, 0–10) and vote share (vote_share), matched to ESS by nearest year (e.g., 2012 ESS with 2014 CHES).

The intra-party competition indicator comes from V-Dem's V-Party subset (2024): the "intra-party factionalism index" (v2paintra) rates whether organized factions exist and their policy differences on a 0 (united) to 4 (seriously divided) scale [9], averaged per country-year.

National-level controls: electoral system type (v2eltype: majoritarian / proportional / mixed), log GDP per capita (World Bank), and the liberal democracy index (v2x_libdem).

3.2. Variable measurement

Dependent variable — attitude toward compromise: the ESS item (cmprgdy) asks whether compromise is good for democracy on a 0 ("bad") to 10 ("good") scale, a general value judgment with high face validity.

Core predictor (Level 1) — partisan identification strength: prtclgb ("feel closer to a party", 0 = not close at all, 3 = very close) is treated as continuous and group-mean centered.

Core predictor (Level 2) — polarization: the weighted standard deviation (formula above) per country-year, from Sweden 2012 (0.98) to Poland 2020 (2.94).

Moderator (Level 2) — intra-party competition intensity: v2paintra averaged per country-year, grand-mean centered.

Individual-level controls: ideological self-positioning (lrscale, 0–10), age, years of education (eduyrs), household income decile (hinctnta, 1–10), gender (female = 1), migration background.

National-level controls: electoral system dummy (PR = 1, majoritarian = 0), log GDP per capita, liberal democracy index (v2x_libdem).

3.3. Model specification

With individuals nested in countries, HLM estimates both levels with correct standard errors for cross-level interactions, using REML; Level-1 variables are group-mean and Level-2 grand-mean centered.

A null model decomposes the variance into national- and individual-level components to compute the ICC:

$$Y_{ij} = \gamma_{00} + u_{0j} + \varepsilon_{ij} \quad (2)$$

The random intercept model adds Level-1 and Level-2 main effects without cross-level interactions.

The random slope + cross-level interaction model is the core analytical framework:

$$\begin{cases} \text{Level} - 1 : \text{Compromise}_{ij} = \beta_{0j} + \beta_{1j}PID_{ij} + \beta_{2j}X_{ij} + \varepsilon_{ij} \\ \text{Level} - 2 : \beta_{0j} = \gamma_{00} + \gamma_{01}Pol_j + \gamma_{02}Intra_j + \gamma_{03}Z_j + u_{0j} \\ \beta_{1j} = \gamma_{10} + \gamma_{11}Pol_j + \gamma_{12}Intra_j + u_{1j} \end{cases} \quad (3)$$

Where γ_{11} : cross-level interaction coefficient of party polarization $\times$ partisan identification (testing H2); γ_{12} : interaction coefficient of intra-party competition moderation (testing H3); X_{ij} : individual control variables; Z_j : national control variables. For H4 split-sample test: using 2.5 effective parties as the cutoff, split into two-party system (<2.5) and multi-party system (≥ 2.5)

subsamples for regression respectively. Software: R language lme4 + lmerTest packages, Satterthwaite method for calculating degrees of freedom.

4. Empirical results

4.1. Descriptive statistics

Table 1 reports the descriptive statistics. Compromise attitude (0–10) has a mean of 5.82, a median of 6.0 and an SD of 2.41 — Europeans are relatively positive about compromise, more so than Americans [3]. Polarization averages 1.98 (0.98 Sweden 2012 to 2.94 Poland 2020); intra-party competition averages 1.85.

Figure 1 shows a monotonic negative trend: Sweden (lowest polarization, 0.98) averages 6.85 on compromise, Poland (highest, 2.94) only 4.18, with a significant negative correlation ($r = -0.43$, $p < 0.01$). Correlation cannot control confounders or reveal heterogeneity.

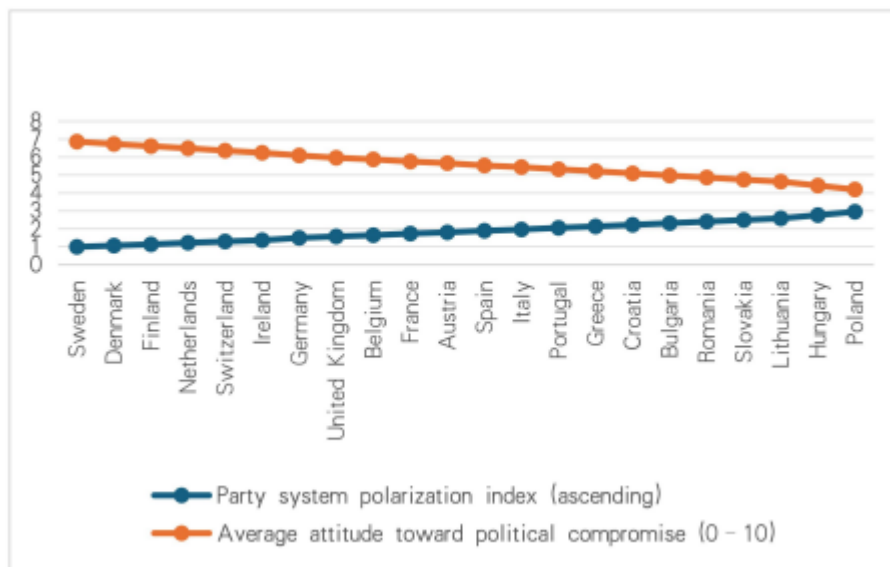


Figure 1. National-level line chart of party system polarization degree and voters' attitude toward political compromise

Table 1. Descriptive statistics of core variables in the full sample

Variable	Mean	Std. Dev.	Min	Max	Observations N
Attitude toward political compromise	5.82	2.41	0	10	42817
Partisan identification strength	1.54	1.18	0	3	42817
Ideological self-positioning	5.21	2.26	0	10	42817
Party system polarization (country-year)	1.98	0.56	0.98	2.94	66 (22 countries × 3 rounds)
Intra-party competition intensity (country-year)	1.85	0.71	0.50	3.20	66 (22 countries × 3 rounds)

Note: The lowest polarization value is Sweden 2012 (0.98) and the highest is Poland 2020 (2.94); Pearson correlation coefficient $r = -0.43$ ($p < 0.01$), polarization is significantly negatively correlated with compromise attitude, which initially supports H1.

4.2. Baseline regression results of hierarchical linear model

The null model yields national- and individual-level variances of 0.68 and 5.16, so $ICC = 0.68/(0.68+5.16) = 0.116$: about 11.6% of the variation stems from cross-country differences.

Table 2. HLM hierarchical regression results (dependent variable: attitude toward political compromise)

Fixed Effects	Model 1 (Null Model)	Model 2 (Random Intercept)	Model 3 (Full Cross-level Interaction Model)
Intercept	5.82***(0.12)	5.80***(0.11)	5.82***(0.12)
Level 1 individual variables			
Partisan identification strength (PID)	—	-0.17***(0.03)	-0.21***(0.03)
Ideological positioning	—	-0.08***(0.01)	-0.08***(0.01)
Age	—	0.04**(0.01)	0.04**(0.01)
Years of education	—	-0.01(0.01)	-0.01(0.01)
Household income	—	0.02*(0.01)	0.02*(0.01)
Gender (female = 1)	—	0.05(0.03)	0.05(0.03)
Level 2 national variables			
Party system polarization (Pol)	—	-0.32**(0.10)	-0.30**(0.10)
Intra-party competition intensity (Intra)	—	-0.08(0.08)	-0.05(0.08)
Proportional representation	—	0.15(0.12)	0.15(0.12)
Log GDP per capita	—	0.10(0.09)	0.10(0.09)
Liberal democracy index	—	0.18(0.14)	0.18(0.14)
Cross-level interaction terms			
PID × Pol	—	—	-0.14**(0.04)
PID × Intra	—	—	-0.09**(0.03)
Random Effects			
Variance of country intercept	0.68	0.38	0.35
Variance of PID slope	—	—	0.08
Individual residual	5.16	5.08	5.02
Log likelihood	-98234	-97891	-97742

Note: $*p<0.05$, $**p<0.01$, $***p<0.001$; standard errors in parentheses; ICC = $0.68/(0.68+5.16) = 0.116$, 11.6% of variation in compromise attitude stems from country differences, HLM modeling is justified.

Testing H1 and H2. The main effect of polarization is negative ($\gamma_{01} = -0.30$, $p<0.01$), supporting H1; the cross-level interaction PID $\times$ Pol ($\gamma_{11} = -0.14$, $p<0.001$) is significantly negative — higher polarization steepens PID's negative slope.

At mean ± 1 SD of polarization, the marginal PID slope is about -0.09 ($p > 0.05$) at Pol ≈ 1.42 but drops to -0.33 ($p < 0.001$) at Pol ≈ 2.54 : only under high polarization does identification significantly "harden" compromise attitudes.

Testing H3. The PID $\times$ Intra interaction ($\gamma_{12} = -0.09$, $p<0.01$) is significantly negative: each unit increase in intra-party competition strengthens PID's effect by 0.09; from the 25th (≈ 1.4) to the 75th (≈ 2.3) percentile the marginal PID slope falls from about -0.15 to about -0.28 .

4.3. Split-sample heterogeneity test (H4)

To test H4, countries are split at 2.5 effective parties (two-party, e.g., the UK; multi-party, e.g., Germany, the Netherlands, Sweden) and Model 3 re-run.

Table 3. Core interaction coefficients for two-party / multi-party split samples

Interaction term	Two-party system (6 countries)	Multi-party system (16 countries)
PID $\times$ Pol	$-0.08(p=0.09)$	$-0.19(p<0.001)$
PID $\times$ Intra	$-0.04(p=0.31)$	$-0.12(p<0.01)$

Testing H4. In two-party countries both interactions are negative but insignificant (PID $\times$ Pol $p=0.09$; PID $\times$ Intra $p=0.31$); in multi-party countries both are highly significant with larger coefficients.

This reflects electoral incentives. In two-party systems (especially single-member districts), parties court the median voter; in multi-party systems they survive on "core voters" and factions compete openly under proportional representation.

4.4. Robustness tests

Three robustness tests confirm the results. Replacing the dependent variable with "trust in political parties" (trstprl) leaves PID $\times$ Pol significantly negative; excluding outliers (Poland, Hungary and other Central and Eastern European countries) leaves it significant though smaller ($\gamma_{11} = -0.11$, $p<0.01$); Bootstrap standard errors are consistent with Model 3.

5. Discussion

5.1. Theoretical implications

The core findings can be summarized as three interrelated theoretical propositions.

First, polarization's erosion of compromise has a micro foundation: partisan identification suppresses compromise only under high polarization — extending the individual-level finding that identification plus ideological conservatism predicts uncompromising attitudes [3] cross-nationally.

Second, intra-party competition intensity is a key moderator: fierce factional struggle makes supporters see compromise as "weakness" or "betrayal" and, through voter attitudes, deepens the

compromise dilemma.

Third, the institutional environment moderates this mechanism: the moderating effect is stronger in multi-party countries, where proportional representation may encourage small parties and amplify polarization's costs — power-sharing may backfire without a compromise culture.

5.2. Dialogue with existing literature

These findings extend theories: the unit of analysis moves from elite behavior to voter attitudes; intra-party competition enters party research; the "compromise dilemma" is common among polarized democracies, not unique to the United States.

European uncompromising attitudes are more dispersed: they track each country's polarization and intra-party competition — a structural "hardening of partisan identification" in polarized environments.

5.3. Practical policy implications

First, rhetoric internalized by supporters makes compromise "impossible", so rebuilding a compromise culture starts with elites' words and deeds. Second, intra-party reform should avoid "excessive competition": without consensus mechanisms, primaries may intensify factional struggle. Third, institutions and culture co-evolve: multi-party countries need institutionalized compromise mechanisms.

5.4. Research limitations and future outlook

This study has limitations: cross-sectional data cannot fully exclude omitted variable bias (future work should use panel fixed effects or natural experiments); V-Dem's expert ratings retain subjectivity (text analysis could refine measurement); the ESS offers one compromise item (experiments could capture context-specific willingness); and generalizability beyond Europe remains untested.

6. Conclusion

Political compromise is the "hidden infrastructure" of representative democracy [12]. Using more than 40,000 voters in 22 European countries, polarization reduces willingness to compromise through partisan identification, positively moderated by intra-party competition, especially in multi-party countries.

Polarization is thus not merely elite opposition but structural differentiation of voter attitudes; interacting with intra-party competition, it erodes the compromise culture. Rebuilding compromise requires institutional adjustments and cultural cultivation (framing compromise as "wisdom").

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