

# Election Administration Failure Leaves Persistent In-Person Turnout Losses Despite Postal Adaptation

April 16, 2026

## **Abstract**

This paper studies whether visible election administration failure affects participation beyond the disrupted election itself. I examine Berlin's 2021 elections, during which many precincts experienced ballot shortages, unlawful polling-place closures, and multi-hour queues—disruptions later validated by a Federal Constitutional Court annulment. Using precinct-level administrative data from eight elections between 2016 and 2025 and an event-study difference-in-differences design, I find persistent losses concentrated in in-person turnout, the voting mode directly affected by the breakdown. In affected precincts, in-person turnout remains about 2 percentage points lower in later regular elections. Postal voting rises by about 1 percentage point, but only partly offsets this decline, leaving total turnout persistently lower. The findings show that visible election administration failure can leave durable downstream effects on participation even when alternative voting modes remain available.

*Keywords:* Voter Turnout, Election Administration, Voting Costs, Postal Voting

Election administration shapes participation not only by affecting the cost of voting in a given election, but also by shaping whether citizens view a particular voting mode as reliable in future contests. When the state visibly fails in the delivery of voting, the consequences may therefore extend beyond the disrupted election itself. This paper asks whether such failure leaves persistent downstream effects on participation, whether those effects are concentrated in the directly affected voting mode, and whether alternative voting modes can offset the loss. The core expectation is mode-specific persistence: if voters update negatively about the reliability of in-person voting after a salient breakdown, in-person turnout should remain depressed in later elections, postal voting may rise as some voters adapt, and total turnout may recover only incompletely.

Berlin’s 2021 election breakdown provides a useful setting to study this question. During the federal election on September 26, 2021, many polling places experienced ballot shortages, misallocated ballots, long queues, and temporary closures that violated electoral law. Following the election, the Federal Constitutional Court annulled the result in 431 of Berlin’s 2,257 polling precincts (19 percent) on the basis of documented procedural violations. I use this court-validated annulment as a measure of severe administrative disruption. Because exposure is defined by failures in the lawful administration of the election, rather than by realized turnout or partisan contestation, the setting allows me to study the downstream consequences of election administration failure using an unusually well-validated measure of local exposure.

This paper contributes to the literature on voting costs and election administration. Most existing work studies barriers that are formal, foreseeable, or evaluated mainly through their immediate effects on turnout.<sup>1</sup> We know much less about whether a salient administrative breakdown changes participation in subsequent elections. An important exception is [Pettigrew \(2021\)](#), who shows that longer waits at the polls reduce turnout in later contests. This paper studies a different object: not the downstream effects of a recurring election-day burden, but the aftermath of a visible and acute administrative

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<sup>1</sup> For an overview of voting costs and turnout, see [Cantoni et al. \(2025\)](#).

failure. It also complements concurrent work by [Fischer and Flügel \(2025\)](#), which studies the contemporaneous turnout effects of Berlin’s 2021 breakdown. In contrast, I examine whether the disruption left persistent effects in subsequent elections, whether these effects are concentrated in in-person voting, and whether later adaptation through postal voting offsets the loss.

The main finding is a persistent decline in the voting mode directly affected by the breakdown. Using an event-study difference-in-differences design, I show that precincts exposed to severe disruption in 2021 remain about two percentage points below comparison precincts in in-person turnout in subsequent elections. Over the same period, postal voting rises by roughly one percentage point, indicating adaptation through substitution across modes. This adjustment is incomplete: postal voting offsets only part of the in-person decline, leaving total turnout persistently lower in affected precincts.

## Theoretical Framework

Visible election administration failure can generate persistent effects on participation through two complementary mechanisms: habit disruption and voting mode-specific belief updating. Voting is a self-reinforcing behavior; when participation is disrupted—by missing an election or encountering ballot shortages or unlawful polling-place closures—the costs of voting are reset, making future participation less likely even for previously regular voters ([Gerber et al., 2003](#); [Fujiwara et al., 2016](#); [Meredith et al., 2009](#)). Crucially, when such failures are highly visible and tied to in-person voting, they prompt voters to revise upward their expectations of the risks and burdens associated with in-person voting, while beliefs about postal voting remain less affected. The result should be a persistent decline in the voting mode directly associated with the breakdown rather than a uniform decline across all forms of participation.

Some voters may adapt by shifting to postal voting in subsequent elections, but this substitution is typically incomplete. Postal voting requires advance planning, information

acquisition, and the formation of new routines, which create frictions that deter full adaptation. Others may simply abstain rather than switch modes. The resulting empirical prediction is therefore voting mode-specific persistence: a lasting decline in in-person turnout and a partial increase in postal voting.

## Institutional Setting, Data, and Empirical Strategy

Berlin’s 2021 election breakdown provides a useful setting for studying whether visible administrative failure leaves persistent effects on political participation. Germany is generally regarded as having stable electoral rules and professional election administration, so the Berlin case is informative not because it reflects chronic institutional weakness, but because it captures a severe and highly visible breakdown in election delivery in an otherwise institutionalized democratic setting.

The 2021 Election Day combined several unusual administrative burdens. On 26 September 2021, Berlin held four concurrent elections: the federal election (*Bundestag*), the state election (*Abgeordnetenhaus*), district council elections (*Bezirksverordnetenversammlung*), and a city-wide referendum. Administering four ballots simultaneously placed unusual logistical demands on polling places. The elections also took place under pandemic-related hygiene rules,<sup>2</sup> and Election Day coincided with the Berlin Marathon, adding further logistical strain. Across parts of the city, polling places experienced ballot shortages, misallocated ballots, long queues, late openings, and temporary closures. In some locations, voting continued after the legal closing time. The breakdown triggered extensive judicial review.

The court rulings provide a validated source of local exposure to severe administrative failure. The Berlin Constitutional Court annulled the entire state and district elections

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<sup>2</sup> These included mask requirements, distancing rules, controlled access to polling rooms, queue management, one-way guidance systems, ventilation requirements, and additional sanitation measures; voters with symptoms were encouraged to use postal voting.

citywide, citing systematic electoral disruptions across the city ([Verfassungsgerichtshof des Landes Berlin, 2022](#), VerfGH 154/21). In a separate ruling, the Federal Constitutional Court annulled the federal election in 431 polling precincts because of severe procedural violations ([Bundesverfassungsgericht, 2023](#), BVerfG 2 BvC 4/23). The court documented ballot delivery failures, incorrect ballot distribution, unlawful polling-place interruptions, and excessive queuing. I use these rulings to measure precinct-level, court-validated exposure to severe administrative failure. Because the failures materialized at the polling place, their most direct effect should appear in in-person participation. Postal voting was already widely used in Berlin before 2021, which makes it possible to distinguish persistent losses in the directly affected voting mode from later adaptation through an alternative mode of participation.<sup>3</sup> Supplementary appendix evidence further suggests that the 2021 breakdown was salient to voters and prompted a later administrative response: postal precincts with longer 2021 waiting times subsequently received more polling-station capacity in later elections ([Appendix A](#), [Appendix B](#)).

## Data and Outcomes

I construct a harmonized postal precinct-level panel covering eight federal, state, and European elections in Berlin between 2016 and 2025. The unit of observation is the postal precinct (*Briefwahlbezirk*), the smallest level at which turnout is reported separately by voting mode and the geography to which all election returns are harmonized. Because precinct boundaries vary over time, all historical returns are mapped into the 2021 postal precinct geography using population-weighted overlays based on 100-meter census grid data. [Appendix C](#) provides details. [Appendix Figure A2](#) shows the spatial distribution of affected postal precincts.

The main outcomes are in-person turnout, postal turnout, and total turnout, each measured relative to eligible voters. In-person turnout is the primary outcome because the 2021 failures occurred at polling places through queues, ballot shortages, and tempo-

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<sup>3</sup> [Appendix Figure A1](#) shows turnout in Berlin by voting mode over time.

rary closures. Postal turnout captures whether voters subsequently adapt by shifting to an alternative voting mode, while total turnout indicates whether such adaptation fully offsets the original disruption.

## Identification and Estimation

Identification comes from comparing treated and untreated postal precincts before and after the 2021 breakdown. My main treatment measure is based on the 431 polling precincts annulled by the Federal Constitutional Court. When mapped into the harmonized 2021 postal precinct geography, these correspond to 294 unique treated postal precincts. In practice, a federally annulled polling precinct corresponds to a treated postal precinct, so treatment at the postal-precinct level closely follows the court-validated geography of severe local disruption. Control postal precincts are the remaining postal precincts in Berlin after excluding postal precincts linked to polling precincts annulled by the Federal Constitutional Court and postal precincts classified as affected only under the state court ruling. The design therefore compares within-postal-precinct changes in turnout after 2021 between areas with severe court-documented local exposure and areas that operated under the same citywide election environment but are untreated in the baseline sample.<sup>4</sup>

The court's rulings matter because treatment is defined by documented procedural failure rather than by realized turnout, partisan outcomes, or self-reported experience. A polling precinct was annulled because the administration failed to provide a lawful opportunity to vote, not because turnout was low or because local actors strategically contested the result. This reduces the concern that treatment is mechanically defined by the outcome of interest. Before 2021, treated postal precincts do not resemble politically disengaged areas; if anything, they exhibit somewhat higher baseline turnout than control postal precincts in the last pre-breakdown federal, state, and European elections.

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<sup>4</sup> [Appendix D](#) discusses the implications of the 2024 federal partial rerun; [Appendix E](#) shows similar, though attenuated, results under broader treatment definitions.

I estimate

$$Y_{idt} = \sum_{\tau \neq -1} \beta_{\tau} \mathbf{1}\{t = \tau\} \times \text{Treatment}_i + \alpha_i + \alpha_{dt} + \varepsilon_{idt}, \quad (1)$$

where  $Y_{idt}$  denotes turnout in postal precinct  $i$ , district  $d$ , and election  $t$ , measured relative to eligible voters,  $\text{Treatment}_i$  indicates whether postal precinct  $i$  is treated,  $\alpha_i$  are postal precinct fixed effects, and  $\alpha_{dt}$  are district-by-election fixed effects. Event time is indexed relative to the 2019 European election, the omitted pre-treatment period. I estimate the model separately for in-person, postal, and total turnout and cluster standard errors at the postal precinct level.

A potential concern is that the 2021 breakdown generated a citywide information shock: even residents of postal precincts in the control group were likely exposed to extensive media coverage and public discussion of electoral failure. Such spillovers would tend to reduce turnout in both treated and control postal precincts after 2021, attenuating the difference-in-differences estimates. The estimated turnout gap should therefore be interpreted as the effect of severe local exposure relative to the lower level of disruption experienced elsewhere in Berlin. The main results are robust to alternative treatment definitions, controls, standard error clustering, matching procedures, and sample constructions reported in [Appendix E](#).

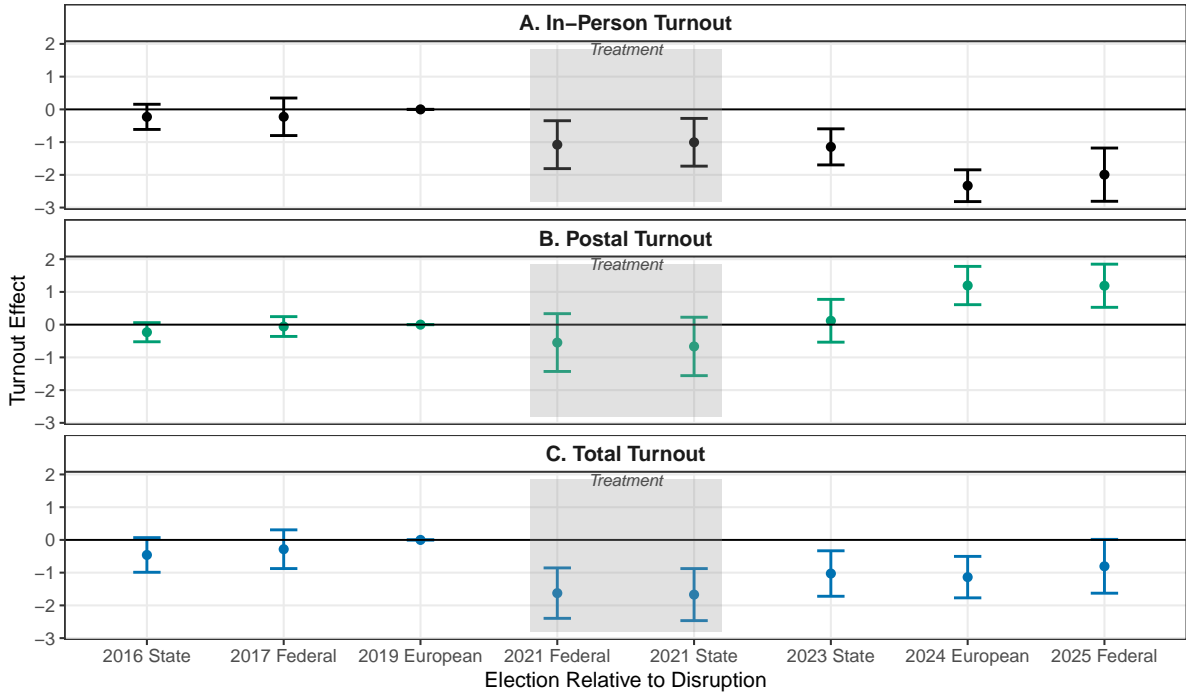
## Results

[Figure 1](#) presents the main results by voting mode; the corresponding estimates are reported in [Appendix Table A2](#).<sup>5</sup> Pre-treatment coefficients are generally small, although total turnout shows some pre-treatment noise in the earlier pre-period. The immediate effects appear in 2021. In treated precincts, in-person turnout declines sharply in the

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<sup>5</sup> [Table A3](#) shows that the qualitative pattern is similar when turnout is expressed in logs.

Figure 1: Event-study estimates by voting mode



*Notes:* The figure reports event-study difference-in-differences estimates from [Equation 1](#) for the in-person, postal, and total turnout. The omitted pre-treatment election is the 2019 European election. Confidence intervals are 95 percent and standard errors are clustered at the postal precinct level. The underlying estimates appear in [Appendix Table A2](#).

federal and concurrent state elections, and total turnout falls as well. Postal voting does not increase contemporaneously; if anything, it declines slightly, though not significantly. This pattern is consistent with an Election Day shock concentrated at the polling place: voters who intended to vote in person faced queues, closures, and ballot shortages, and some did not complete the act of voting.

The central result is persistence. Treated precincts remain about 1 percentage point lower in in-person turnout in the 2023 state rerun and about 2 percentage points lower in the 2024 European and 2025 federal elections. Over the same period, postal turnout rises by roughly 1 percentage point in later regular elections, indicating adaptation through

substitution across modes. But this adjustment is incomplete: total turnout remains below comparison precincts even after postal voting increases. The overall pattern is stable across post-2021 elections: persistent losses in the directly affected voting mode, partial adaptation through postal voting, and incomplete recovery in total participation.

The immediate decline is in line with [Fischer and Flügel \(2025\)](#), who show that Berlin’s 2021 irregularities reduced turnout on Election Day itself. The persistent effect is also consistent with [Pettigrew \(2021\)](#), but the results here show that persistence is concentrated in in-person voting and only partly offset by later postal adaptation. Supplementary appendix analyses reinforce this interpretation: waiting-time estimates show a clear dose-response pattern, with larger and more persistent in-person turnout losses where disruption was more severe ([Appendix F](#)); administrative data further show that more severely disrupted areas later received greater polling-station capacity ([Appendix B](#)); additional analyses suggest somewhat larger persistent in-person losses in younger precincts ([Appendix G](#)), survey evidence consistent with contemporaneous salience and perceived unfairness ([Appendix A](#)), and only modest downstream shifts in party vote shares ([Appendix H](#)).

## Conclusion

Using court-validated exposure to Berlin’s 2021 election breakdown and a precinct-level event-study difference-in-differences design, I show that the consequences of visible administrative failure were not confined to Election Day. Treated precincts experienced sharp declines in in-person turnout in 2021 and remained below comparison precincts in subsequent elections. Postal participation rose later, but only partly offset these losses, leaving total turnout persistently lower in affected precincts. Visible failures in election administration can therefore leave durable downstream effects on participation by depressing use of the voting mode directly affected by the breakdown, even when alternative modes remain available.

## References

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# Online Appendix

## Election Administration Failure Leaves Persistent In-Person Turnout Losses Despite Postal Adaptation

### A Survey Evidence

This section provides descriptive survey evidence consistent with the interpretation of the turnout results. I use pooled data from the German Longitudinal Election Study (GLES) Rolling Cross-Section surveys for the 2017, 2021, and 2025 federal elections and compare respondents in Berlin to respondents in the rest of Germany, using the 2017 pre-election survey as the baseline. Specifically, I estimate

$$Y_{ist} = \sum_{\kappa \neq 2017} \beta^{\kappa} (\mathbb{1}_{\kappa=t} \times \text{Berlin}_i) + \gamma_s + \lambda_t + u_{ist}, \quad (\text{A1})$$

where  $Y_{ist}$  is the outcome for individual  $i$  in state  $s$  and election year  $t$ ,  $\gamma_s$  are state fixed effects, and  $\lambda_t$  are year fixed effects. Standard errors are clustered at the state level.

The main trust item asks whether respondents agree that the federal election was conducted correctly and fairly.<sup>6</sup> I examine binary indicators for strong and at least partial disagreement. For nonvoters, I examine whether abstention was decided on Election Day or attributed to being prevented from voting.

The survey evidence points to two patterns. First, Berlin respondents in 2021 were more likely than respondents elsewhere to disagree that the federal election was conducted correctly and fairly. Second, among self-identified nonvoters, Berlin respondents were more likely to report deciding not to vote on Election Day or being prevented from voting. These patterns are consistent with the idea that the 2021 breakdown generated both acute Election Day frictions and a contemporaneous decline in perceived procedural integrity.

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<sup>6</sup> Original wording: “Die Bundestagswahl wird von den zuständigen Behörden korrekt und fair durchgeführt”.

By 2025, the Berlin–rest-of-Germany gap in perceived fairness narrows, suggesting partial recovery in stated attitudes.

I treat these results as descriptive rather than causal evidence. Berlin sample sizes in the GLES are modest, especially within the nonvoter subsample, and [Equation A1](#) does not identify precinct-level exposure to administrative failure. The survey evidence is therefore best understood as supplementary evidence consistent with the mechanisms highlighted by the turnout analysis. [Table A4](#) reports the corresponding estimates.

## B Administrative Response

Precincts that experienced more severe disruption in 2021 later received additional polling infrastructure. To examine this administrative response, I estimate difference-in-differences regressions in which the outcome is the number of polling stations in a precinct-election and the key regressor is disruption intensity in 2021, measured as total reported queueing time (in hours) across in-person polling stations within a postal precinct, interacted with indicators for 2023, 2024, and 2025. The specification includes precinct fixed effects and election  $\times$  district fixed effects. Results are reported in [Table A5](#).<sup>7</sup>

The estimates indicate a delayed but meaningful capacity response. Postal precincts with longer waiting times in 2021 experienced larger increases in polling-station capacity in 2024, a smaller positive association in 2025, and little change in 2023. Although these patterns do not show that expanded capacity offset turnout losses, they reinforce the interpretation that the 2021 breakdown was both salient and consequential enough to prompt later administrative adjustment.

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<sup>7</sup> Administrative data on polling station counts are available from 2021 through 2025.

## C Data Sources and Harmonization

The core dataset is a harmonized precinct-level panel covering all Berlin state, federal, and European elections between 2016 and 2025. The unit of observation is the 2021 postal precinct, which serves as the constant spatial frame across time. Election results are reported for in-person and postal precincts (*Urnen-* and *Briefwahlbezirke*), but boundaries vary across elections. I therefore harmonize all historical data to the 2021 postal precinct geography. For each election, I first aggregate in-person precincts to the postal precinct level and then construct population-weighted spatial crosswalks linking each election’s precinct geometries (2016, 2017, 2019, 2024, and 2025) to the 2021 configuration. [Figure A2](#) presents a map of the 2021 postal precincts.

The crosswalks use 100-meter raster population data from the 2022 census, restricted to German citizens aged 18 and older, aggregated over the intersection of historical and 2021 precinct polygons. Within each source precinct, these population shares are normalized to construct weights that reallocate votes and socio-demographic variables to the 2021 boundaries. This approach mainly aggregates smaller historical precincts to larger 2021 units, while proportionally splitting overlapping areas where necessary. The resulting panel contains consistent precinct identifiers, official second-ballot results for all elections, harmonized socio-demographic indicators, and treatment flags for precincts affected by the 2021 administrative breakdown. [Table A6](#) reports summary statistics. In the main analysis panel, 18 of 10,800 harmonized precinct-years exceed 100% turnout because harmonization can allocate votes and eligible voters with slightly different weights, especially when external or postal ballots are assigned across boundaries.

A potential limitation is that precinct borders changed across elections, particularly before 2016. Fixing all observations to the 2021 delineations may therefore introduce measurement error if population density or voter composition differs within reallocated areas. Three considerations mitigate this concern: precincts are small, with about 1,500 eligible voters on average; crosswalk weights are based on 100-meter census population

counts rather than polygon area; and the results are robust to alternative harmonization strategies that downweight or exclude fragmented crosswalk mappings (see [Appendix E](#)).

The dataset spans eight elections across seven election years: European Parliament (2019, 2024), state (*Abgeordnetenhaus*) elections (2016, 2021, 2023), and federal (*Bundestag*) elections (2017, 2021, 2025). Precinct shapefiles come from the Berlin Electoral Office.<sup>8</sup> Turnout and party vote shares are measured relative to eligible voters, separately for in-person and postal voting. I use postal precincts as the analytical unit because they are the smallest geography that consistently reports both voting modes and aligns cleanly with the treatment definition. Socio-demographic controls come from Berlin’s 2021 structural reports (*Strukturdaten*) and include population size, age composition, gender, migration background, and welfare dependency rates.<sup>9</sup> Administrative disruption data come from the Berlin State Court and Federal Constitutional Court rulings on the 2021 elections, which document ballot shortages, waiting times, and other polling-station failures; I aggregate these indicators to the postal precinct level.

## D 2024 Federal Partial Rerun

In February 2024, a court-ordered partial rerun of the 2021 *Bundestag* election was conducted in the 431 precincts identified by the Federal Constitutional Court ([Bundesverfassungsgericht, 2023](#)). I do not include this rerun as an outcome period in the panel event-study analysis because voting took place only in affected precincts, so no within-election control group exists for that election wave.

The partial rerun is also unlikely to explain the main results for subsequent regular elections. First, the turnout gap between affected and unaffected precincts is already visible before the rerun, most clearly in the universal rerun of the state election, where

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<sup>8</sup> See <https://daten.berlin.de/datensaetze>, last accessed on Oct 27, 2025.

<sup>9</sup> See <https://www.statistik-berlin-brandenburg.de/>, last accessed on Oct 27, 2025.

treated precincts exhibit lower in-person and total turnout (see [Table A2](#)). Second, the partial federal rerun is itself an institutional response to the 2021 administrative failure and is therefore better understood as a downstream consequence of the original disruption than as a separate confounding shock. For these reasons, the long-run turnout effects observed in subsequent regular elections are interpreted as persistent effects of the 2021 breakdown.

## E Robustness Checks

This section reports a range of robustness checks for the main specification. Across alternative inference procedures, treatment definitions, controls, matching approaches, and sample constructions, the core pattern remains the same: treated precincts experience persistent declines in in-person turnout, partial increases in postal voting, and lower total turnout.

**Randomization Inference** I implement a randomization-inference procedure following [Heß \(2017\)](#), conducting 999 permutations while preserving the number of treated postal precincts within each district. [Table A7](#) shows that the observed treatment effects are unlikely to arise by chance.

**Treatment Definition: Federal vs. State Disruptions** The main specification focuses on precincts annulled in the federal election. To assess whether effects differ by the type and salience of disruption, I distinguish among precincts affected during the federal election, precincts affected only during the state election, and unaffected precincts. [Figure A4](#) shows that turnout losses are concentrated in precincts disrupted during the federal election, whereas state-only disruptions generate little detectable effect. [Table A8](#) provides descriptive information on the underlying irregularities.

**Additional Controls** I re-estimate the main specification adding time-invariant controls, interacted with election indicators and held constant at their 2019 values, for demographic composition and precinct size. The controls include the shares of foreign citizens, residents with migration background, welfare recipients, women, residents aged 6–18, 18–25, and 65+, the share of EU citizens, and the log number of eligible voters. [Table A9](#) shows that the main estimates remain substantively unchanged.

**Matching on Observables** I re-estimate the baseline specification using several matching procedures based on pre-treatment precinct characteristics: local geographic matching, propensity-score matching, Mahalanobis matching, and entropy balancing ([Hainmueller, 2012](#)). Matching is based on 2019 values of the shares of residents with migration background, welfare recipients, women, residents in different age groups, and EU citizens; propensity-score matching additionally imposes exact balance by election and district. [Table A10](#) shows that the main results remain qualitatively similar across these alternative comparison sets.

**Alternative Inference** The baseline analysis clusters standard errors at the postal precinct level, the level at which treatment is assigned and outcomes are observed. [Table A11](#) shows that the results are similar under alternative clustering choices, including constituency-level clustering and two-way clustering by precinct and district  $\times$  election.

**Spatial Sample Construction and Weighting** Because the panel harmonizes historical election outcomes to the 2021 postal precinct geography, some precinct-election observations combine multiple source precincts. To assess whether the results are sensitive to this spatial fragmentation, I implement two alternative approaches. First, I weight observations by concentration measures derived from the crosswalks, so precinct-election observations based on cleaner geographic matches receive greater weight. Second, I restrict the sample to a balanced subset of postal precincts with low fragmentation in all crosswalked elections, using thresholds based on the number of source precincts needed

to account for most of the mapped population. [Table A12](#) shows that the core results are robust to these alternatives.

## F Disruption Intensity: Waiting Times

The main analysis uses a binary treatment indicator based on legal rulings, but not all affected precincts experienced disruption of equal severity. This section examines whether more severe breakdowns, measured by recorded waiting times, are associated with larger turnout effects. Disruption intensity is coded from official documentation in the Berlin State Constitutional Court and Federal Constitutional Court rulings ([Verfassungsgerichtshof des Landes Berlin, 2022](#); [Bundesverfassungsgericht, 2023](#)). For each annulled postal precinct, I code reported waiting times and aggregate them to the postal precinct level, which allows estimation of dose-response relationships rather than a simple treated-control contrast.<sup>10</sup> [Table A13](#) reports event-study estimates using waiting time in 2021 as a continuous treatment measure. The results show a clear dose-response pattern: longer waiting times are associated with larger immediate and subsequent declines in in-person turnout. In later elections, postal turnout moves in the opposite direction, consistent with delayed adaptation, but these increases do not fully offset the in-person losses. Overall, the waiting-time results support the interpretation that voters respond not only to the presence of administrative breakdown, but also to its severity.

## G Heterogeneous Effects by Socio-Demographics

The average effects in [Figure 1](#) show a persistent decline in in-person turnout following the 2021 administrative breakdown. To assess whether this effect varies across precinct environments, I estimate triple-difference event-study specifications that interact treatment with standardized precinct characteristics. Age exhibits the clearest gradient. As shown

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<sup>10</sup> For more detail on the underlying data construction, see [Appendix C](#).

in [Figure A3](#), precincts with larger shares of younger adults display larger declines in in-person turnout after 2021, whereas precincts with older age profiles exhibit smaller effects. This pattern is consistent with the idea that newer or less entrenched voters are more vulnerable to disruptions in participation routines ([Fujiwara et al., 2016](#); [Shino and Smith, 2018](#); [Coppock and Green, 2016](#)). [Table A15](#) reports the underlying age coefficients. By contrast, I find little systematic heterogeneity by migration background, welfare receipt, or gender composition; the corresponding estimates are reported in [Table A14](#).

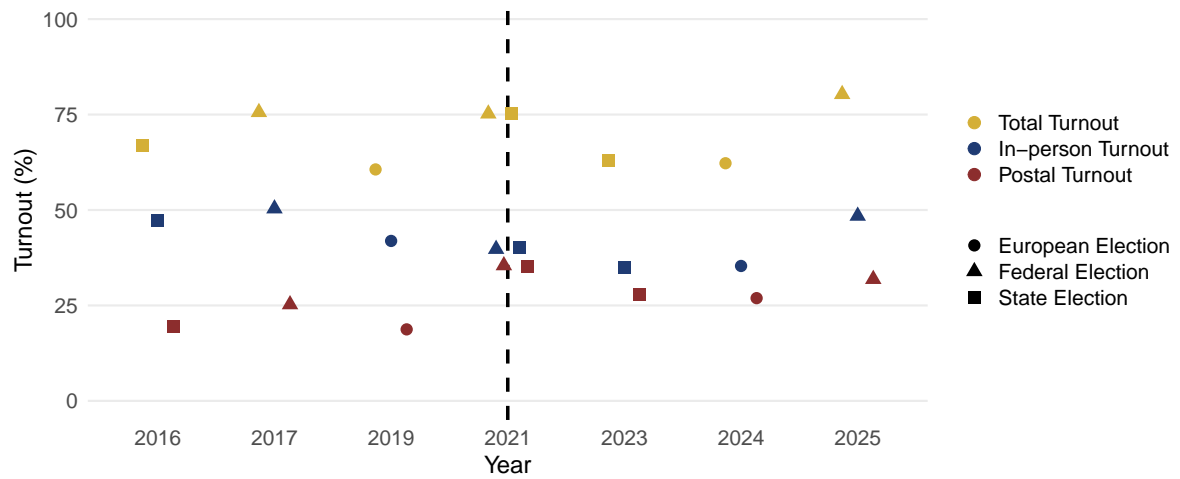
## H Downstream Electoral Composition

This appendix examines whether Berlin’s 2021 election-day administrative breakdown affected the partisan composition of the electorate in addition to reducing participation. I estimate treatment effects on party vote shares using the same event-study specification as in the main turnout analysis, replacing turnout with party  $p$ ’s vote share in postal precinct  $i$  and election  $t$ . All specifications include postal precinct fixed effects and district-by-election fixed effects, with standard errors clustered at the postal precinct level. The reference election ( $t - 1$ ) is the 2019 European election.

[Table A16](#) reports the resulting estimates for parties represented in the federal parliament. Pre-treatment coefficients are generally small, but several parties exhibit statistically significant pre-period estimates, so the vote-share results should be interpreted as suggestive evidence only. Post-2021 estimates indicate modest movements relative to the participation effects in the main analysis. The most consistent increases appear for LINKE and, in some post-disruption elections, for the Greens and the FDP. By contrast, effects for the SPD, CDU, and AfD are small or not systematic across elections. Overall, any downstream shifts in electoral composition appear secondary in magnitude to the turnout effects.

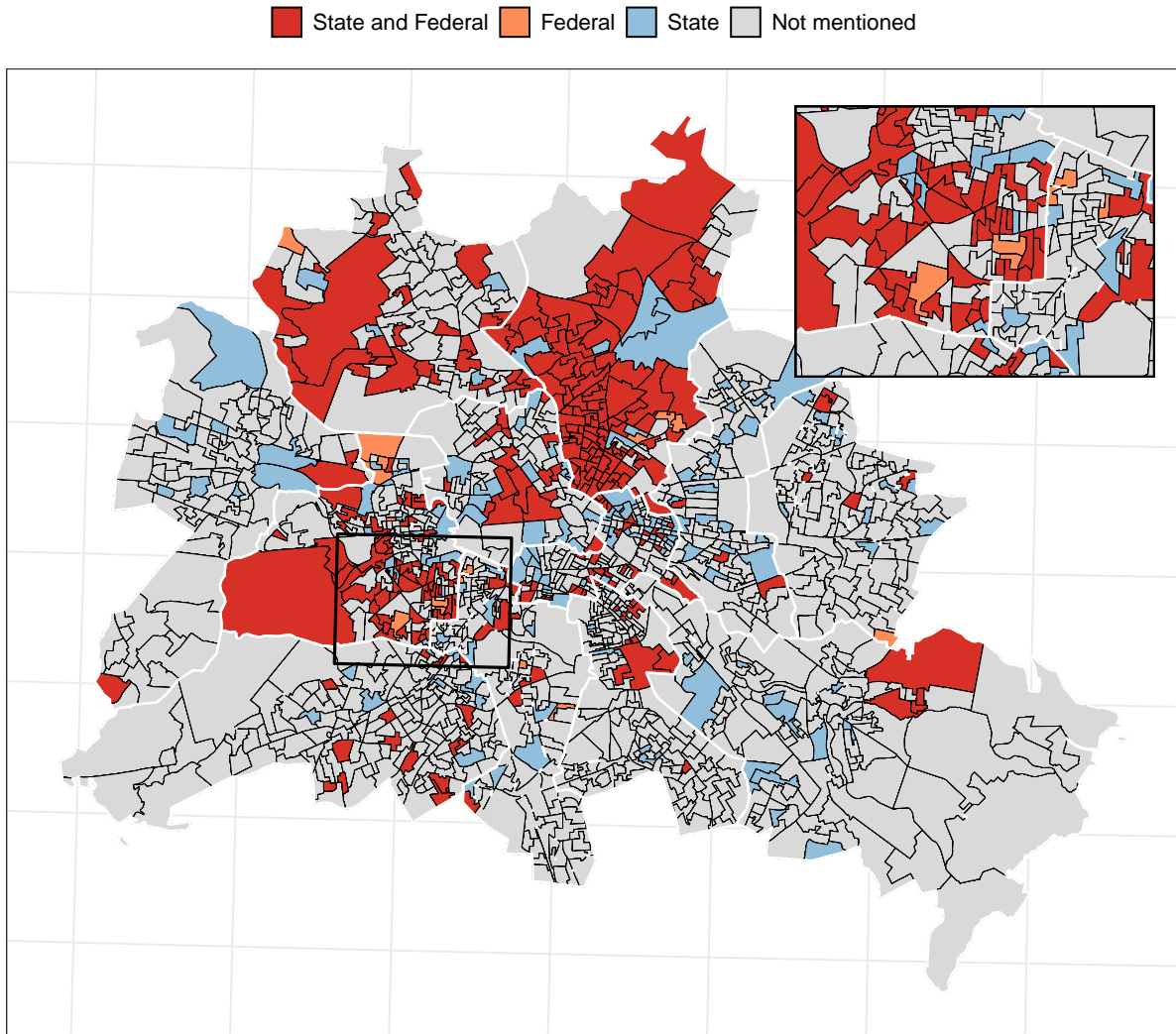
# I Supplementary Figures

Figure A1: Turnout by Election Type in Berlin since 2016



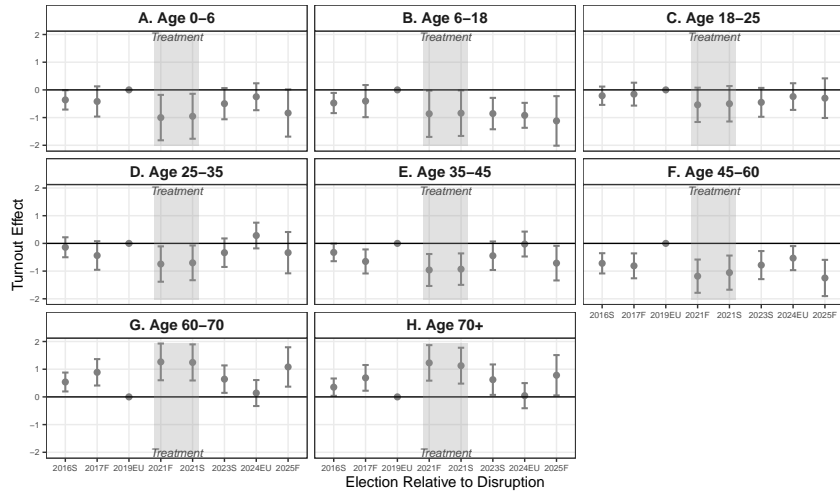
*Notes:* The figure presents in-person, postal, and total turnout for the European, federal, and state elections in the sample. The dotted vertical line marks the 2021 election.

Figure A2: Berlin Precincts by Court Mention



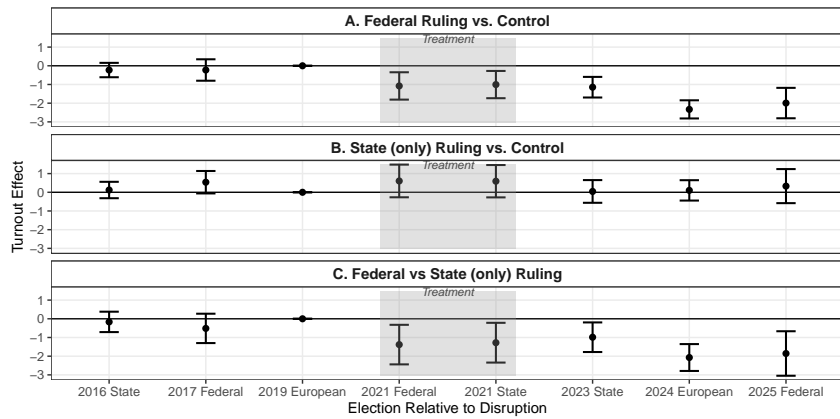
*Notes:* The figure displays Berlin's postal precincts (*Briefwahlbezirke*) classified by whether they were mentioned in the 2021 election rulings of the *Berlin Constitutional Court*, the *Federal Constitutional Court*, or both. The inset highlights a high-density area for visual clarity.

Figure A3: Heterogeneity by Age



*Notes:* The figure reports triple-difference estimates for the in-person turnout. The reference election ( $t - 1$ ) is the 2019 European election. Confidence intervals use standard errors clustered at the postal precinct level. The underlying estimates appear in [Table A15](#).

Figure A4: Heterogeneity by Type of Treatment



*Notes:* The figure reports event-study estimates for the in-person, postal, and total turnout under alternative treatment definitions. The reference election ( $t - 1$ ) is the 2019 European election. 95%-confidence intervals use standard errors clustered at the postal precinct level.

## J Supplementary Tables

Table A1: Pre-breakdown characteristics by treatment and election family

|   | Treated mean | Control mean | Diff (T - C) | SE   | p-value |
|---|--------------|--------------|--------------|------|---------|
| <b>Panel A. Federal election baseline (BT17)</b>  |              |              |              |      |         |
| Turnout 2017 (BT)                                 | 78.58        | 76.01        | 2.58         | 0.49 | 0.000   |
| Share age 18–25                                   | 7.81         | 7.83         | -0.02        | 0.16 | 0.877   |
| Share welfare recipients (SGB II)                 | 11.41        | 13.72        | -2.31        | 0.61 | 0.000   |
| Share migration background                        | 13.62        | 13.90        | -0.28        | 0.53 | 0.601   |
| <b>Panel B. State election baseline (AH16)</b>    |              |              |              |      |         |
| Turnout 2016 (AH)                                 | 69.71        | 67.69        | 2.01         | 0.55 | 0.000   |
| Share age 18–25                                   | 7.81         | 7.83         | -0.02        | 0.16 | 0.877   |
| Share welfare recipients (SGB II)                 | 11.41        | 13.72        | -2.31        | 0.61 | 0.000   |
| Share migration background                        | 13.62        | 13.90        | -0.28        | 0.53 | 0.601   |
| <b>Panel C. European election baseline (EU19)</b> |              |              |              |      |         |
| Turnout 2019 (EU)                                 | 65.42        | 61.14        | 4.28         | 0.66 | 0.000   |
| Share age 18–25                                   | 7.81         | 7.83         | -0.02        | 0.16 | 0.877   |
| Share welfare recipients (SGB II)                 | 11.41        | 13.72        | -2.31        | 0.61 | 0.000   |
| Share migration background                        | 13.62        | 13.90        | -0.28        | 0.53 | 0.601   |

*Notes:* Each panel compares precincts later annulled by the Federal Constitutional Court (“treated”) to other Berlin precincts (“control”) in the last pre-breakdown election of the same type.

Table A2: Main Specification

|                                | In-person Turnout<br>(1) | Postal Turnout<br>(2) | Total Turnout<br>(3)  |
|--------------------------------|--------------------------|-----------------------|-----------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)      | -0.2309<br>(0.1489)   | -0.4593*<br>(0.2697)  |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)      | -0.0576<br>(0.1542)   | -0.2837<br>(0.3014)   |
| Treatment 2021 Federal (t+0/F) | -1.078***<br>(0.3729)    | -0.5472<br>(0.4500)   | -1.625***<br>(0.3926) |
| Treatment 2021 State (t+0/S)   | -1.005***<br>(0.3716)    | -0.6656<br>(0.4547)   | -1.671***<br>(0.4051) |
| Treatment 2023 State (t+1)     | -1.145***<br>(0.2809)    | 0.1184<br>(0.3332)    | -1.027***<br>(0.3541) |
| Treatment 2024 European (t+2)  | -2.332***<br>(0.2475)    | 1.195***<br>(0.2981)  | -1.137***<br>(0.3229) |
| Treatment 2025 Federal (t+3)   | -1.994***<br>(0.4146)    | 1.188***<br>(0.3360)  | -0.8056*<br>(0.4190)  |
| Control mean                   | 41.96                    | 19.18                 | 61.14                 |
| Observations                   | 10,800                   | 10,800                | 10,800                |
| Precinct FE                    | ✓                        | ✓                     | ✓                     |
| Election-District FE           | ✓                        | ✓                     | ✓                     |

*Notes:* The table presents event study results based on [Equation 1](#) for the in-person turnout, postal turnout, and total turnout. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A3: Levels and Log Specifications

| Panel A: In-person Turnout     | (1)                   | (2)                    |
|--------------------------------|-----------------------|------------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)   | -0.0066<br>(0.0050)    |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)   | -0.0073<br>(0.0074)    |
| Treatment 2021 Federal (t+0/F) | -1.078***<br>(0.3729) | -0.0244***<br>(0.0091) |
| Treatment 2021 State (t+0/S)   | -1.005***<br>(0.3716) | -0.0225**<br>(0.0091)  |
| Treatment 2023 State (t+1)     | -1.145***<br>(0.2809) | -0.0281***<br>(0.0074) |
| Treatment 2024 European (t+2)  | -2.332***<br>(0.2475) | -0.0623***<br>(0.0064) |
| Treatment 2025 Federal (t+3)   | -1.994***<br>(0.4146) | -0.0441***<br>(0.0099) |
| Control mean                   | 41.96                 | 41.96                  |
| Panel B: Postal Turnout        | (1)                   | (2)                    |
| Treatment 2016 State (t-3)     | -0.2309<br>(0.1489)   | -0.0068<br>(0.0081)    |
| Treatment 2017 Federal (t-2)   | -0.0576<br>(0.1542)   | -0.0040<br>(0.0067)    |
| Treatment 2021 Federal (t+0/F) | -0.5472<br>(0.4500)   | -0.0215*<br>(0.0129)   |
| Treatment 2021 State (t+0/S)   | -0.6656<br>(0.4547)   | -0.0238*<br>(0.0130)   |
| Treatment 2023 State (t+1)     | 0.1184<br>(0.3332)    | 0.0060<br>(0.0132)     |
| Treatment 2024 European (t+2)  | 1.195***<br>(0.2981)  | 0.0414***<br>(0.0112)  |
| Treatment 2025 Federal (t+3)   | 1.188***<br>(0.3360)  | 0.0327**<br>(0.0130)   |
| Control mean                   | 19.18                 | 19.18                  |
| Panel C: Total Turnout         | (1)                   | (2)                    |
| Treatment 2016 State (t-3)     | -0.4593*<br>(0.2697)  | -0.0074<br>(0.0049)    |
| Treatment 2017 Federal (t-2)   | -0.2837<br>(0.3014)   | -0.0073<br>(0.0060)    |
| Treatment 2021 Federal (t+0/F) | -1.625***<br>(0.3926) | -0.0252***<br>(0.0063) |
| Treatment 2021 State (t+0/S)   | -1.671***<br>(0.4051) | -0.0254***<br>(0.0064) |
| Treatment 2023 State (t+1)     | -1.027***<br>(0.3541) | -0.0159***<br>(0.0058) |
| Treatment 2024 European (t+2)  | -1.137***<br>(0.3229) | -0.0189***<br>(0.0052) |
| Treatment 2025 Federal (t+3)   | -0.8056*<br>(0.4190)  | -0.0145*<br>(0.0076)   |
| Control mean                   | 61.14                 | 61.14                  |
| Observations                   | 10,800                | 10,800                 |
| Specification                  | Levels                | Log                    |
| Precinct FE                    | ✓                     | ✓                      |
| Election-District FE           | ✓                     | ✓                      |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for in-person, postal, and total turnout in levels (Column 1) and logs (Column 2). \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ ,

\*  $p < 0.1$ .

Table A4: GLES Survey Results

|                    | Strongly Disagree<br>election fair/correct<br>(1) | (Strongly) Disagree<br>election fair/correct<br>(2) | Prevented<br>from voting<br>(3) | Same day decision to abstain<br>or prevented<br>(4) |
|--------------------|---|---|---------------------------------|---|
| Berlin 2017 (post) | -0.0058<br>(0.0039)                               | -0.0123***<br>(0.0032)                              |                                 |   |
| Berlin 2021 (post) | -0.0930***<br>(0.0035)                            | -0.1275***<br>(0.0040)                              | 0.5281***<br>(0.0360)           | 0.4950***<br>(0.0401)                               |
| Berlin 2025 (pre)  | -0.0287***<br>(0.0034)                            | -0.0075**<br>(0.0026)                               |                                 |   |
| Berlin 2025 (post) | -0.0175***<br>(0.0050)                            | -0.0122***<br>(0.0031)                              | -0.0077<br>(0.0527)             | 0.1823**<br>(0.0621)                                |
| Observations       | 20,213  | 31,484  | 510                             | 510   |
| Year FE            | ✓   | ✓   | ✓                               | ✓   |
| State FE           | ✓   | ✓   | ✓                               | ✓   |

*Notes:* This table reports estimates from [Equation A1](#) using pooled data from the GLES Rolling Cross-Section surveys conducted in 2017, 2021, and 2025. Columns (1) and (2) use all respondents and measure disagreement with the statement *“Die Bundestagswahl wird von den zuständigen Behörden korrekt und fair durchgeführt”*. Column (1) equals 1 if respondents strongly disagree; Column (2) equals 1 if respondents at least partially disagree. Columns (3) and (4) use the nonvoter subsample only. Column (3) equals 1 if respondents report being prevented from voting. Column (4) equals 1 if respondents report deciding not to vote on Election Day or being prevented from voting. The omitted category is the 2017 pre-election survey. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A5: Administrative Response: Change in Polling Station Capacity

|                               | Number Polling Stations |                       |
|-------------------------------|-------------------------|-----------------------|
|                               | (1)                     | (2)                   |
| Treatment 2023 State (t+1)    | -0.0171<br>(0.0260)     | 0.0407<br>(0.0321)    |
| Treatment 2024 European (t+2) | 0.8199***<br>(0.1918)   | 0.4798***<br>(0.1697) |
| Treatment 2025 Federal (t+3)  | 0.0566<br>(0.0351)      | 0.0927***<br>(0.0336) |
| Control mean                  | 0.65                    | 0.65                  |
| Observations                  | 5,400                   | 5,400                 |
| Specification                 | Binary                  | Waiting Time in h     |
| Precinct FE                   | ✓                       | ✓                     |
| Election FE                   | ✓                       | ✓                     |

*Notes:* The table reports difference-in-differences estimates for the number of distinct polling stations within a postal precinct. Column (1) uses a binary disruption indicator; Column (2) uses total queueing time in 2021 (hours). The control mean is for 2021 and can be below one because multiple polling precincts may share the same physical polling location. The reference election is the 2021 federal election. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A6: Summary Statistics

| Panel A: Full Sample      |       |           |          |         |           |           |           |           |
|---------------------------|-------|-----------|----------|---------|-----------|-----------|-----------|-----------|
| Statistic                 | N     | Mean      | St. Dev. | Min     | Pctl(25)  | Median    | Pctl(75)  | Max       |
| Total Turnout             | 1,350 | 76.618    | 9.302    | 48.053  | 70.233    | 77.755    | 83.153    | 125.795   |
| In-person Turnout         | 1,350 | 39.742    | 3.604    | 26.594  | 37.419    | 39.783    | 42.055    | 56.059    |
| Postal Turnout            | 1,350 | 36.876    | 8.701    | 13.857  | 30.586    | 37.005    | 42.422    | 86.934    |
| Eligible Voters           | 1,350 | 1,659.061 | 617.445  | 258.995 | 1,160.463 | 1,430.296 | 2,146.394 | 3,848.810 |
| Migrant Backgrounds Share | 1,350 | 13.758    | 8.069    | 1.864   | 7.825     | 12.104    | 18.124    | 63.429    |
| Female Share              | 1,350 | 51.879    | 2.754    | 40.625  | 50.138    | 51.899    | 53.594    | 65.376    |
| Panel B: Treatment Group  |       |           |          |         |           |           |           |           |
| Statistic                 | N     | Mean      | St. Dev. | Min     | Pctl(25)  | Median    | Pctl(75)  | Max       |
| Total Turnout             | 294   | 77.367    | 7.929    | 48.053  | 73.304    | 78.883    | 82.978    | 100.986   |
| In-person Turnout         | 294   | 39.868    | 3.184    | 31.101  | 37.839    | 39.769    | 41.933    | 48.584    |
| Postal Turnout            | 294   | 37.499    | 7.433    | 14.359  | 33.195    | 38.568    | 42.257    | 62.366    |
| Eligible Voters           | 294   | 1,919.967 | 720.474  | 690.971 | 1,256.041 | 1,887.964 | 2,584.046 | 3,815.900 |
| Migrant Backgrounds Share | 294   | 13.622    | 7.971    | 2.725   | 7.764     | 11.940    | 17.776    | 50.800    |
| Female Share              | 294   | 51.821    | 2.788    | 40.625  | 49.966    | 51.881    | 53.572    | 61.141    |
| Panel C: Control Group    |       |           |          |         |           |           |           |           |
| Statistic                 | N     | Mean      | St. Dev. | Min     | Pctl(25)  | Median    | Pctl(75)  | Max       |
| Total Turnout             | 1,056 | 76.410    | 9.643    | 51.107  | 69.533    | 77.041    | 83.309    | 125.795   |
| In-person Turnout         | 1,056 | 39.707    | 3.713    | 26.594  | 37.363    | 39.803    | 42.177    | 56.059    |
| Postal Turnout            | 1,056 | 36.702    | 9.018    | 13.857  | 30.074    | 36.504    | 42.458    | 86.934    |
| Eligible Voters           | 1,056 | 1,586.423 | 564.859  | 258.995 | 1,146.354 | 1,369.789 | 2,005.608 | 3,848.810 |
| Migrant Backgrounds Share | 1,056 | 13.796    | 8.099    | 1.864   | 7.838     | 12.143    | 18.194    | 63.429    |
| Female Share              | 1,056 | 51.894    | 2.745    | 41.689  | 50.221    | 51.904    | 53.597    | 65.376    |

*Notes:* The table presents summary statistics for the 2021 Federal election for the main sample, i.e., excluding those precincts only affected by administrative breakdown in the State election. Turnout exceeds 100% in 18 of 10,800 precincts  $\times$  elections, two treated and 16 control precincts.

Table A7: Randomized Inference

|                                | In-person Turnout<br>(1)             | Postal Turnout<br>(2)               | Total Turnout<br>(3)                 |
|--------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)<br>[0.2523]      | -0.2309<br>(0.1489)<br>[0.1161]     | -0.4593<br>(0.2697)*<br>[0.0801]*    |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)<br>[0.4565]      | -0.0576<br>(0.1542)<br>[0.6957]     | -0.2837<br>(0.3014)<br>[0.3363]      |
| Treatment 2021 Federal (t+0/F) | -1.078<br>(0.3729)***<br>[0.0030]*** | -0.5472<br>(0.4500)<br>[0.2202]     | -1.625<br>(0.3926)***<br>[0.0000]*** |
| Treatment 2021 State (t+0/S)   | -1.005<br>(0.3716)***<br>[0.0140]**  | -0.6656<br>(0.4547)<br>[0.1281]     | -1.671<br>(0.4051)***<br>[0.0000]*** |
| Treatment 2023 State (t+1)     | -1.145<br>(0.2809)***<br>[0.0000]*** | 0.1184<br>(0.3332)<br>[0.7297]      | -1.027<br>(0.3541)***<br>[0.0060]*** |
| Treatment 2024 European (t+2)  | -2.332<br>(0.2475)***<br>[0.0000]*** | 1.195<br>(0.2981)***<br>[0.0000]*** | -1.137<br>(0.3229)***<br>[0.0010]*** |
| Treatment 2025 Federal (t+3)   | -1.994<br>(0.4146)***<br>[0.0000]*** | 1.188<br>(0.3360)***<br>[0.0000]*** | -0.8056<br>(0.4190)*<br>[0.0611]*    |
| Control mean                   | 41.96                                | 19.18                               | 61.14                                |
| Observations                   | 10,800                               | 10,800                              | 10,800                               |
| Precinct FE                    | ✓                                    | ✓                                   | ✓                                    |
| Election-District FE           | ✓                                    | ✓                                   | ✓                                    |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for the in-person, postal, and total turnout. Brackets report p-values from 999 random permutations following [Heß \(2017\)](#), preserving the number of treated precincts within each district. Parentheses report cluster-robust asymptotic standard errors from the baseline specification.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A8: Treatment Overview

| Treatment<br>Federal                              | Treatment<br>State | Ballot<br>Error | Ballot<br>Missing | Disruption | Unusual<br>Waiting | Open After<br>Official Closing | N   |
|---|--------------------|-----------------|-------------------|------------|--------------------|--------------------------------|-----|
| <i>yes</i>  | <i>yes</i>         | 32              | 13                | 101        | 90                 | 212                            | 277 |
| <i>no</i>   | <i>yes</i>         | 45              | 61                | 2          | 55                 | 1                              | 157 |
| Subsample: Disruption = 0 & Open A.O. Closing = 0 |                    |                 |                   |            |                    |                                |     |
| <i>yes</i>  | <i>yes</i>         | 1               | 2                 | —          | 16                 | —                              | 17  |
| <i>no</i>   | <i>yes</i>         | 44              | 61                | —          | 55                 | —                              | 154 |

*Notes:* The table reports the number of precincts by treatment status during the federal and state elections. The type of irregularity is available only for the state election.

Table A9: Robustness: Controls

|                                | In-person Turnout<br>(1) | Postal Turnout<br>(2) | Total Turnout<br>(3)   |
|--------------------------------|--------------------------|-----------------------|------------------------|
| Treatment 2016 State (t-3)     | -0.1174<br>(0.1791)      | -0.1327<br>(0.1389)   | -0.2501<br>(0.2284)    |
| Treatment 2017 Federal (t-2)   | -0.1872<br>(0.2202)      | -0.0170<br>(0.1518)   | -0.2043<br>(0.2485)    |
| Treatment 2021 Federal (t+0/F) | -1.113***<br>(0.2844)    | -0.2654<br>(0.3659)   | -1.378***<br>(0.3930)  |
| Treatment 2021 State (t+0/S)   | -1.047***<br>(0.2878)    | -0.3693<br>(0.3740)   | -1.417***<br>(0.4059)  |
| Treatment 2023 State (t+1)     | -1.150***<br>(0.2805)    | 0.1902<br>(0.2932)    | -0.9601***<br>(0.3273) |
| Treatment 2024 European (t+2)  | -2.312***<br>(0.2466)    | 0.9666***<br>(0.2790) | -1.345***<br>(0.3149)  |
| Treatment 2025 Federal (t+3)   | -1.949***<br>(0.3248)    | 0.8516***<br>(0.3248) | -1.097***<br>(0.3798)  |
| Control mean                   | 41.96                    | 19.18                 | 61.14                  |
| Observations                   | 10,800                   | 10,800                | 10,800                 |
| Precinct FE                    | ✓                        | ✓                     | ✓                      |
| Election-District FE           | ✓                        | ✓                     | ✓                      |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for in-person, postal, and total turnout with additional controls. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A10: Matching

|                                | (1)                   | In-person Turnout     |                       | (4)                   |
|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                |                       | (2)                   | (3)                   |                       |
| Treatment 2016 State (t-3)     | -0.0085<br>(0.1984)   | -0.0366<br>(0.2501)   | 0.1402<br>(0.2483)    | -0.2388<br>(0.2454)   |
| Treatment 2017 Federal (t-2)   | -0.0943<br>(0.3029)   | 0.0385<br>(0.3683)    | 0.1428<br>(0.3718)    | -0.0096<br>(0.5854)   |
| Treatment 2021 Federal (t+0/F) | -1.107***<br>(0.3893) | -0.7368<br>(0.4779)   | -1.012**<br>(0.4737)  | -1.512***<br>(0.5347) |
| Treatment 2021 State (t+0/S)   | -1.035***<br>(0.3871) | -0.6708<br>(0.4745)   | -0.9554**<br>(0.4689) | -1.438***<br>(0.5246) |
| Treatment 2023 State (t+1)     | -1.124***<br>(0.2911) | -1.026***<br>(0.3635) | -1.212***<br>(0.3507) | -2.017***<br>(0.4510) |
| Treatment 2024 European (t+2)  | -2.320***<br>(0.2573) | -2.166***<br>(0.3146) | -2.155***<br>(0.3081) | -2.803***<br>(0.3923) |
| Treatment 2025 Federal (t+3)   | -1.942***<br>(0.4330) | -1.509***<br>(0.5338) | -1.673***<br>(0.5237) | -2.587***<br>(0.5507) |
| Control mean                   | 42.5                  | 43.31                 | 43.28                 | 41.96                 |
| Observations                   | 5,832                 | 3,632                 | 3,648                 | 10,800                |
| Specification                  | Local Matching        | Propensity Score      | Mahalanobis           | Entropy Bal.          |
| Precinct FE                    | ✓                     | ✓                     | ✓                     | ✓                     |
| Election-District FE           | ✓                     | ✓                     | ✓                     | ✓                     |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for the in-person turnout under alternative matching approaches. Column (1) uses local geographic matching. Column (2) uses nearest-neighbor matching based on the propensity score. Column (3) uses Mahalanobis matching. Column (4) uses entropy-balancing weights from [Hainmueller \(2012\)](#). \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A11: Robustness: Standard Errors

| Panel A: In-person Turnout     | (1)                   | (2)                   | (3)                          |
|--------------------------------|-----------------------|-----------------------|------------------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)   | -0.2283<br>(0.3120)   | -0.2283<br>(0.3559)          |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)   | -0.2261<br>(0.3023)   | -0.2261<br>(0.4145)          |
| Treatment 2021 Federal (t+0/F) | -1.078***<br>(0.3729) | -1.078***<br>(0.3093) | -1.078**<br>(0.4630)         |
| Treatment 2021 State (t+0/S)   | -1.005***<br>(0.3716) | -1.005***<br>(0.3110) | -1.005**<br>(0.4572)         |
| Treatment 2023 State (t+1)     | -1.145***<br>(0.2809) | -1.145***<br>(0.3122) | -1.145**<br>(0.4395)         |
| Treatment 2024 European (t+2)  | -2.332***<br>(0.2475) | -2.332***<br>(0.3104) | -2.332***<br>(0.3842)        |
| Treatment 2025 Federal (t+3)   | -1.994***<br>(0.4146) | -1.994***<br>(0.3378) | -1.994***<br>(0.5304)        |
| Control mean                   | 41.96                 | 41.96                 | 41.96                        |
| Panel B: Postal Turnout        | (1)                   | (2)                   | (3)                          |
| Treatment 2016 State (t-3)     | -0.2309<br>(0.1489)   | -0.2309<br>(0.3247)   | -0.2309<br>(0.2738)          |
| Treatment 2017 Federal (t-2)   | -0.0576<br>(0.1542)   | -0.0576<br>(0.3213)   | -0.0576<br>(0.1550)          |
| Treatment 2021 Federal (t+0/F) | -0.5472<br>(0.4500)   | -0.5472<br>(0.3733)   | -0.5472<br>(0.4768)          |
| Treatment 2021 State (t+0/S)   | -0.6656<br>(0.4547)   | -0.6656*<br>(0.3797)  | -0.6656<br>(0.4881)          |
| Treatment 2023 State (t+1)     | 0.1184<br>(0.3332)    | 0.1184<br>(0.3100)    | 0.1184<br>(0.3708)           |
| Treatment 2024 European (t+2)  | 1.195***<br>(0.2981)  | 1.195***<br>(0.2997)  | 1.195***<br>(0.3219)         |
| Treatment 2025 Federal (t+3)   | 1.188***<br>(0.3360)  | 1.188***<br>(0.3316)  | 1.188***<br>(0.4127)         |
| Control mean                   | 19.18                 | 19.18                 | 19.18                        |
| Panel C: Total Turnout         | (1)                   | (2)                   | (3)                          |
| Treatment 2016 State (t-3)     | -0.4593*<br>(0.2697)  | -0.4593<br>(0.3332)   | -0.4593<br>(0.3975)          |
| Treatment 2017 Federal (t-2)   | -0.2837<br>(0.3014)   | -0.2837<br>(0.3718)   | -0.2837<br>(0.3639)          |
| Treatment 2021 Federal (t+0/F) | -1.625***<br>(0.3926) | -1.625***<br>(0.3471) | -1.625***<br>(0.4187)        |
| Treatment 2021 State (t+0/S)   | -1.671***<br>(0.4051) | -1.671***<br>(0.3605) | -1.671***<br>(0.4365)        |
| Treatment 2023 State (t+1)     | -1.027***<br>(0.3541) | -1.027***<br>(0.3498) | -1.027**<br>(0.4474)         |
| Treatment 2024 European (t+2)  | -1.137***<br>(0.3229) | -1.137***<br>(0.3615) | -1.137***<br>(0.4121)        |
| Treatment 2025 Federal (t+3)   | -0.8056*<br>(0.4190)  | -0.8056**<br>(0.3810) | -0.8056<br>(0.5060)          |
| Control mean                   | 61.14                 | 61.14                 | 61.14                        |
| Standard-Errors                | Precinct              | Precinct-Election     | Precinct & Election-District |
| Observations                   | 10,800                | 10,800                | 10,800                       |
| Precinct FE                    | ✓                     | ✓                     | ✓                            |
| Election-District FE           | ✓                     | ✓                     | ✓                            |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for the in-person, postal, and total turnout using alternative standard-error calculations. Column (1) clusters at the precinct level. Column (2) uses two-way clustering at the postal precinct  $\times$  election level. Column (3) uses two-way clustering at the postal precinct and district  $\times$  election levels. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A12: Spatial Sample Construction and Weighting

| Panel A: In-person Turnout     | (1)                   | (2)                   | (3)                   |
|--------------------------------|-----------------------|-----------------------|-----------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)   | -0.2089<br>(0.2099)   | 0.0111<br>(0.2390)    |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)   | -0.1609<br>(0.3190)   | -0.0438<br>(0.3656)   |
| Treatment 2021 Federal (t+0/F) | -1.078***<br>(0.3729) | -1.004***<br>(0.3863) | -0.9323**<br>(0.4577) |
| Treatment 2021 State (t+0/S)   | -1.005***<br>(0.3716) | -0.9313**<br>(0.3860) | -0.8694*<br>(0.4581)  |
| Treatment 2023 State (t+1)     | -1.145***<br>(0.2809) | -1.071***<br>(0.3067) | -0.8154**<br>(0.3478) |
| Treatment 2024 European (t+2)  | -2.332***<br>(0.2475) | -2.301***<br>(0.2838) | -2.218***<br>(0.3042) |
| Treatment 2025 Federal (t+3)   | -1.994***<br>(0.4146) | -1.816***<br>(0.4387) | -1.586***<br>(0.5023) |
| Control mean                   | 41.96                 | 41.96                 | 42.32                 |
| Panel B: Postal Turnout        | (1)                   | (2)                   | (3)                   |
| Treatment 2016 State (t-3)     | -0.2309<br>(0.1489)   | -0.2470<br>(0.1625)   | -0.2286<br>(0.1779)   |
| Treatment 2017 Federal (t-2)   | -0.0576<br>(0.1542)   | -0.0982<br>(0.1654)   | -0.2177<br>(0.1639)   |
| Treatment 2021 Federal (t+0/F) | -0.5472<br>(0.4500)   | -0.6017<br>(0.4400)   | -0.6132<br>(0.4719)   |
| Treatment 2021 State (t+0/S)   | -0.6656<br>(0.4547)   | -0.7201<br>(0.4453)   | -0.7597<br>(0.4825)   |
| Treatment 2023 State (t+1)     | 0.1184<br>(0.3332)    | 0.0639<br>(0.3389)    | 0.1502<br>(0.3919)    |
| Treatment 2024 European (t+2)  | 1.195***<br>(0.2981)  | 1.196***<br>(0.3178)  | 1.398***<br>(0.3563)  |
| Treatment 2025 Federal (t+3)   | 1.188***<br>(0.3360)  | 1.165***<br>(0.3579)  | 1.130***<br>(0.4056)  |
| Control mean                   | 19.18                 | 19.18                 | 19.61                 |
| Panel C: Total Turnout         | (1)                   | (2)                   | (3)                   |
| Treatment 2016 State (t-3)     | -0.4593*<br>(0.2697)  | -0.3959<br>(0.2883)   | -0.2175<br>(0.3278)   |
| Treatment 2017 Federal (t-2)   | -0.2837<br>(0.3014)   | -0.2549<br>(0.3427)   | -0.2616<br>(0.3632)   |
| Treatment 2021 Federal (t+0/F) | -1.625***<br>(0.3926) | -1.663***<br>(0.4004) | -1.545***<br>(0.4251) |
| Treatment 2021 State (t+0/S)   | -1.671***<br>(0.4051) | -1.708***<br>(0.4141) | -1.629***<br>(0.4473) |
| Treatment 2023 State (t+1)     | -1.027***<br>(0.3541) | -1.064***<br>(0.3695) | -0.6653<br>(0.4085)   |
| Treatment 2024 European (t+2)  | -1.137***<br>(0.3229) | -1.141***<br>(0.3693) | -0.8204**<br>(0.3923) |
| Treatment 2025 Federal (t+3)   | -0.8056*<br>(0.4190)  | -0.7896*<br>(0.4644)  | -0.4562<br>(0.5172)   |
| Control mean                   | 61.14                 | 61.14                 | 61.92                 |
| Observations                   | 10,800                | 10,800                | 7,328                 |
| Specification                  | Baseline              | HHI-weighted          | k90-balanced(<=2)     |
| Precinct FE                    | ✓                     | ✓                     | ✓                     |
| Election-District FE           | ✓                     | ✓                     | ✓                     |

*Notes:* The table reports event-study estimates based on [Equation 1](#) for in-person, postal, and total turnout under alternative spatial sample constructions. Column (1) is the baseline. Column (2) weights precinct-election observations by spatial concentration in the crosswalk to the 2021 postal precinct geography. Column (3) restricts the sample to a balanced set of postal precincts with low crosswalk fragmentation in all crosswalked elections. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A13: Waiting Time

| Panel A: In-person Turnout     | (1)                   | (2)                   |
|--------------------------------|-----------------------|-----------------------|
| Treatment 2016 State (t-3)     | -0.2283<br>(0.1960)   | -0.0038<br>(0.2238)   |
| Treatment 2017 Federal (t-2)   | -0.2261<br>(0.2922)   | -0.4680<br>(0.3320)   |
| Treatment 2021 Federal (t+0/F) | -1.078***<br>(0.3729) | -1.835***<br>(0.4070) |
| Treatment 2021 State (t+0/S)   | -1.005***<br>(0.3716) | -1.799***<br>(0.3932) |
| Treatment 2023 State (t+1)     | -1.145***<br>(0.2809) | -1.468***<br>(0.3605) |
| Treatment 2024 European (t+2)  | -2.332***<br>(0.2475) | -1.958***<br>(0.3056) |
| Treatment 2025 Federal (t+3)   | -1.994***<br>(0.4146) | -1.939***<br>(0.4746) |
| Control mean                   | 41.96                 | 41.96                 |
| Panel B: Postal Turnout        | (1)                   | (2)                   |
| Treatment 2016 State (t-3)     | -0.2309<br>(0.1489)   | -0.1488<br>(0.1711)   |
| Treatment 2017 Federal (t-2)   | -0.0576<br>(0.1542)   | 0.2197<br>(0.1652)    |
| Treatment 2021 Federal (t+0/F) | -0.5472<br>(0.4500)   | 0.3617<br>(0.4232)    |
| Treatment 2021 State (t+0/S)   | -0.6656<br>(0.4547)   | 0.2792<br>(0.4287)    |
| Treatment 2023 State (t+1)     | 0.1184<br>(0.3332)    | 0.8185**<br>(0.4017)  |
| Treatment 2024 European (t+2)  | 1.195***<br>(0.2981)  | 0.9317***<br>(0.3578) |
| Treatment 2025 Federal (t+3)   | 1.188***<br>(0.3360)  | 0.5311<br>(0.4011)    |
| Control mean                   | 19.18                 | 19.18                 |
| Observations                   | 10,800                | 9,648                 |
| R <sup>2</sup>                 | 0.89565               | 0.89509               |
| Within R <sup>2</sup>          | 0.00559               | 0.00129               |
| Panel C: Total Turnout         | (1)                   | (2)                   |
| Treatment 2016 State (t-3)     | -0.4593*<br>(0.2697)  | -0.1525<br>(0.3227)   |
| Treatment 2017 Federal (t-2)   | -0.2837<br>(0.3014)   | -0.2483<br>(0.3558)   |
| Treatment 2021 Federal (t+0/F) | -1.625***<br>(0.3926) | -1.473***<br>(0.3767) |
| Treatment 2021 State (t+0/S)   | -1.671***<br>(0.4051) | -1.520***<br>(0.3899) |
| Treatment 2023 State (t+1)     | -1.027***<br>(0.3541) | -0.6491<br>(0.4368)   |
| Treatment 2024 European (t+2)  | -1.137***<br>(0.3229) | -1.026**<br>(0.4224)  |
| Treatment 2025 Federal (t+3)   | -0.8056*<br>(0.4190)  | -1.408***<br>(0.5119) |
| Control mean                   | 61.14                 | 61.14                 |
| Observations                   | 10,800                | 9,648                 |
| Specification                  | Baseline              | Waiting Time in h     |
| Precinct FE                    | ✓                     | ✓                     |
| Election-District FE           | ✓                     | ✓                     |

*Notes:* The table presents event study results based on [Equation 1](#) for the in-person turnout, postal turnout, and total turnout. Column (1) shows the baseline. In column (2) treatment is defined as the maximum waiting time in hours within a postal precinct as reported by the ruling of the *State Constitutional Court* for the 2021 state election.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A14: Heterogeneity by Socio-demographics

|   | In-person Turnout     |                        |                        |
|---|-----------------------|------------------------|------------------------|
|   | (1)                   | (2)                    | (3)                    |
| Treatment 2016 State (t-3)                  | -0.2114<br>(0.2004)   | -0.2160<br>(0.1920)    | -0.2133<br>(0.1902)    |
| Treatment 2017 Federal (t-2)                | -0.2931<br>(0.2818)   | -0.2136<br>(0.2936)    | -0.1556<br>(0.2328)    |
| Treatment 2021 Federal (t+0/F)              | -1.100***<br>(0.3471) | -1.065***<br>(0.3767)  | -0.9526***<br>(0.2776) |
| Treatment 2021 State (t+0/S)                | -1.039***<br>(0.3415) | -0.9975***<br>(0.3738) | -0.8823***<br>(0.2793) |
| Treatment 2023 State (t+1)                  | -1.094***<br>(0.2930) | -1.134***<br>(0.2813)  | -1.109***<br>(0.2754)  |
| Treatment 2024 European (t+2)               | -2.382***<br>(0.2498) | -2.337***<br>(0.2451)  | -2.290***<br>(0.2404)  |
| Treatment 2025 Federal (t+3)                | -2.101***<br>(0.3961) | -1.982***<br>(0.4138)  | -1.878***<br>(0.3311)  |
| Treatment State 2016 (t-3) $\times Z_i$     | -0.0939<br>(0.2103)   | -0.0120<br>(0.1570)    | 0.1549<br>(0.2181)     |
| Treatment Federal 2017 (t-2) $\times Z_i$   | 0.0136<br>(0.2696)    | 0.0349<br>(0.2273)     | 0.3890<br>(0.2610)     |
| Treatment 2021 Federal (t+0/F) $\times Z_i$ | -0.3736<br>(0.3528)   | 0.2367<br>(0.3133)     | 0.0538<br>(0.3421)     |
| Treatment 2021 State (t+0/S) $\times Z_i$   | -0.3221<br>(0.3580)   | 0.0824<br>(0.3625)     | 0.0911<br>(0.3539)     |
| Treatment 2023 State (t+1) $\times Z_i$     | -0.3176<br>(0.2993)   | 0.1177<br>(0.2414)     | 0.0373<br>(0.3066)     |
| Treatment 2024 European (t+2) $\times Z_i$  | 0.1264<br>(0.2775)    | -0.4191**<br>(0.1912)  | -0.0800<br>(0.2485)    |
| Treatment 2025 Federal (t+3) $\times Z_i$   | 0.0017<br>(0.3970)    | -0.2143<br>(0.3319)    | 0.2191<br>(0.3799)     |
| Control mean                                | 41.96                 | 41.96                  | 41.96                  |
| Observations                                | 10,800                | 10,800                 | 10,800                 |
| Covariate $Z_i$                             | Migrant Backgrounds   | Females                | Welfare Recipients     |
| Precinct FE                                 | ✓                     | ✓                      | ✓                      |
| Election-District FE                        | ✓                     | ✓                      | ✓                      |

*Notes:* The table reports triple-difference event-study estimates for in-person turnout.

Each column interacts treatment with one standardized precinct characteristic, held constant at its 2019 value. Covariates are scaled to have mean zero and standard deviation one. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A15: Heterogeneity by Age

|   | In-person Turnout     |                        |                       |                       |                        |                        |                       |                        |
|---|-----------------------|------------------------|-----------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------|
|   | (1)                   | (2)                    | (3)                   | (4)                   | (5)                    | (6)                    | (7)                   | (8)                    |
| Treatment 2016 State (t-3)                  | -0.2629<br>(0.1975)   | -0.2811<br>(0.1976)    | -0.1981<br>(0.1985)   | -0.1579<br>(0.2007)   | -0.0081<br>(0.1827)    | -0.2048<br>(0.1944)    | -0.1096<br>(0.1937)   | 0.0065<br>(0.1898)     |
| Treatment 2017 Federal (t-2)                | -0.2843<br>(0.2904)   | -0.2720<br>(0.2994)    | -0.2522<br>(0.2914)   | -0.1635<br>(0.3049)   | 0.0122<br>(0.2864)     | -0.0800<br>(0.2739)    | -0.0790<br>(0.2990)   | 0.0026<br>(0.3023)     |
| Treatment 2021 Federal (t+0/F)              | -1.200***<br>(0.3708) | -1.176***<br>(0.3761)  | -1.110***<br>(0.3528) | -1.006***<br>(0.3829) | -0.7886**<br>(0.3650)  | -0.8841**<br>(0.3502)  | -0.8897**<br>(0.3764) | -0.8528**<br>(0.3867)  |
| Treatment 2021 State (t+0/S)                | -1.122***<br>(0.3698) | -1.100***<br>(0.3746)  | -1.042***<br>(0.3490) | -0.9411**<br>(0.3814) | -0.7318**<br>(0.3651)  | -0.8187**<br>(0.3518)  | -0.8218**<br>(0.3753) | -0.8078**<br>(0.3839)  |
| Treatment 2023 State (t+1)                  | -1.196***<br>(0.2813) | -1.241***<br>(0.2789)  | -1.103***<br>(0.2834) | -1.064***<br>(0.2877) | -0.9433***<br>(0.2750) | -1.130***<br>(0.2813)  | -1.010***<br>(0.2743) | -0.9559***<br>(0.2902) |
| Treatment 2024 European (t+2)               | -2.363***<br>(0.2476) | -2.434***<br>(0.2471)  | -2.322***<br>(0.2469) | -2.352***<br>(0.2458) | -2.213***<br>(0.2414)  | -2.281***<br>(0.2457)  | -2.276***<br>(0.2420) | -2.249***<br>(0.2484)  |
| Treatment 2025 Federal (t+3)                | -2.098***<br>(0.4149) | -2.120***<br>(0.4222)  | -2.042***<br>(0.4016) | -1.934***<br>(0.4237) | -1.638***<br>(0.3953)  | -1.797***<br>(0.3931)  | -1.795***<br>(0.4044) | -1.695***<br>(0.4242)  |
| Treatment State 2016 (t-3) $\times Z_i$     | -0.3622**<br>(0.1775) | -0.4741**<br>(0.1856)  | -0.2110<br>(0.1684)   | -0.1396<br>(0.1839)   | -0.3258**<br>(0.1618)  | -0.7195***<br>(0.1863) | 0.5380***<br>(0.1740) | 0.3519**<br>(0.1594)   |
| Treatment Federal 2017 (t-2) $\times Z_i$   | -0.4180<br>(0.2783)   | -0.4047<br>(0.2959)    | -0.1538<br>(0.2107)   | -0.4377*<br>(0.2633)  | -0.6517***<br>(0.2213) | -0.8101***<br>(0.2293) | 0.8879***<br>(0.2431) | 0.6875***<br>(0.2366)  |
| Treatment 2021 Federal (t+0/F) $\times Z_i$ | -1.001**<br>(0.4178)  | -0.8626**<br>(0.4259)  | -0.5396*<br>(0.3159)  | -0.7453**<br>(0.3257) | -0.9604***<br>(0.2941) | -1.184***<br>(0.3062)  | 1.264***<br>(0.3378)  | 1.228***<br>(0.3271)   |
| Treatment 2021 State (t+0/S) $\times Z_i$   | -0.9533**<br>(0.4138) | -0.8407**<br>(0.4193)  | -0.5009<br>(0.3264)   | -0.7022**<br>(0.3197) | -0.9296***<br>(0.2896) | -1.056***<br>(0.3145)  | 1.245***<br>(0.3323)  | 1.127***<br>(0.3302)   |
| Treatment 2023 State (t+1) $\times Z_i$     | -0.4978*<br>(0.2872)  | -0.8552***<br>(0.2889) | -0.4501*<br>(0.2659)  | -0.3357<br>(0.2626)   | -0.4458*<br>(0.2625)   | -0.7834***<br>(0.2584) | 0.6415**<br>(0.2526)  | 0.6220**<br>(0.2803)   |
| Treatment 2024 European (t+2) $\times Z_i$  | -0.2476<br>(0.2479)   | -0.9186***<br>(0.2296) | -0.2411<br>(0.2456)   | 0.2843<br>(0.2366)    | -0.0235<br>(0.2291)    | -0.5314**<br>(0.2217)  | 0.1393<br>(0.2392)    | 0.0447<br>(0.2315)     |
| Treatment 2025 Federal (t+3) $\times Z_i$   | -0.8352*<br>(0.4348)  | -1.120**<br>(0.4560)   | -0.2992<br>(0.3647)   | -0.3348<br>(0.3804)   | -0.7132**<br>(0.3186)  | -1.249***<br>(0.3335)  | 1.081***<br>(0.3627)  | 0.7822**<br>(0.3710)   |
| Control mean                                | 41.96                 | 41.96                  | 41.96                 | 41.96                 | 41.96                  | 41.96                  | 41.96                 | 41.96                  |
| Observations                                | 10,800                | 10,800                 | 10,800                | 10,800                | 10,800                 | 10,800                 | 10,800                | 10,800                 |
| Covariate $Z_i$                             | Ages 0-6              | Ages 6-18              | Ages 18-25            | Ages 25-35            | Ages 35-45             | Ages 45-60             | Ages 60-70            | Ages 70+               |
| Precinct FE                                 | ✓                     | ✓                      | ✓                     | ✓                     | ✓                      | ✓                      | ✓                     | ✓                      |
| Election-District FE                        | ✓                     | ✓                      | ✓                     | ✓                     | ✓                      | ✓                      | ✓                     | ✓                      |

*Notes:* The table presents event study results based on a triple interaction event study for the in-person turnout. The share of citizens within the corresponding age group is held constant in 2019 and is scaled with a mean of 0 and a standard deviation of 1.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Table A16: Election Results (Vote Share)

|                                | LINKE<br>(1)          | The Greens<br>(2)     | SPD<br>(3)          | FDP<br>(4)           | CDU<br>(5)           | AfD<br>(6)          |
|--------------------------------|-----------------------|-----------------------|---------------------|----------------------|----------------------|---------------------|
| Treatment 2016 State (t-3)     | 0.0272*<br>(0.0152)   | 0.0203*<br>(0.0121)   | 0.0144<br>(0.0096)  | 0.0325*<br>(0.0177)  | 0.0099<br>(0.0125)   | 0.0154<br>(0.0108)  |
| Treatment 2017 Federal (t-2)   | 0.0069<br>(0.0135)    | 0.0153<br>(0.0107)    | 0.0113<br>(0.0105)  | 0.0198<br>(0.0138)   | 0.0318**<br>(0.0140) | 0.0140<br>(0.0098)  |
| Treatment 2021 Federal (t+0/F) | 0.0268*<br>(0.0162)   | 0.0335***<br>(0.0127) | 0.0008<br>(0.0081)  | 0.0288**<br>(0.0143) | -0.0218*<br>(0.0120) | 0.0070<br>(0.0177)  |
| Treatment 2021 State (t+0/S)   | 0.0497***<br>(0.0182) | 0.0314**<br>(0.0134)  | -0.0083<br>(0.0093) | 0.0394**<br>(0.0156) | -0.0135<br>(0.0124)  | -0.0024<br>(0.0173) |
| Treatment 2023 State (t+1)     | 0.0636***<br>(0.0202) | 0.0333*<br>(0.0182)   | -0.0048<br>(0.0087) | 0.0352*<br>(0.0196)  | 0.0025<br>(0.0144)   | 0.0032<br>(0.0191)  |
| Treatment 2024 European (t+2)  | 0.0598***<br>(0.0208) | 0.0220<br>(0.0137)    | 0.0073<br>(0.0103)  | 0.0180<br>(0.0224)   | 0.0132<br>(0.0106)   | -0.0079<br>(0.0154) |
| Treatment 2025 Federal (t+3)   | 0.0182<br>(0.0177)    | 0.0174<br>(0.0146)    | 0.0030<br>(0.0104)  | 0.0321*<br>(0.0190)  | 0.0150<br>(0.0126)   | 0.0027<br>(0.0138)  |
| Control mean                   | 11.36                 | 26.01                 | 14.24               | 4.84                 | 16.31                | 10.34               |
| Observations                   | 10,800                | 10,800                | 10,800              | 10,800               | 10,800               | 10,800              |
| Precinct FE                    | ✓                     | ✓                     | ✓                   | ✓                    | ✓                    | ✓                   |
| Election-District FE           | ✓                     | ✓                     | ✓                   | ✓                    | ✓                    | ✓                   |

*Notes:* The table presents event study results based on [Equation 1](#) for the vote share of the political parties represented in the federal parliament *LINKE* (Left), *The Greens*, the *SPD* (Social Democrats), the *FDP* (Liberals), the *CDU* (Christian Conservatives), and the *AfD* (right-wing populist). \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

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