Do place-based policies matter at the poll?

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Abstract

This paper studies whether place-based policies affect electoral outcomes by exploiting a major public-sector relocation program in Germany, which relocated more than 60 agencies and 3,000 civil-service jobs to municipalities in structurally weaker regions of Bavaria between 2015 and 2025. Exploiting exogenous variation generated by the state's rule-based allocation of public agencies, we find sizable electoral effects in treated municipalities. The incumbent governing party, CSU, which actively claimed credit for the policy, gains just over 2 percentage points in state elections, while its coalition partner, the Free Voters, loses about 1.6 points. The program also reduces support for the far-right populist party AfD by roughly 0.5–1 point. Turnout falls by 0.72 percentage points in the first election following a relocation, consistent with a modest demobilization effect. In federal elections, we observe aligned but smaller shifts in vote shares (CSU +0.7 percentage points; Free Voters −1.5 percentage points; AfD -0.3 percentage points).

Keywords: Place-based policies, relocation, voting, populism, incumbent

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1 Introduction

Can policies aimed at lagging regions change how their residents vote? Automation and globalization create geographically concentrated winners and losers (Anelli *et al.*, 2019; Autor *et al.*, 2020; Colantone and Stanig, 2018). Financial crises and austerity can deepen these regional disparities (Funke *et al.*, 2016; Fetzer, 2019). Economic distress and insecurity, in turn, help radical and populist parties attract support (Guiso *et al.*, 2017; Liberini *et al.*, 2019; Dal Bó *et al.*, 2019; Algan *et al.*, 2017; Dorn *et al.*, 2024; Dippel *et al.*, 2022). Place-based policies seek to improve economic conditions in disadvantaged regions. Their political consequences matter both for the governments that implement them and for the parties that appeal to voters who feel left behind.

We study these consequences through Bavaria's public-sector relocation program. Between 2015 and 2025, the state relocated around 60 public agencies and more than 3,000 civil-service jobs and study places to structurally weak municipalities. The program was announced in 2014 and promoted by leading politicians of the Christian Social Union (CSU), Bavaria's main governing party. We examine whether receiving an agency changes support for the CSU, its coalition partner the Free Voters (FW), and the far-right Alternative for Germany (AfD). We also study turnout, effects in neighboring municipalities, and voting in federal elections. The setting allows us to examine who gains politically from a visible place-based policy and whether those gains extend beyond the level of government that implements it.

Voters may reward a government because a policy improves local economic conditions or because it signals attention to their region. Either response could reduce support for parties that appeal to dissatisfaction with established politics. Yet the parties in a governing coalition need not benefit equally: voters may credit the party that promotes and implements the policy. These questions connect the economic determinants of populism (Guriev and Papaioannou, 2022) to the electoral returns to regional policy. They also matter for regional development itself. Firms in regions with strong right-wing movements face difficulties recruiting skilled workers, maintaining customer relations, and joining local business networks (Henn and Hannemann, 2023); these difficulties can reinforce regional inequality.[1]

Our empirical strategy uses rule-based eligibility for receiving a public agency. Municipalities in districts classified as structurally weak by a government index were prioritized for relocations, while other districts were ineligible. We combine a municipality-level panel of 2,056 municipalities observed from 2008 to 2023 with four Bavarian state elections (2008, 2013, 2018, and 2023) and four federal elections (2009, 2013, 2017, and 2021). We estimate difference-in-differences models and use the estimator of Callaway and Sant'Anna (2021) to account for staggered relocation dates. The analysis controls for time-varying confounders, the economic and demographic indicators underlying eligibility, and prior changes in party vote shares. It also examines a comparison group restricted to municipalities with index values between 80 and 100.

The electoral gains accrue to the CSU rather than to both governing parties. In state elections, the CSU gains 2–3 percentage points in treated municipalities, while the Free Voters lose about 1.6 percentage points. The AfD's vote share declines by about one percentage point, roughly 33% of the sample mean. The CSU implemented the program and publicly claimed credit for it. The contrast with the Free Voters therefore connects our findings to the question

[1] See Funke *et al.* (2020) for an analysis of the economic consequences of populists in power.

of which party voters credit for a government policy.

The effects extend to participation and federal voting. Turnout falls by 0.72 percentage points in the first election after a relocation, consistent with modest voter demobilization. Effects in neighboring municipalities are small, suggesting that the geographical impact is largely confined to receiving municipalities. In federal elections, the CSU gains about 0.7 percentage points, the Free Voters lose about 1.5 percentage points, and the AfD loses about 0.3 percentage points. These results show how a state-level policy can affect voting at another level of government.

Our first contribution is to the literature on the political effects of regional policy. Evidence from the Brexit referendum is mixed. Regions that voted strongly to leave the European Union were often structurally weak and dependent on EU markets (Los *et al.*, 2017). EU structural funds had no average effect on the leave vote, but reduced Euroscepticism where they improved economic conditions (Becker *et al.*, 2017; Crescenzi *et al.*, 2020). National fiscal cuts, by contrast, increased support for populism and Brexit (Fetzer, 2019). Evidence from Italy and European Parliament elections also links EU regional funds to lower support for populist parties (Albanese *et al.*, 2022; Gold and Lehr, 2024). We extend this work by studying public-sector relocations: a policy that brings public agencies and jobs to specific municipalities and that a state government can visibly claim as its own.

Second, we connect the literature on public-employment reallocation to electoral outcomes. Existing studies examine regional employment and private-sector multipliers, as well as wages, housing prices, and productivity (Alesina *et al.*, 2001; Algan *et al.*, 2002; Auricchio *et al.*, 2020; Becker *et al.*, 2021; Caponi, 2017; Faggio and Overman, 2014; Faggio, 2019; Faggio *et al.*, 2019; Jefferson and Trainor, 1996; Jofre-Monseny *et al.*, 2020). We are the first to examine the electoral consequences of public-employment reallocation as a place-based policy. Our findings also contribute to research on the determinants of populism by showing how targeted regional policies can limit support for radical parties.

Third, the different responses of the CSU and the Free Voters speak to the literatures on incumbent voting and credit claiming (Levitt and Snyder Jr, 1997; Grimmer *et al.*, 2012; Lazarus and Reilly, 2010; Gerber *et al.*, 2022; Bueno, 2023). Regional economic conditions can affect incumbent parties' electoral outcomes (Rombi and Valbruzzi, 2024). In Bavaria, the leading party that announced, promoted, and implemented the relocations gains votes, while its coalition partner loses them. The magnitude of these shifts exceeds the potential effect of new public employees entering the local electorate.[2] The CSU also gains in federal elections, showing that the electoral returns to a visible regional policy can cross levels of government.

Section 2 describes the relocation program and Bavaria's political system. Section 3 presents the data and descriptive statistics, and Section 4 explains the empirical strategy. Section 5 reports the findings, and Section 6 concludes.

[2] Public employees may have different voting preferences; see Bhatti and Hansen (2013); Corey and Garand (2002); Geys and Sørensen (2022).

2 Institutional details and relocation in Bavaria

2.1 Relocation program in Bavaria: "Heimatstrategie"

The Free State of Bavaria is Germany's largest federal state in terms of geographic area and the second largest in terms of population. With almost 13.5 million inhabitants (as of 2023), it is larger than some European countries such as Belgium, Sweden, the Czech Republic, Austria, or Switzerland.

In 2014, the Bavarian "Heimatstrategie" (homeland strategy) was established by the state government of Bavaria (STMFH, 2014), represented by leading politicians of the main incumbent party at the state level —the Christian Social Union (CSU).[3] The initiative aimed at equalizing living conditions across the Bavarian regions and supporting economic development and job creation in structurally weaker regions. The initiative was announced and introduced by the Bavarian Ministry of Finance, Regional Development, and Homeland, represented by its Minister of State Markus Söder (CSU) – who claimed credit for the program and served as the minister responsible for the homeland strategy until 2018, and has been serving as the Bavarian Prime Minister ever since. The prime minister and the leading incumbent party, the CSU, are therefore closely linked to the implemented place-based policies in the target regions.

The relocation program of public institutions and government jobs is a key component of the structural place-based policy within the homeland strategy. In 2015 and 2016, the Bavarian government started the first phase of the largest relocation of public authorities and state institutions in recent decades. The concept comprises 66 relocation projects[4] by 2025 with a total of 3,155 people, of which 2,225 are civil servants and employees and 930 are students (see Bayerischer Landtag 2018). The relocations are mainly from the Munich area.[5]

For the new locations, the government used a quantitative eligibility rule based on a composite index of structural weakness: the Bavarian average was normalized to 100, and districts scoring 90 or below were designated as *Räume mit besonderem Handlungsbedarf* (RmbH) and prioritized for relocations. The Bavarian government's structural-weakness index is a weighted composite of five indicators, with weights fixed ex ante and a cutoff rule for eligibility. In the RDP 2013/14 version used for the first phase of the Heimatstrategie, the weights are: 30% population predictions, 30% unemployment, 10% employment density, 20% disposable income, and 10% net migration of young adults.

By 2021, more than three quarters of the relocation projects had already been implemented, including the relocation of more than 50 authorities and institutions with over 1,500 civil service jobs (STMFH, 2021). In 2019 the Bavarian government announced an extension of the homeland strategy with a second phase of relocations of public authorities and the promotion of structurally weaker regions with a new program until 2030. It builds on the successes of the first phase and adds relocation projects in target regions. The first and second phases together encompass 80 relocation projects, providing around 5,200 civil-service jobs in the target regions (and new study places for 1,330 students).

[3] Following the constitutional mandate of the Bavarian Constitutional Law, Article 3, Paragraph 2, Sentence 2, which calls for the promotion and safeguarding of equal living and working conditions in Bavaria, in both urban and rural areas.

[4] Three relocation projects were transferred to the Autobahn GmbH of the Federal Government in 2021 and are excluded.

[5] An example is the relocation of parts of the Bavarian State Office for Statistics from Munich to the cities of Fürth and Schweinfurt.

2.2 Political landscape

State elections in Bavaria are held every five years, usually in September or October. The 2023 election took place on October 8, 2023. Article 14 of the Bavarian State Constitution stipulates that the state parliament is elected according to "improved proportional representation". The electoral system consists of two pillars: first, there are direct mandates, i.e. all regions of Bavaria should send at least one representative to the state parliament. For this reason, the whole of Bavaria is divided into 91 constituencies in which citizens vote for a direct candidate with their **first vote**. A simple majority is sufficient to win. The second pillar consists of list mandates. Just under half (89 out of 180) of the seats in the Bavarian state parliament are allocated to list candidates. To this end, the parties draw up lists of their candidates for each of the seven administrative districts (*Regierungsbezirke*).[6] With their **second vote**, citizens vote for a candidate on these lists and thus determine who enters the state parliament in addition to the direct candidates. Unlike in federal elections, it is not just this second vote that determines the distribution of seats in the state parliament, but the total number of votes. All direct candidates who have won their constituency – provided their party received more than 5% of the votes state-wide – enter the state parliament. If the party in question is entitled to more seats based on its total votes, additional list candidates – those who personally received the most votes – move in. In our empirical analysis, we use second votes for the Bavarian state parliament to determine party vote shares.

Following the 2023 election, five parties make up the Bavarian state parliament: the Christian Conservatives (*CSU*), the liberal-conservative Free Voters (*FW*), the far-right Alternative for Germany (*AfD*), the Green party and the Social Democrats (*SPD*). The liberal party (*FDP*) failed to re-enter the state parliament in 2023. The Bavarian party system deviates significantly from the overall federal level in several respects. First and foremost, there is the special status of the CSU in the federal parliament. The "sister parties" CDU and CSU – often referred to as the Union parties (*Unionsparteien*) – form a joint parliamentary group in the German federal parliament which brings together MPs from two independent parties. Since its foundation in 1949, the CSU has seen itself as the parliamentary representation of an independent party. Its special status as a 'parliamentary group within the parliamentary group' (Günter Buchstab) is recognised by the CDU.[7] The government of the CSU and the FW under Prime Minister Markus Söder (CSU) has been in office since 31 October 2023. It is the only government in Germany with the participation of the FW. The Free Voters originated as an electoral association which ran in local and regional elections with their own independent candidates as an alternative to the established parties. Its orientation can be described as 'liberal-conservative' and 'value-conservative', with a focus on the expansion of local self-government. Standing in the 1998 Bavarian state elections was internally controversial, because according to the critics, the Free Voters would be leaving their actual field of activity at the local level. The FW have held seats in the Bavarian state parliament since 2008 and have participated in the state government since 2018.

[6] These lists vary in length, as the administrative districts receive different numbers of seats in the Bavarian state parliament depending on the number of inhabitants.

[7] The joint parliamentary group is only possible because the two parties do not run against each other in any federal state. Until now, the CSU is only organized and active in Bavaria.

3 Data and Descriptives

3.1 Data

We use data on four federal (2009, 2013, 2017, and 2021) and state elections (2008, 2013, 2018, and 2023) measured at the municipality level. Data are provided by the Federal Statistical Office of Bavaria. We construct (second) vote shares for the major parties competing at both levels by dividing each party's votes by the total number of valid votes.[8]

The Bavarian relocation dataset was manually compiled from the BayernAtlas. This dataset includes the program name, managing state ministry, agency address, job relocation figures, and relocation status. Completion dates for relocations were obtained from the annual report on the Homeland Strategy program. For agencies not included in these reports, we conducted manual searches in local newspapers to determine the exact relocation dates. The average relocation comprised 55 jobs and 7 study places. Figure 1 shows the municipalities treated more than once in our sample. Since 2015, agencies have been iteratively relocated from the sending locations, mainly Munich, to other regions that are on average 180 km away. Some localities were treated more than once. For those, we use the first relocation to define the treatment period.

Our control variables, population, unemployment, employment, and tax income per capita, are sourced from the German Regional Database ("Regionalstatistik"). The Bavarian government relies on these statistics to determine which areas to subsidize and consider for the public employment relocation program. We account for pre-treatment trends in these statistics by calculating the log differences between 2009 and 2014.

To account for long-term municipal preferences for certain political platforms, we also consider the log differences in vote shares for the CSU and Freie Wähler in state elections before the relocations between 2003 and 2013. The right-wing party AfD was founded in 2013. Although they participated in the federal elections of the same year, they did not participate in the Bavarian state elections happening at the same time. Therefore, to control for preferences for a right-wing party platform, we use the log differences in AfD vote shares between the 2013 and 2017 federal elections. We do not regard this as a bad control because we only analyze the AfD vote shares in state elections as outcomes from 2018 onwards.

3.2 Descriptive statistics

Table 1 shows descriptive statistics for the outcome variables and table 2 for the control variables. The 2008 election marked a major disruption for the CSU in Bavaria. For the first time in over 30 years, the CSU missed the absolute majority and had to enter a coalition government (then with the liberal-conservative party FDP). Compared to the preceding election in 2003, the CSU lost 18 percentage points on average. Since 2018, the CSU has governed together with the right-wing conservative party FW (German: Freie Wähler) which have enjoyed increasing support since 2013. Although the far-right populist party AfD was founded in February 2013, it did not compete in the 2013 Bavarian state elections, the focus being on the federal elections that took place the same year. In the 2018 state elections, the AfD won 11% of the votes, in 2023 16%.

[8] Note that for the state elections, the Bavarian Statistical Office publishes the total votes and the first votes. Thus, to calculate the second votes, we subtracted the first votes from the total votes.

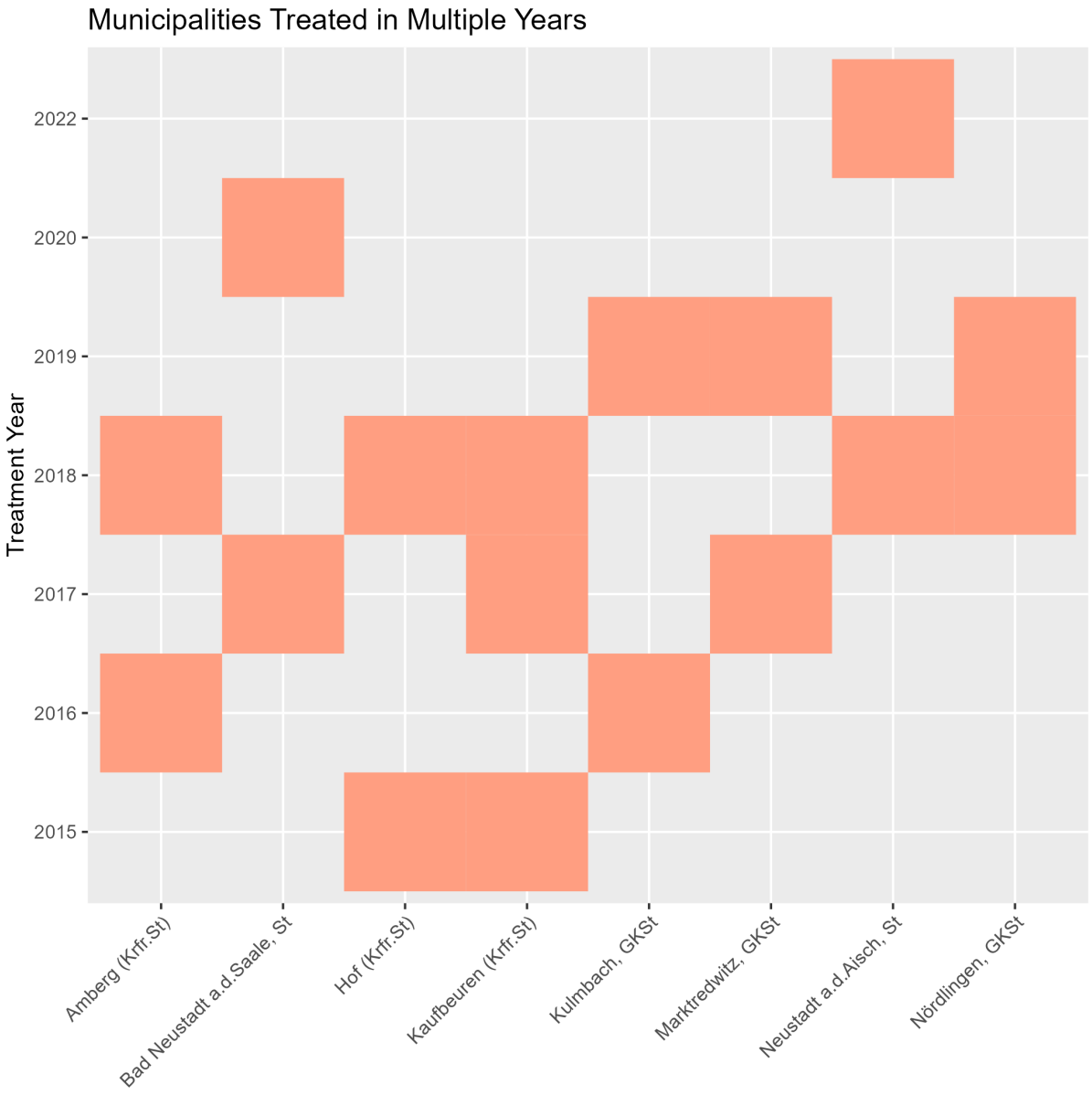


Figure 1: Municipalities that were treated more than once until 2022. For example, Hof was treated in 2015, and then again in 2018.

Year		2003			2008			2013			2018			2023	
Variable	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
CSU vote share	2031	67	8.5	2031	49	7.7	2031	54	7.8	2031	42	6.9	2031	39	7.4
AfD vote share	2031	0	0	2031	0	0	2031	0	0	2031	11	3.1	2031	16	4.2
Freie Wähler vote share	2031	4.6	4.1	2031	12	5.8	2031	10	5.5	2031	14	5.8	2031	21	9.6
Grüne vote share	2031	5.6	2.9	2031	7.7	4.3	2031	6.7	2.9	2031	13	5.1	2031	9.7	4.7
FDP vote share	2031	1.9	1.1	2031	6.6	2.6	2031	2.6	1.8	2031	3.8	1.7	2031	2.2	1.1
Die Linke vote share	2031	0	0	2031	3.7	1.5	2031	1.7	0.8	2031	2.3	0.87	2031	1	0.47
SPD vote share	2031	15	6.8	2031	14	6.4	2031	16	6.4	2031	7.7	3.9	2031	6.4	3.1

Table 1: Summary statistics for outcome variables. Data were extracted from the German Regional Database and the Bavarian Statistical Office. Vote shares are in percent. The left-wing party Die Linke ran in the Bavarian state elections for the first time in 2008. The far-right party 'AfD' also ran in the 2013 Bavarian state elections for the first time.

Variable	N	Mean	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
Control Variables							
Population	2031	-0.00061	0.04	-0.3	-0.025	0.023	0.28
Unemployment	2031	-0.26	0.22	-1.2	-0.39	-0.13	0.92
Employment	2031	0.09	0.049	-0.36	0.06	0.12	0.49
Tax Income per cap.	2031	0.15	0.061	-0.5	0.13	0.18	0.84
Population btw. 18-30 yrs	2031	0.0046	0.1	-0.59	-0.057	0.064	0.57
CSU Vote Share	2031	-0.23	0.1	-0.88	-0.28	-0.17	0.2
Freie Wähler Vote Share	2031	0.99	0.67	-1.2	0.54	1.4	3.5
AfD Fed. Vote Share	2056	1.2	0.37	0.2	0.95	1.4	2.6

Table 2: Summary statistics for control variables. Data were extracted from the German Regional Database, and the Bavarian Statistical Office. We take the log differences between 2009 and 2014 for all economic and demographic control variables except for the tax income per capita, where we take the 2010 to 2014 log differences. For the controls concerning prior voting outcomes, we take the 2003-13 log differences for the CSU and the FW vote share. For the AfD, we take the log 2013-17 vote shares of the local results for the federal elections because they did not participate in the 2013 state elections.

4 Identification strategy and method

4.1 Main Specification

In our baseline approach, we estimate a canonical difference-in-differences model following equation 1, exploiting variation in timing across relocation waves and variation in exposure across space:

$$\Delta y_{it} = \alpha_j + \delta_t + \beta \, reloc_{it} + \Delta X_{it}^{'} \gamma + \epsilon_{it}, \tag{1}$$

where Δy_{it} denotes the change in party vote shares in municipality i between election years t and $t-1$. The indicator $reloc_{it}$ equals one if municipality i is targeted by a relocation project (and remains one in subsequent periods) and zero otherwise. $X_{it}^{'}$ is a vector of municipality covariates. α_j captures district-specific time-invariant factors and δ_t common time shocks. Our coefficient of interest is β, measuring the average effect of the relocation program on municipalities' changes in party vote shares. Because equation 1 is estimated in first differences, it nets out municipality fixed effects.

Identification relies on the assumption that, absent the relocation program, voting patterns would have evolved in parallel between treated and control municipalities conditional on observables. We assess this assumption visually by plotting the evolution of vote shares by treatment status. Figures A1, A2 and A3 show the corresponding pre-trend diagnostics for the CSU, the Freie Wähler, and the AfD, respectively.

A key institutional feature of the Heimatstrategie is that receiving areas were prioritized using a quantitative eligibility rule based on a composite index of structural weakness (RmbH). Districts with an index value below 90 percent of the Bavarian average were designated as *Räume mit besonderem Handlungsbedarf* and targeted for relocation projects. This raises concerns that treated municipalities may systematically differ from untreated ones. We address this in two complementary ways. First, we control directly for the economic and demographic fundamentals underlying the policy rule by including the index components as covariates in $X_{it}^{'}$. Second, we account for differential pre-policy political trajectories—i.e., persistent "taste" for specific parties—by adding pre-treatment changes in the respective party's vote share to $X_{it}^{'}$. These

pre-policy vote-share changes flexibly absorb municipality-specific political trends that could otherwise be correlated with both relocation targeting and subsequent voting outcomes.

To further tighten comparability, our strictest specification restricts the control group to municipalities with index values between 80 and 100, thereby comparing treated locations to economically and demographically similar municipalities around the eligibility threshold and in moderately comparable structural conditions. In addition, we exclude sending locations, which are typically large agglomerations on distinct growth paths relative to structurally weaker receiving areas. Under these restrictions and conditioning on the index components and pre-policy party-specific vote-share dynamics, we argue that target locations **within districts** are as good as randomly assigned.

4.2 Heterogeneity in Treatment Timing

Given the staggered nature of treatment timing, we know that the canonical difference-in-differences estimates might be biased. Thus, we extend the analysis using the estimator of Callaway and Sant'Anna (2021). This estimator splits the treated municipalities into cohorts based on their treatment timing and constructs long differences for all cohorts, comparing each of them separately to never-treated units or not-yet-treated units.

In our case, electoral outcomes are measured every five years, while the relocations occur each year. Therefore, we adapt our treatment cohorts to match the election periods. We assign all municipalities that were treated between 2015 and 2017 to the 2018 cohort, and all municipalities treated between 2019 and 2021 to the 2023 cohort. We do not assign municipalities that were treated in an election year to the respective cohort because we do not know exactly when the relocation happened. Since it might have happened after the elections, we decided to exclude them from the sample. Additionally, we only analyze relocations completed by 2021, as we depend on the yearly government report to assign treatment periods, and it has not been released for the following years yet.

The base period for comparison is always the first pre-treatment period for each cohort. This means that for each estimation, the parallel trends assumption only has to hold between two periods for a single cohort and the control group, and not across all periods analyzed, which makes it very flexible.

For the Callaway and Sant'Anna estimator, the cohort-specific average treatment effect (ATT) is defined as:

$$ATT(g,t) = E\left[Y_{it}(g) - Y_{it}(\infty) \mid \mathcal{G}_i = g\right] \tag{2}$$

The effect is identified by comparing the expected change in outcomes for a given cohort g between periods $g-1$ and t with those for units that are either yet-to-be-treated or never-treated:

$$ATT(g,t) = E\left[Y_{it} - Y_{i,g-1}(\infty) \mid \mathcal{G}_i = g\right] - E\left[Y_{it} - Y_{i,g-1}(\infty) \mid \mathcal{G}_i \in \mathcal{G}_{comp}\right], \tag{3}$$

where $\mathcal{G}_{comp} = \{g' : g' > t\}$. To aggregate these cohort-specific effects into a single event-study parameter, we use:

$$ATT_l^w = \sum_g w_g \times ATT(g, g+l), \tag{4}$$

Here, l represents the number of periods after the policy was implemented. For statistical

inference, bootstrap methods are employed.

5 Results

5.1 Main results

In the baseline specification, we estimate a difference-in-differences regression on a municipality–election-year panel. The treatment variable is coded as an interaction term and assumes the value of one in all elections after a given municipality received treatment, i.e. a relocated public institution, and zero otherwise. As dependent variables, we use the change in the CSU, Freie Wähler, and AfD vote shares at the four Bavarian state elections between 2008 and 2023. Standard errors are clustered at the district level, and we include year and district fixed effects.

Table 3: Baseline results for state elections

	(1) Δ AfD	(2) Δ CSU	(3) Δ FW
Treat × Post	-0.535**	2.004***	-1.537***
	(0.252)	(0.481)	(0.430)
Observations	3387	7288	7096
R^2	0.402	0.706	0.451
District FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Mean dep.var.	6.00	-6.96	3.73

The baseline results indicate that relocations are associated with a statistically significant reallocation of votes across the three parties. Receiving municipalities experience an increase in CSU support of about 2 percentage points in the subsequent state election. In contrast, the Freie Wähler lose around 1.5 percentage points in treated municipalities relative to the control group, despite rising on average over the sample period. For the AfD, we estimate a modest negative differential of roughly half a percentage point.

Tighter comparability: restricting the control group to index values 80–100. A potential concern with the baseline comparison is that treated municipalities may systematically differ from the full set of untreated municipalities, since relocations were prioritized using the structural-weakness index. To increase comparability and sharpen the quasi-experimental contrast, we reestimate the model restricting the sample to municipalities whose index values fall between 80 and 100 (i.e., treated municipalities in the relevant range and a control group drawn from the same segment of the structural-weakness distribution). Table 4 reports the results.

Relative to the baseline, the qualitative pattern is unchanged but the estimated effects become larger in magnitude. The CSU gains increase to about 2.6 percentage points and remain highly statistically significant. The Freie Wähler losses deepen to roughly 1.8 percentage points and are statistically significant at conventional levels. For the AfD, the point estimate becomes more negative (about -0.8 percentage points) and is marginally significant. This strengthening is consistent with the interpretation that the baseline specification attenuates treatment effects by comparing treated municipalities to a heterogeneous set of controls that differ in structural

Table 4: State elections: control group restricted to index values 80–100

	(1) Δ AfD	(2) Δ CSU	(3) Δ FW
Treat × Post	-0.764*	2.604***	-1.796**
	(0.450)	(0.721)	(0.837)
Observations	896	1906	1844
R^2	0.335	0.694	0.439
District FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Mean dep.var.	6.80	-6.53	3.58

conditions and underlying political dynamics. Restricting the comparison to municipalities in the 80–100 index band plausibly reduces this heterogeneity and yields a tighter counterfactual.

Another margin to examine is whether the relocation program increased political participation in targeted regions. We therefore rerun the baseline specification using the change in turnout at state elections as the dependent variable. As Table 5 shows, we do not find evidence of a statistically significant turnout effect. Hence, the baseline party effects are unlikely to be driven primarily by broad mobilization, and instead reflect changes in party choice conditional on participation.

Table 5: Change in turnout at state elections

	(1) Δ turnout	(2) Δ turnout
Treat × Post	-0.105	-0.229
	(0.221)	(0.208)
Observations	7288	7288
R^2	0.557	0.597
District FE	No	Yes
Year FE	Yes	Yes
Controls	Yes	Yes
Mean dep.var.	4.29	4.29

In Table 6, we repeat the analysis for federal elections to assess whether state-level relocations also affect federal voting behavior. The baseline results suggest spillovers to federal elections: the CSU gains remain positive but are smaller than at the state level, whereas the Freie Wähler exhibit losses of comparable magnitude. The AfD coefficient is negative but not precisely estimated in the baseline comparison.

When we condition on program exposure more tightly by restricting the sample to structurally comparable municipalities, the federal-election effects become clearer. Table 7 shows that the CSU gains are about 0.9 percentage points and highly significant, while the Freie Wähler lose around 1.24 percentage points and remain strongly significant. For the AfD, the estimate is negative (around -0.34 percentage points) and statistically significant at the 10% level. Together, these results indicate that relocations not only shifted voting patterns in Bavarian state elections—the level at which the policy was implemented—but also translated into electorally

Table 6: Baseline results for federal elections

	(1) Δ AfD	(2) Δ CSU	(3) Δ FW
Treat × Post	-0.290	0.683**	-1.402***
	(0.222)	(0.299)	(0.225)
Observations	3736	5661	3736
R^2	0.851	0.876	0.730
District FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Mean dep.var.	3.25	-3.95	3.24

Standard errors in parentheses

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

meaningful spillovers at the federal level.

Table 7: Federal elections: alternative specification (program-only / restricted comparison)

	(1) Δ AfD	(2) Δ CSU	(3) Δ FW
Treat × Post	-0.341*	0.920***	-1.243***
	(0.182)	(0.307)	(0.239)
Observations	3733	5657	3733
R^2	0.851	0.876	0.730
District FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Mean dep.var.	3.25	-3.95	3.24

Standard errors in parentheses

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

5.2 Heterogeneity Analysis

We evaluate the impact of the relocation program on the vote shares of CSU, Freie Wähler, and AfD using the estimator proposed by Callaway and Sant'Anna (2021). The results indicate a positive effect on the CSU vote share in the first election following the relocation program, as depicted in Figure 2. On average, the CSU vote share increases significantly by 3.1 percentage points in municipalities that received relocations. The observed effect is primarily driven by municipalities treated before 2018, as shown in Figure 3.

Conversely, in Figure 4 we observe a reduction of approximately 1.8 percentage points in the Freie Wähler vote share, although this effect is not statistically significant. Due to the AfD's absence in the 2013 state elections, we can only analyze the effect of relocations on their vote share in the 2023 election, using the 2018 election as the sole pre-treatment period. The lower panel of Figure 5 illustrates that for municipalities treated before 2023, the AfD vote share decreased significantly by an average of 1.22 percentage points.

We also analyze turnout in the heterogeneity framework. When splitting the ATT by cohort, we find a negative, statistically insignificant effect of the relocations on turnout. In Figure 6 we

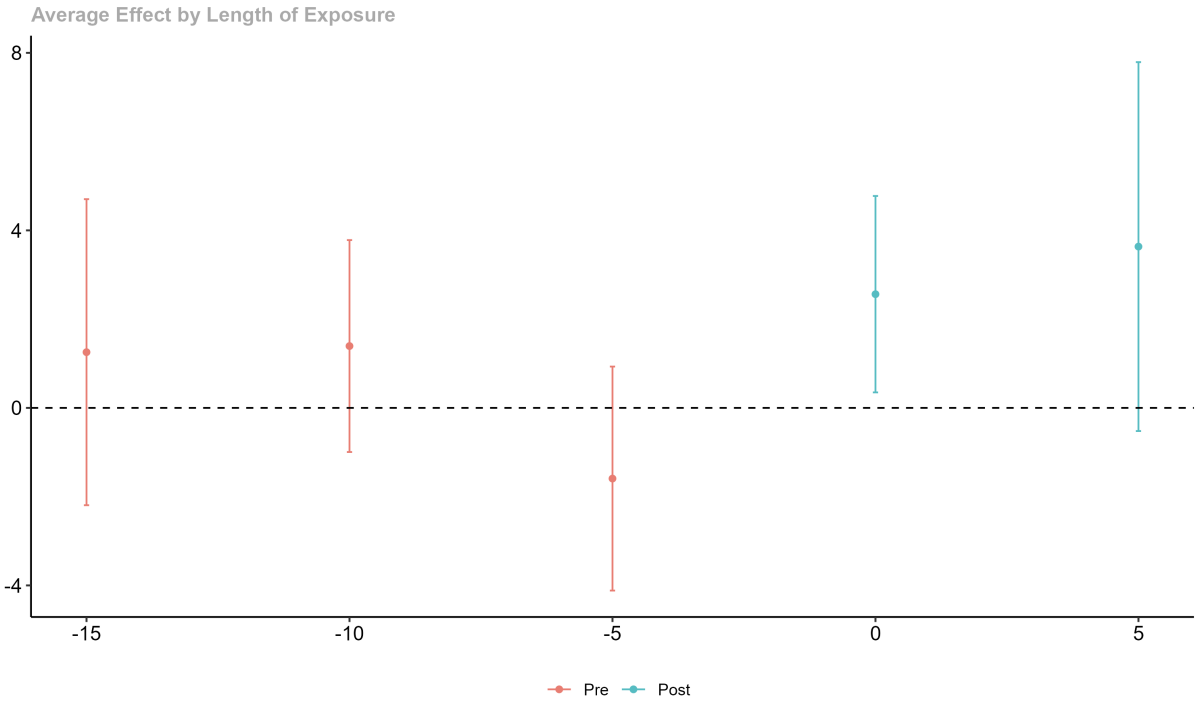


Figure 2: Event study: CSU vote share. Estimated using the estimator of Callaway and Sant'Anna (2021). The state election outcomes are measured every five years.

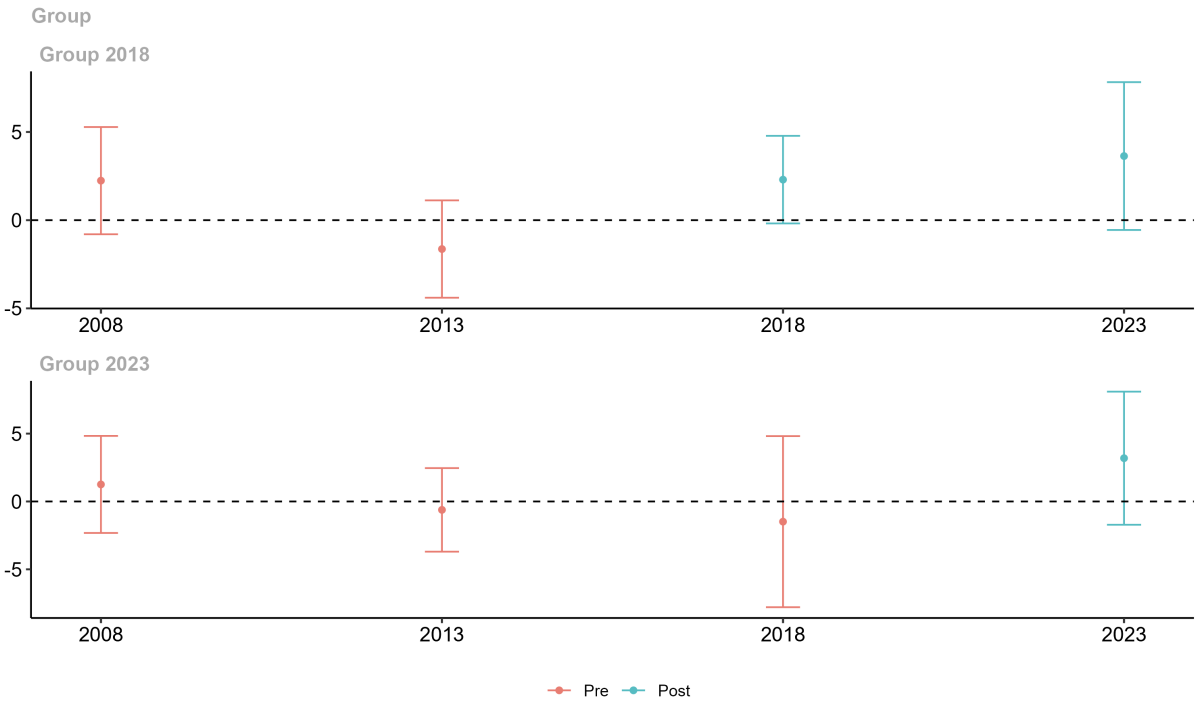


Figure 3: Event study by treatment cohort: CSU vote share. Estimated using the estimator of Callaway and Sant'Anna (2021). The state election outcomes are measured every five years.

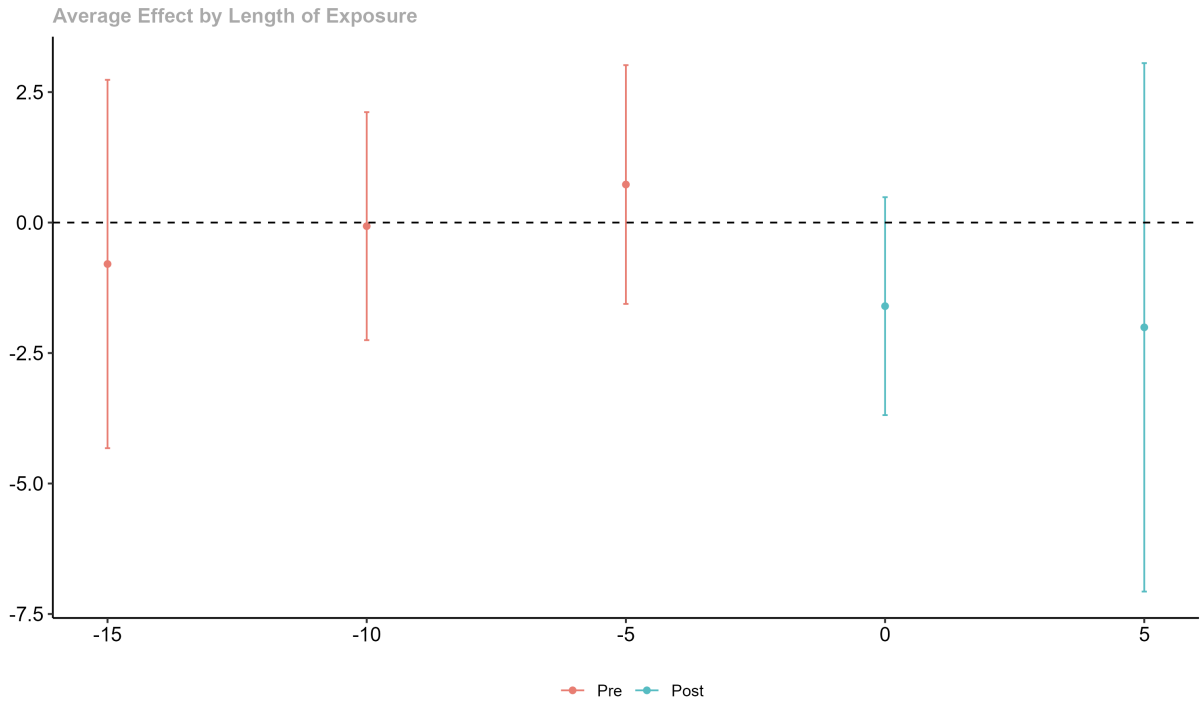


Figure 4: Event study: Freie Wähler vote share. Estimated using the estimator of Callaway and Sant'Anna (2021). The state election outcomes are measured every five years.

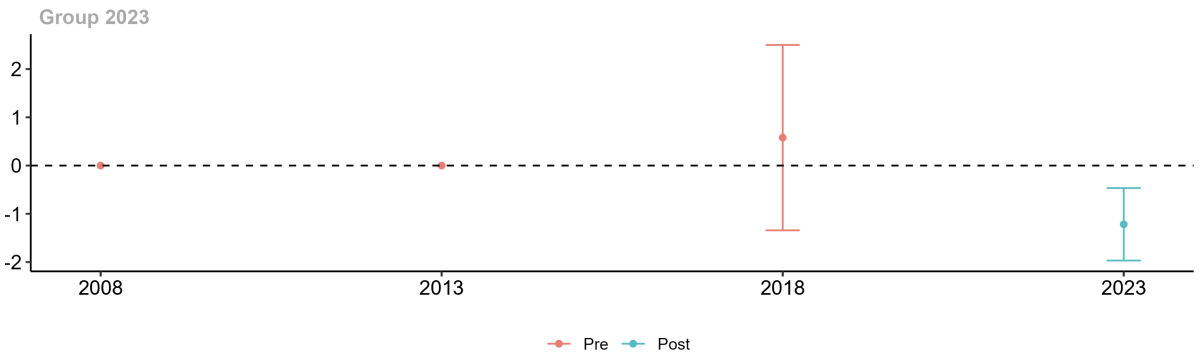


Figure 5: Event study by treatment cohort: AfD vote share. Estimated using the estimator of Callaway and Sant'Anna (2021). The state election outcomes are measured every five years. The first panel shows that we do not observe AfD vote shares on the state level before 2018, and hence, the values for the pre-treatment periods are 0.

see that the negative effect is more pronounced for the 2023 cohort—a reduction in turnout of 1.15 percentage points—than for the 2018 cohort with an effect of -0.30 percentage points.

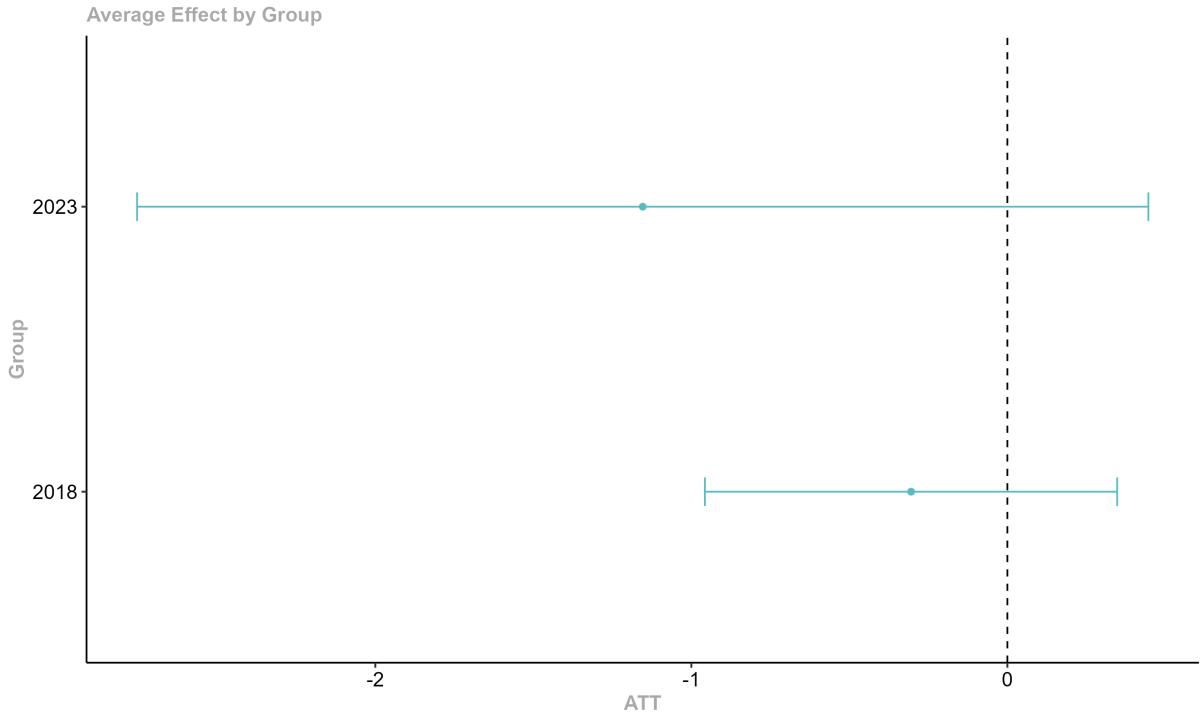


Figure 6: ATT estimator for turnout using the estimator of Callaway and Sant'Anna (2021) by cohort. Treatment cohorts were adjusted to match election periods.

However, when we look at time since treatment, we find a negative and significant effect of -0.72 percentage points on turnout in the first election after a relocation took place in a municipality. Figure 7 shows that turnout is generally lower every second election indicating a trend.

5.3 Geographic Spillover Effects

We implement two types of geographic spillover analyses. First, we define all geographic neighbors to treated municipalities based on whether they share a common border and exclude them from the control group. Second, we use this group of neighbors as an alternative treatment group (and simultaneously exclude the treated municipalities from the estimation sample). Results from this exercise point towards some spillover effects at least for the CSU. When we exclude the neighbors of treated municipalities, the treatment effect for the CSU is 2 percentage points, so quantitatively similar to the baseline effect. For the Freie Wähler the coefficient of -2 percentage points exceeds the baseline estimate. When we use the neighbors of treated municipalities as the treatment group, however, we do not find any evidence for spillover effects.

5.4 Robustness Checks

As a preliminary robustness check, we also implement other new estimators in the difference-in-differences literature and compare them with the results from the Callaway and Sant'Anna (2021) estimator. We implement the regular TWFE, the Borusyak *et al.* (2024), the Roth and Sant'Anna (2023), and the Sun and Abraham (2021) estimator. TWFE might be biased towards zero as we know from the literature since early treated units might serve as control group for

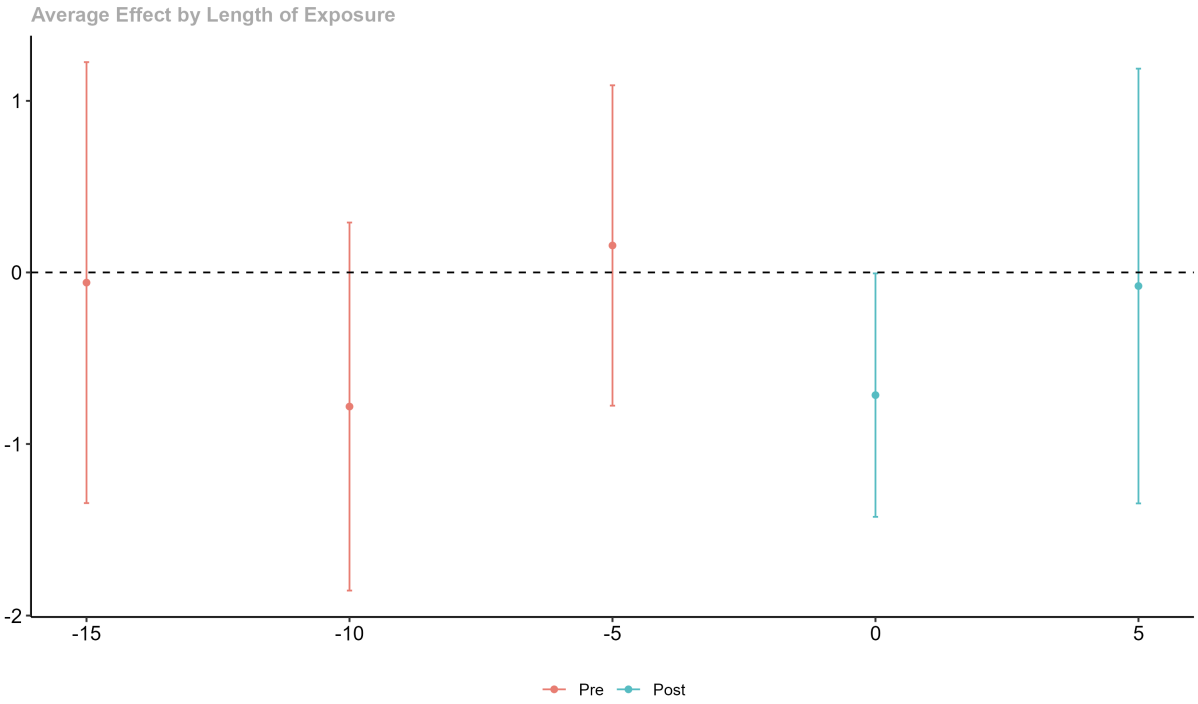


Figure 7: Event study on turnout based on the estimator of Callaway and Sant'Anna (2021). Treatment cohorts were adjusted to match election periods.

Table 8: Spillover effects

	Exclude neighbors			Analyse treated neighbors		
	(1) Δ AfD	(2) Δ CSU	(3) Δ FW	(4) Δ AfD	(5) Δ CSU	(6) Δ FW
Treat × Post	-0.431	2.129***	-1.741***			
	(0.320)	(0.591)	(0.464)			
Treat × Post (neighbor)				-0.219	0.945	-0.295
				(0.245)	(0.595)	(0.542)
Observations	2956	6353	6197	3297	7109	6923
R^2	0.416	0.719	0.452	0.402	0.708	0.452
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep.var.	5.89	-7.00	3.72	5.99	-6.98	3.74

later treated units. Borusyak *et al.* (2024) is an imputation estimator treating the fundamental problem of causal inference, where we do not observe the counterfactual, as a missing-data problem. Roth and Sant'Anna (2023) provides a more efficient way to estimate design-based policies, where the rollout is as good as random. We note that we do not know if this is the case in our set-up. We know that the availability of buildings sped up the relocation process, while localities where construction was needed received an agency later in the program. However, we cannot be sure whether other factors, such as local political leniency towards the coalition parties determined the rollout speed. Sun and Abraham (2021) disentangles the ATT into cohorts, similarly to Callaway and Sant'Anna (2021). However, the base period is dynamic, and not the period before the policy started, making it less flexible than Callaway and Sant'Anna (2021).

Figure 8 shows the event study plots for the changes in vote shares for the incumbent parties CSU and FW (Freie Wähler). The positive effect of the policy on the CSU vote share is confirmed by the Borusyak *et al.* (2024) estimator. However, since the other estimators are not as flexible as the Callaway and Sant'Anna (2021) estimator in terms of how long the parallel trends assumption needs to hold, the results are mostly insignificant. The negative effect on the FW vote shares is confirmed by all estimators, except for TWFE and Sun and Abraham (2021). The effect remains insignificant as in the main event study estimation.

Figure 9 displays the event study plot for the changes in vote shares for the far-right party AfD and Figure 10 shows the robustness check for the previous turnout results. Both effects are insignificant in all other estimators.

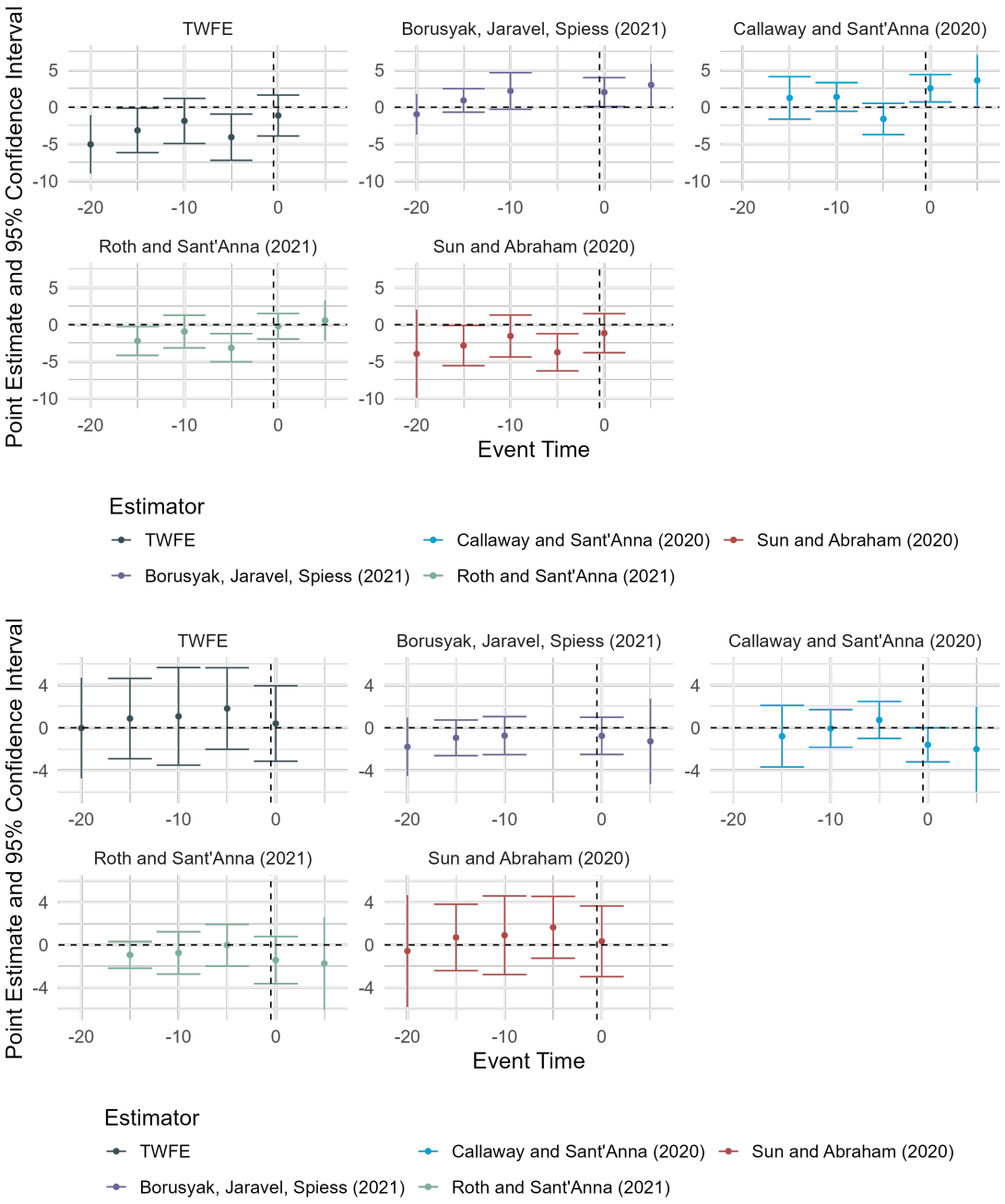


Figure 8: Robustness check for CSU (upper panel), and FW (lower panel) vote shares using the TWFE, Borusyak *et al.* (2024), the Callaway and Sant'Anna (2021), the Roth and Sant'Anna (2023) and the Sun and Abraham (2021) estimators.

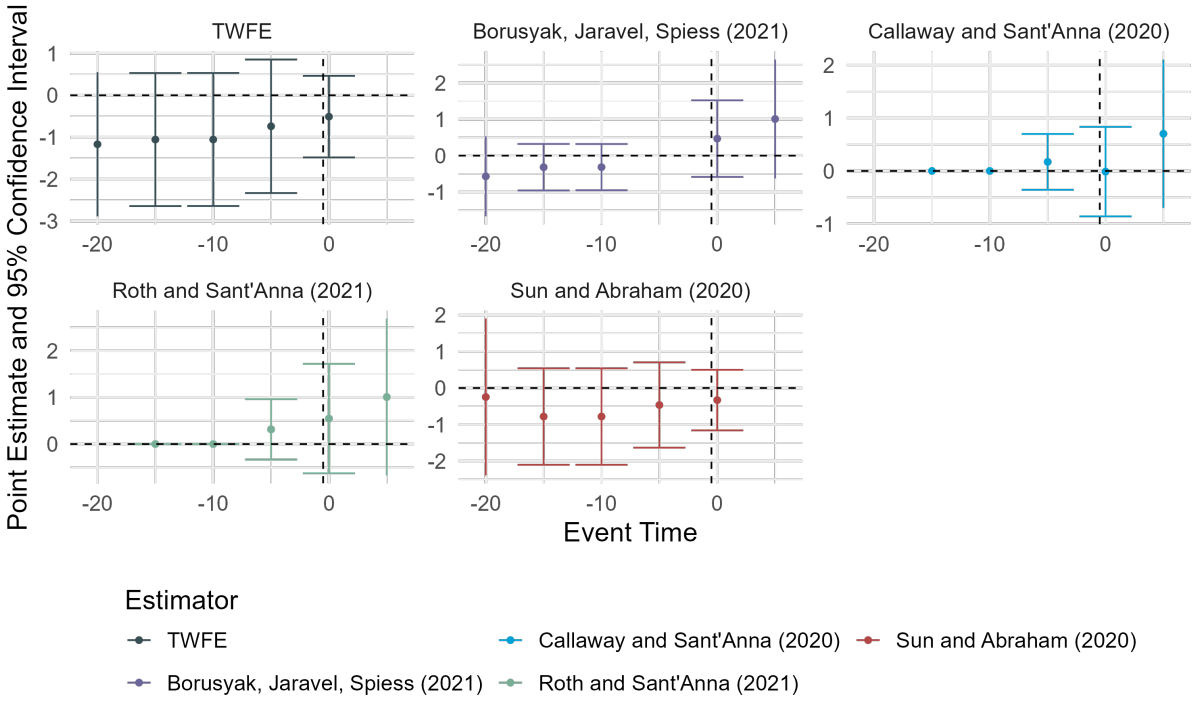


Figure 9: Robustness check for AfD vote shares using the TWFE, Borusyak *et al.* (2024), the Callaway and Sant'Anna (2021), the Roth and Sant'Anna (2023) and the Sun and Abraham (2021) estimators.

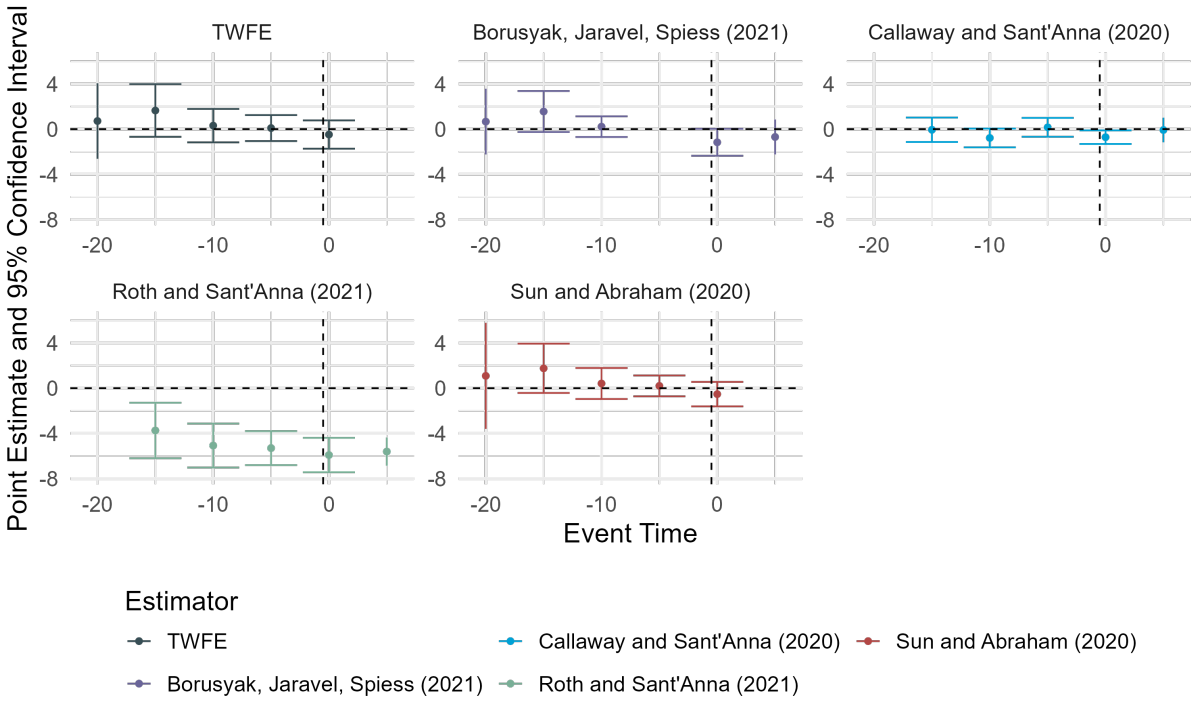


Figure 10: Robustness check for turnout changes using the TWFE, Borusyak *et al.* (2024), the Callaway and Sant'Anna (2021), the Roth and Sant'Anna (2023) and the Sun and Abraham (2021) estimators.

6 Concluding remarks

Bavaria's public-sector relocation program changed electoral outcomes in receiving municipalities. The CSU, the leading incumbent party responsible for implementing the policy, gained votes in both state and federal elections. These gains suggest an incumbency advantage from visible, targeted interventions in economically distressed regions.

The smaller coalition partner, the Free Voters, lost votes in treated municipalities. The program also helped contain the rise of the AfD, whose vote share fell by approximately one percentage point, or a third of its average vote share. The electoral consequences thus differed across both governing and opposition parties.

These findings suggest that governments can win support in disadvantaged regions through visible place-based policies and may also reduce support for populist parties. Geographic spillovers were limited, indicating that the effects were largely confined to receiving municipalities. Smaller effects in federal elections show that the political returns can nevertheless extend beyond the level of government responsible for the policy. Place-based policies therefore offer governments a way to address regional economic disparities while also shaping electoral outcomes.

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Appendix

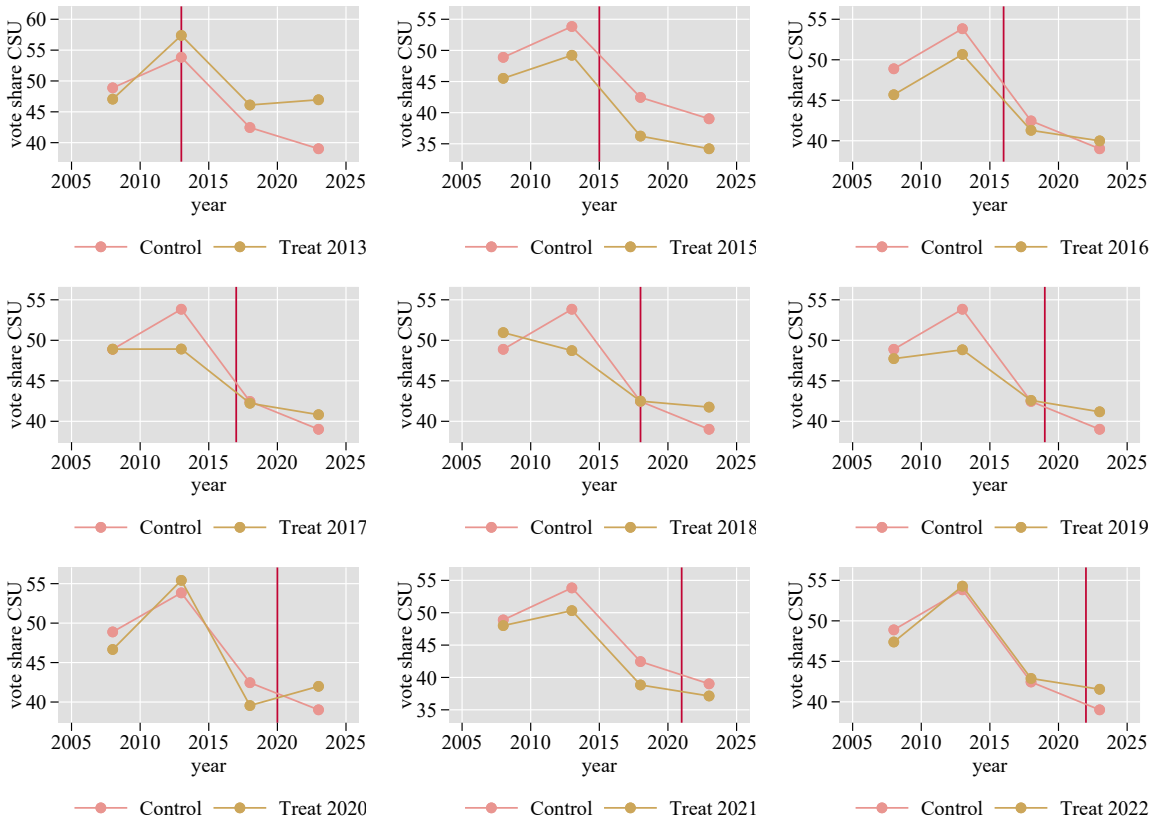


Figure A1: Vote shares for the CSU by treatment cohorts.

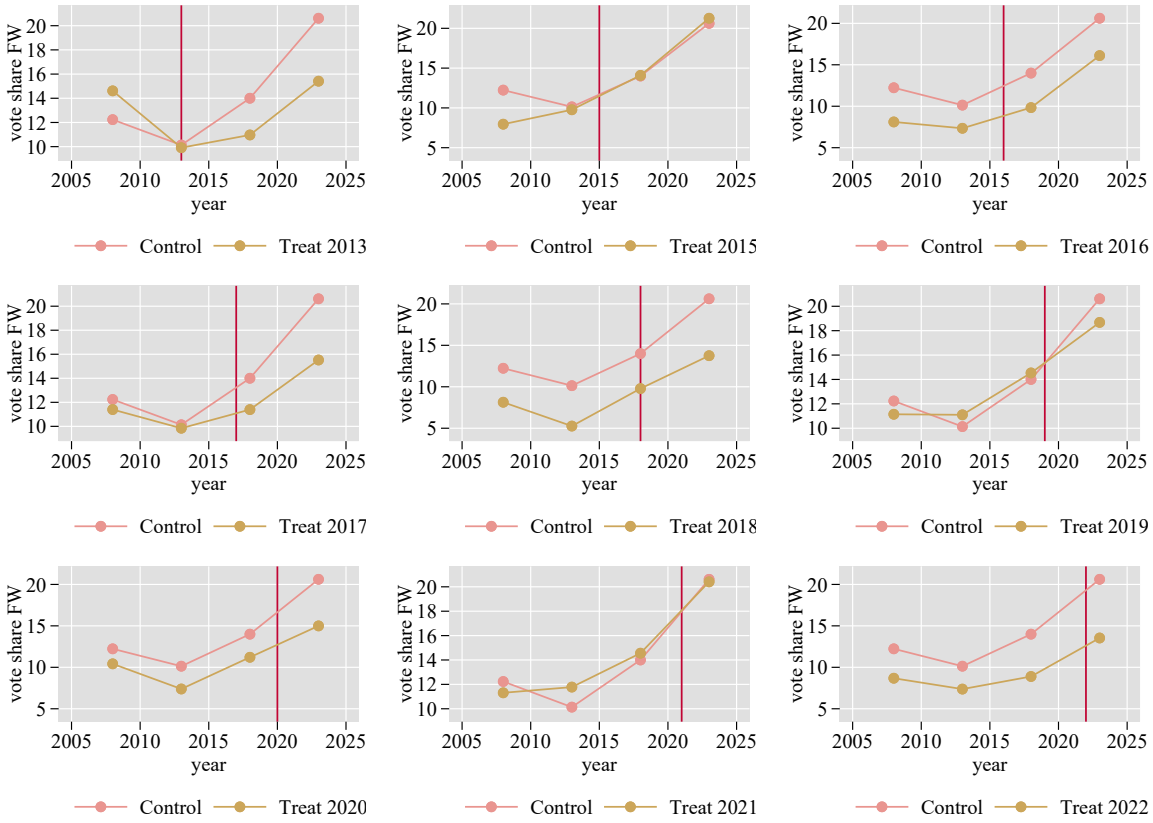


Figure A2: Vote shares for the Freie Wähler by treatment cohorts.

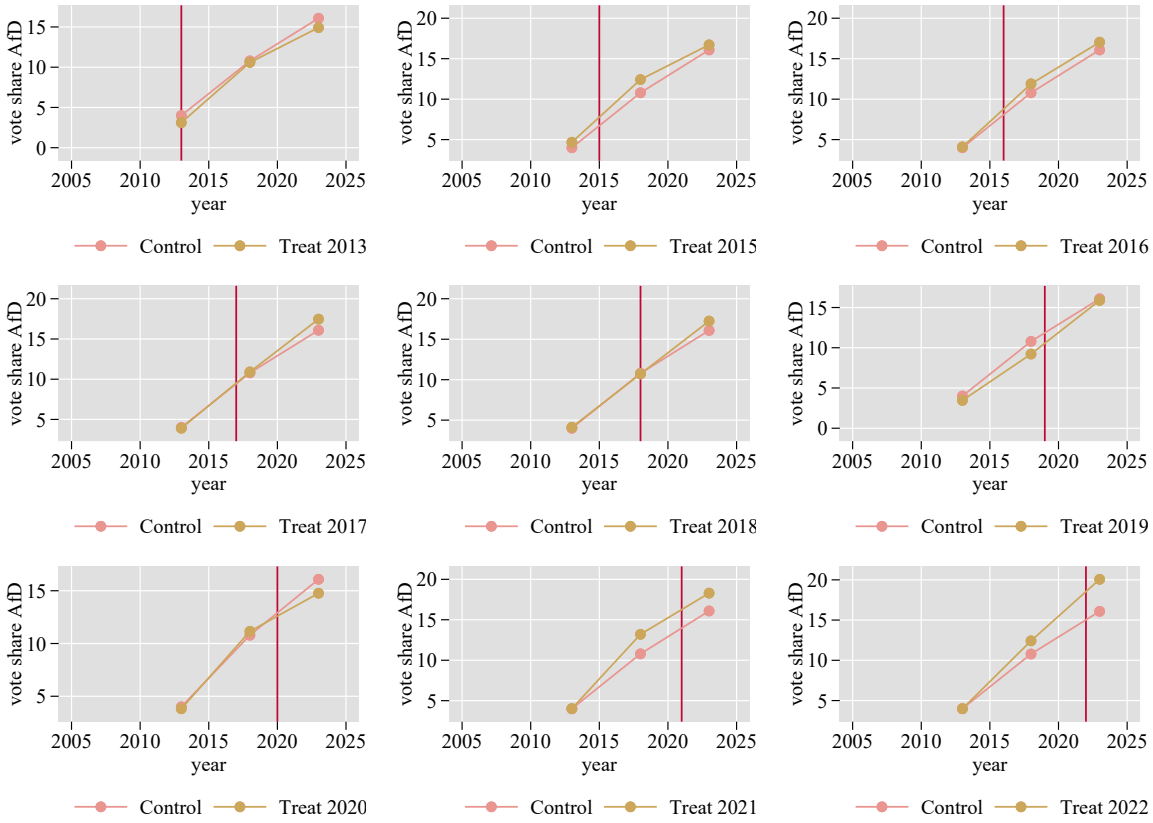


Figure A3: Vote shares for the AfD by treatment cohorts.