

Coattails and Spillover-Effects: Quasi-Experimental Evidence from Concurrent Executive and Legislative Elections*

Lukas Rudolph [†] Arndt Leininger [‡]

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Abstract

Concurrent elections are widely used to increase turnout. We theorize and show empirically how concurrency affects electoral outcomes. First, concurrency increases turnout and thereby the participation of peripheral voters. Second, in combined elections, one electoral arena affects the other. In our case of majoritarian executive elections concurrent to PR legislative elections, the centripetal tendency of majoritarian elections colors off to the concurrent PR race. Third, concurrency also entails spill-overs of the incumbency advantage of executive officeholders to the concurrent legislative race. Drawing on quasi-random variation in local election timing in Germany, we show that concurrency increases turnout as well as council votes for the incumbent mayor's party and centrist parties more generally, with slightly more pronounced gains for the political left. As a consequence, concurrent elections consolidate party systems and political power by leading to less fragmented municipal councils and more unified local governments.

Keywords: Concurrency, Turnout, Electoral outcomes, Election Timing, Second-Order Elections, Quasi-Experiment

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[†]LMU Munich and ETH Zurich, lukas.rudolph@gsi.uni-muenchen.de

[‡]Freie Universität Berlin, arndt.leininger@fu-berlin.de

1 Introduction

Concurrent elections are a widely used tool to make electoral participation more convenient and efficient for citizens. For instance, in 25 of the 33 OECD member states we can observe concurrency of elections at the national as well as sub-national level. Concurrency occurs when two elections of similar or different saliency, which could be elections for executive, legislative, special elections, or referendums, are held simultaneously. It is well established that concurrency brings voters to the polls that otherwise would have abstained. However, do these additional voters affect electoral outcomes in a systematic way? We study this question in the context of concurrent second-order elections, for which the turnout effect is particularly relevant,¹ and for combinations of PR legislative and majoritarian executive elections.²

The classical view is that electoral participation rates are high among socio-economically advantaged and low among disadvantaged citizens. From this, we could expect that a stimulus to turnout relates to relative increases in participation of the latter (Tingsten 1937; Lijphart 1997; Kogan et al. 2018). Then, left-of-center parties should also do better. Drawing on quasi-exogenous variation in institutional settings, this has been shown empirically in various contexts (for example, Bechtel et al. 2016; Fowler 2013; Potrafke and Roesel 2020), also specifically for turnout increases from concurrency (Fowler 2015). However, numerous studies report findings that diverge from this pattern: turnout increases can also lead to mildly higher vote shares for minor as opposed to mainstream parties (Ferwerda 2014), more electoral support for the extreme ends of the political spec-

¹ A substantial turnout effect for low-saliency elections is evident both when such an election is combined with a political contest of higher saliency (see Geys 2006) and when it is combined with a contest of similarly low saliency (Fauvelle-Aymar and François 2015; Garmann 2016; Leininger et al. 2018).

² Prominent real-world examples of these are the Chilean and Mexican presidential and parliamentary elections, Germany's and Japan's mixed electoral systems, or Poland's and Spain's parliamentary elections, where one chamber is elected in majoritarian elections. In contrast, the other is elected using PR. At the subnational level, France's regional and departmental elections are one example of concurrency of two different electoral systems; the former use PR while the latter use single-member constituencies. In addition to Germany, our case of study, the US, UK, and various other countries also frequently see local elections for a directly-elected mayor and a council, which are held on the same day.

trum (Finseraas and Vernby 2014), more participation of well-off citizens (Cepaluni and Hidalgo 2016), or electoral benefits for the left but also centrist parties (Hodler et al. 2015). We take from these findings that the consequences of turnout shocks depend on particular institutional settings. However, a nuanced and systematic assessment of how concurrent elections should influence turnout is lacking.

Therefore, the first contribution of our article is a theoretical argument that systematizes three important features of concurrent elections and explains what effects they may have. The first feature of concurrency is the ensuing turnout shock, which affects the composition of the electorate and should increase the participation of peripheral voters – this should improve the electoral fortunes of left-wing parties and positions in line with Tingsten’s (1937) law (but see Finseraas and Vernby 2014). The second feature of concurrent elections is that concurrent elections frequently combine different electoral systems – in our case, we assess a combination of executive and legislative elections. We theorize that the two-party tendency of majoritarian elections colors off to a concurrent non-majoritarian race. Third, drawing on the incumbency advantage (Lopes da Fonseca 2017) and coattail literature (Campbell 1960), we argue that the incumbency bonus in one race has electoral spill-overs – incumbent parties of incumbent mayors profit in the concurrent race (cf. Hainmueller and Kern 2008).

Our second contribution lies in providing credible causal evidence for the effect of simultaneous low-salience elections on electoral outcomes. Given that election timing is usually politically determined and has low variation over time, evidence on the electoral effects of concurrency that can credibly deal with potential endogeneity is scarce. We are able to draw on a unique case in the German state of Lower Saxony, where we observe quasi-random variation in the combination of legislative (local council) and executive (mayoral) elections at the municipal level in three legislative periods. Idiosyncrasies in the introduction of mayoral elections led to quasi-randomness in whether mayoral elections are on- or off-cycle with respect to council elections. Various balance, parallel trends, and placebo tests provide support for this assumption. In our case, concurrency leads

to gains of centrist parties (around 1.2 percentage points) in general and incumbent parties in particular (around 1-2.5 percentage points, in tendency higher on the left side of the political spectrum). The fact that candidates and parties in high-salience electoral contests provide coattails to candidates and parties in low-salience concurrent elections is well established (Magar 2012; Campbell 1991, 1987; Ferejohn and Calvert 1984; DeNardo 1980). Here, we provide evidence that coattails are also a relevant feature of simultaneous low-salience elections, where the turnout shock is more moderate in size. Our results also demonstrate that coattails can occur in cases of horizontal concurrency (executive and legislative elections at the same level). In contrast, the existing literature on coattails has mostly focused on vertical concurrency (first-order executive and second-order legislative or other elections) (e.g. Rogers 2019; Meredith 2013). Therefore, our argument and results should apply to a wide range of cases where we see concurrent executive and legislative elections, or concurrent elections with different electoral formulas more generally.³

Our third contribution is that we show that these concurrency effects matter for representation. With centrist parties and incumbent parties (which mostly are centrist) profiting, we see a lower number of effective parliamentary parties, a higher likelihood of single-party dominance in local councils, and a higher likelihood of alignment of local council majorities and mayoral party affiliation. In short, concurrent elections consolidate party systems and political power by producing less fragmented municipal councils and more unified local governments.

2 Theoretical argument

We start with the observation that a combination of elections increases turnout. This effect is well-known and was e.g. already formulated in Boyd's (1989) ballot attractiveness hypothesis (whereby turnout increases if salient elections are added to a ballot). Since Boyd, a broad literature has established that turnout increases in low-salience elections

³ Some evidence in this direction can also be found in the literature on mixed electoral systems (e.g. Hainmueller and Kern 2008; Ferrara et al. 2005).

when they are held concurrent to high-salience elections (see Geys 2006). However, and more relevant for our case, a recent literature provides evidence that concurrency is also causing an increase in turnout for the combination of two second-order elections, both similarly low in salience (Fauvelle-Aymar and François 2015; Garmann 2016; Leininger et al. 2018). Theoretically, this literature argues that with constant voting costs any additional ballot should increase the benefit of turning out at a concurrent election for a sub-set of the population, though not necessarily the whole population. Hence, the composition of the electorate for a given contest likely differs when it is held concurrently compared to being held alone. In the following, we lay out why we would expect these concurrent elections not to be outcome neutral.

We propose that an effect of concurrent elections on vote shares through higher turnout could stem from three mechanisms. First, concurrent elections have economies of scale to the individual voter (as at least some costs of voting are constant irrespective of the number of ballots). Hence, when concurrent elections reduce voting costs over benefits as such, this could lead to increased participation of peripheral voters. Arguably, voting costs matter more for socioeconomically disadvantaged citizens who (given their economic situation) should have a preference for left-wing parties. This is what drives the widely hypothesized relationship between lower turnout and more socioeconomically biased electorates known as Tingsten’s (1937) law. Conversely, a relative decrease of voting costs should lead to more balanced participation, and electorally to benefits for the political left (see Bechtel et al. (2017), Fowler (2013, 2015), but Finseraas and Vernby (2014), Ferwerda (2014)). In our case, this is the center-left social-democratic SPD.

In line with this argument, Kogan et al. (2018) show that when low salience elections in the US are combined with high salience nation-wide elections, especially with presidential elections, the electorate becomes more diverse and more liberal on aggregate. However, the relative increase of participation of peripheral voters with concurrency needs to be sufficiently large to make a meaningful difference to the overall voter composition (Kohler 2011). Hence, Kogan et al. (2018) also find that, when combined with other low-salience

elections, compositional effects are less pronounced. As a first hypothesis, we therefore propose:

Hypothesis 1: *Concurrent second-order elections provide electoral benefits to left-wing parties, through increased participation of peripheral voters.*

Second, beyond such an overall incentive to turn out to vote for peripheral voters, a simultaneous election brings with it a specific coattail effect that can but does not have to benefit the political left.⁴ In particular, each election brings with it mobilization efforts of individual parties and candidates. We draw upon a model by Cox (2015), who argues that concurrent elections allow parties that field candidates in separate races simultaneously to internalize external effects from mobilization in any individual electoral contest. Mobilizational alliances for different political seats under the same party brand increase the mobilization efforts of political actors, and even more so with the number and value of the offices at stake. However, the model stays silent on how this could affect electoral outcomes.

We propose that the aggregate effects of mobilization depend on the electoral systems that are combined. In our case, we see the combination of a PR vote for local councils with a majoritarian election for the mayoral office. Only two parties can field viable choices (usually the dominant centrist parties) for the majoritarian election (Cox 1997) and will plausibly invest in mobilization efforts for this race and be seen as worthwhile to turn out for by voters. Consequently, the strength of mobilizational alliance varies over parties, with viable parties in the majoritarian election enjoying a mobilizational edge for the concurrent PR contest. Hence, the usual two-party concentration effect of majoritarian electoral contests should rub off to the concurrent PR election. This argument is related to the centripetal pressure towards a two-party system in the PR tier proposed by Duverger

⁴ By coattail effects we understand that institutional and other features of one government level affect election outcomes at another government level. Drawing on Meredith (2013: 742), this is the usage of the term coattail effect in the comparative politics literature, which is a bit broader than its usage in the American politics literature, where coattails usually refer to the effect that "the personal identity of a party's candidate in one election has on the performance of the party's candidates in concurrent elections".

(1986: 72) for mixed-member systems that combine majoritarian with PR elections. As a second hypothesis, we therefore propose:

Hypothesis 2: *Concurrent second-order elections lead to electoral benefits for centrist parties.*

Third, we start by observing that incumbents hold electoral advantages over competitors and propose that these extend to concurrent elections. As Dewan and Shepsle (2011) note, “the advantage of incumbents in electoral contests is perhaps one of the best-documented empirical regularities in politics.” These electoral advantages may stem from scare-off effects of potential challengers, experience and resources attached to the office, or informational shortcuts that voters apply (see Lopes da Fonseca 2017). Irrespective of why these incumbents enjoy an electoral advantage, we propose that the electoral benefit of incumbency is not restricted to personal reelection. In line with Hainmueller and Kern (2008), we argue that incumbents can attract additional votes for their party in a concurrent election. One potential mechanism for this runs through informational shortcuts that voters employ. De Benedictis-Kessner (2016) reports that the incumbency advantage for mayors increases with national elections concurrent to mayoral elections, which he explains by uninformed voters coming to the poll and supporting an incumbent whose name they recognize against a lesser-known challenger (see also Bracco and Revelli (2018) and Rudolph (2017), but Trounstine (2013)). Beyond the personality of the incumbent mayor, similar effects may accrue to the party of the sitting mayor itself. For instance, relevant to our case, Freier (2015) identifies a persistent and strong party incumbency advantage in German municipal elections.

We turn this argument around and propose that voters who support the incumbent mayor and are mobilized to vote for them are also more inclined to vote for their party in the concurrent election. This argument directly relates to the large literature on the coattails of executive office holders on concurrent legislative elections – such coattails provide a plausible pathway that an incumbency advantage would color off to a concurrent

race (e.g. Halberstam and Montagnes 2015; Magar 2012), and is part of the explanation of the “surge” observed in votes for congressional candidates on a presidential party ticket in Campbell’s 1960 “surge and decline” argument. As most party incumbents (aside from independent candidates) are from CDU and SPD, we would again expect to see the two centrist parties profit on aggregate from these incumbency advantages. As a third hypothesis, we therefore propose:

Hypothesis 3: *Concurrent second-order elections lead to electoral benefits for the parties of mayoral incumbents.*

Finally, we can derive expectations for the overall party system in council elections if all these hypotheses bear out. If one or both of the major parties profit, this will lead to a decrease in party system fragmentation and a greater likelihood of single-party majorities in the municipal council. Given that most mayoral incumbents come from one of the two major parties and that incumbents provide coattails to their party list, we should expect a greater likelihood of alignment of the incumbent mayors’ party and the party holding the council majority – all points we address in more detail in the discussion. Having established our expectations for the empirical analysis, we proceed with a short description of our case before explaining our research design.

3 Case

Election timing has been shown to depend on strategic considerations of policy-makers (Anzia 2012a) such as future economic prospects (Smith 2003) or anticipated feelings in the electorate (Lupia and Strom 1995) – see also Hartney and Nickerson (2012); Kayser (2005); Meredith (2009). This could well imply that unobserved variables correlate with our dependent variable, turnout levels and vote shares, and our independent variable, the occurrence of a concurrent election. We therefore first describe how our case of Lower Saxony provides us with credibly exogenous variation in the occurrence of CMEs.

We begin by briefly outlining the institutional setting under study. Municipalities are the lowest tier of government in Germany. However, they are of substantial political and economic importance, as they account for about a quarter of all total government spending.⁵ They are responsible for culture, sports, elementary schools, local public transport, social welfare, and local infrastructure management, among others. Municipalities generate revenue through property and business taxes, which they set and collect themselves. In addition, municipalities receive a share of wage and income tax as well as VAT revenue. Finally, they also finance themselves through fees, rents, leases, and sales, as well as debt. To the extent that their own revenues are not sufficient, the state provides the necessary funds through an inter-municipality financial compensation mechanism.

We study municipalities in the state of Lower Saxony, which with 47.600 km² and 7.9 million inhabitants, is Germany's second-largest and fourth-most populous state. Lower Saxony comprises 414 municipalities with directly elected mayors.⁶ From this set of 414 municipalities, we exclude municipalities that have seen changes in their borders due to municipality mergers between 2001 and 2011. This leaves us with 401 municipalities, which remained unchanged throughout our period of investigation.

Council elections in Lower Saxony are held every five years on the same date across the federal state. Voters have three votes, which they allocate freely to party list(s) or individual party candidate(s) in an open-list system with seat allocation proportional to vote share and no electoral threshold apart from the natural threshold defined by the seat allocation mechanism. Lower Saxony's political spectrum, just as the national level, is dominated by two parties: the center-left SPD and the center-right CDU. In the council

⁵ See <http://www.bpb.de/nachschlagen/zahlen-und-fakten/soziale-situation-in-deutschland/61867/oeffentliche-finanzen>, retrieved on 16/03/2017.

⁶ Of these, 126 are so-called *Samtgemeinden* (collective municipal associations). A *Samtgemeinde* is an administrative division particular to Lower Saxony. It is an association of smaller municipalities that executes most municipal duties for its member municipalities. Around 80% of municipalities in Lower Saxony have united to form *Samtgemeinden*. (<https://en.wikipedia.org/wiki/Samtgemeinde>, last retrieved 23/03/2017). The remaining 288 are so-called *Einheitsgemeinden*, including 124 cities (As of 01/01/2014, see <http://www.mi.niedersachsen.de/themen/kommunen/kommunen-in-niedersachsen-63108.html>, retrieved on 16/03/2017). While the former tend to be more rural, the latter tend to be more urban.

elections that we study, these two parties obtained the plurality of votes in 1121 out of 1203 elections. They also won 66.9% of mayoral elections between 2001 and 2011. Independents won almost all other elections.

In 1996, under SPD-party rule and contested by the opposition, the direct election of these local executives was introduced with five-year terms. Mayors were until then indirectly elected by the municipal council for 12-year terms and had a largely ceremonial and representative role. The municipal administration's day-to-day business was overseen by a professional municipal director, who was appointed by the council. When elected mayors were introduced in 1996, the latter position ceased to exist. Elected mayors lead the municipal executive, which is a full-time appointment in Lower Saxony. They hold considerable sway over a municipality's public administration. For instance, departmental heads of the city administration are elected by the council on the recommendation by the mayor, who retains the exclusive right to nominate candidates. In contrast to mayors, council members retain their regular jobs and receive a modest allowance for serving on the council.

In mayoral elections, voters have a single vote to give to one candidate. If no candidate receives an absolute majority of votes, a run-off election between the top two candidates is held a week after the first round.⁷ Turnout in municipal elections in Lower Saxony is relatively high when compared, for instance, against turnout in the US. On average, 50% to 60% of eligible citizens vote in local elections, with turnout being systematically higher when mayoral and council elections are held concurrently, as we show in this paper. Even stand-alone mayoral elections draw almost half of the electoral to the voting booth. Turnout in these elections is on par with European elections turnout.⁸

Mayoral elections were to be held concurrently to council elections beginning in 1996

⁷ Electoral reforms by competing state governments led to the abolishment of run-offs between elections in November 2011 and 2013. However, this reform does not concern us because we focus on the first round of mayoral elections only. There are no second-round mayoral elections, which were concurrent with council elections. In cases where the ends of the council and mayoral terms coincided, the first-round of the mayoral election was held on the same day as the council election.

⁸ Here, we rely on research by Leininger et al. (2018) who contrast turnout in 2014 European elections in Lower Saxony and turnout in mayoral run-off elections in the same year.

(Detjen 2000). However, transitional rules did not force municipal executives to face reelection in 1996 and 2001 if their original 12-year term was still running (Armbrust 2007: 60f.). This reform introduced desynchronization of the timing of mayoral elections because some mayors, due to idiosyncratic reasons such as their age, chose to hold early elections while others served out their full term. Note that at that time, municipalities were to a certain degree already on different trajectories depending on when the mayor in office at that time was elected by the municipal council, which would also influence a mayor's decision whether to opt for concurrent mayoral elections in 1996. Additionally, in 2005, under CDU rule and again contested by the opposition, the term length of municipal executives was prolonged to eight years (Armbrust 2007: 60f.). The explicit political aim of the reform was to desynchronize the electoral cycles of municipal executives and councils.⁹ This became effective for all municipal executive elections from 2005. This reform pushed municipalities with concurrent elections out of concurrency and some into concurrency. Lastly, exceptional mayoral elections occur with the death, retirement, or resignation of mayors and lead to new terms, inducing additional desynchronization of council and mayoral elections.¹⁰

⁹ In 2013, again under SPD rule, this prolongation and desynchronization were reversed by the new government (STK 2013).

¹⁰ De-selection of municipal executives is rarely an issue. There are very high political hurdles; only two cases until 2008 are known where this occurred, see <http://www.bpb.de/apuz/144111/politische-verfasstheit-der-kommunalen-ebene?p=all> (last retrieved on 29 August 2020).

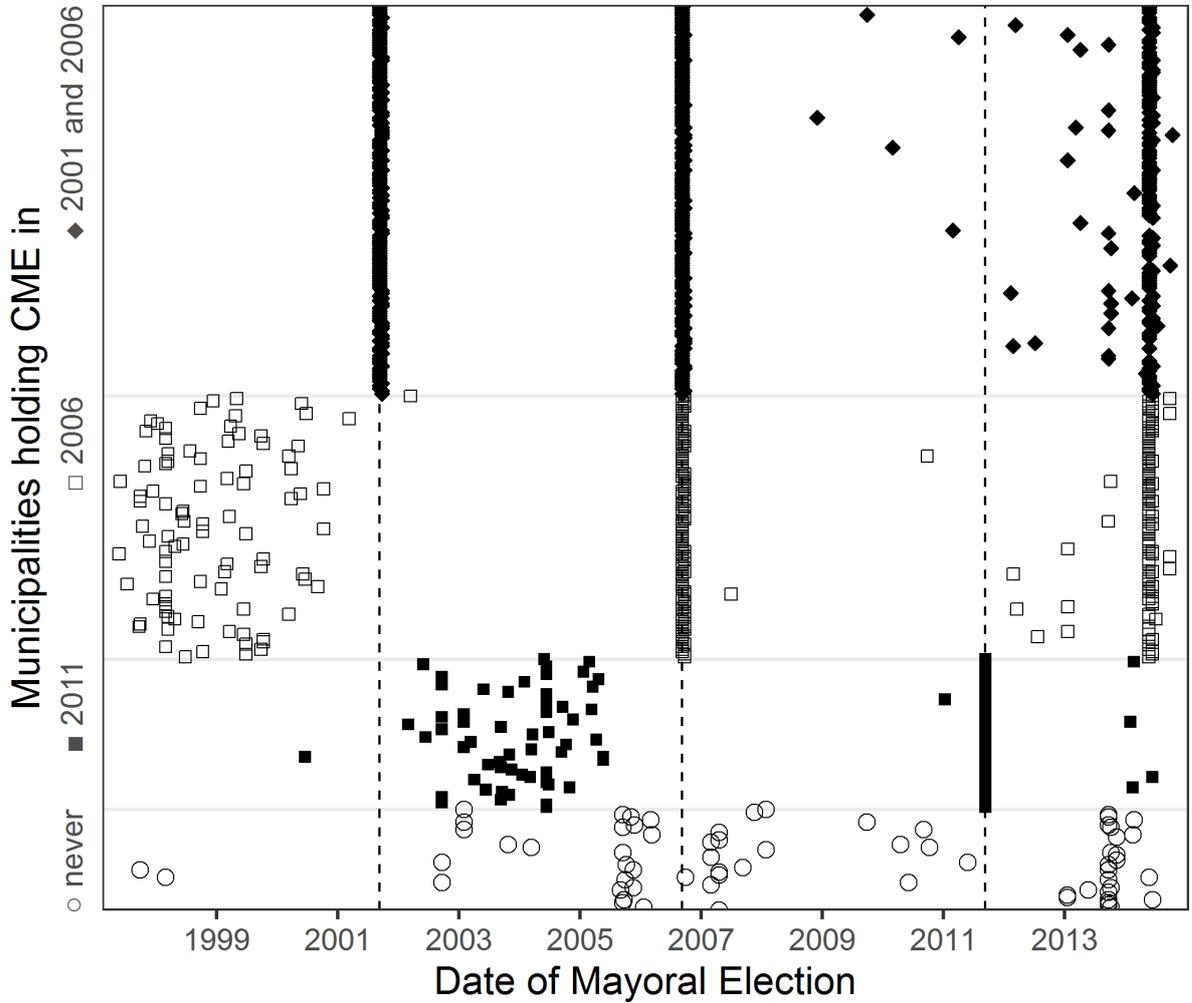


Figure 1: The figure presents one marker for each mayoral election since 1997 in 362 (out of 401) municipalities in our sample. Vertical dashed lines indicate state-wide council elections in 2001, 2006 and 2011. If a marker overlaps the vertical dashed line, a municipality holds mayoral elections concurrently with council elections. We align municipalities along the y-axis by groups defined by patterns of concurrency: 156 municipalities held concurrent mayoral elections (CMEs) in 2001 and 2006 but not 2011 (◆), 105 held CMEs in 2006 only (□), 60 held CMEs in 2011 only (■), 41 never held mayoral elections concurrent with council elections (○). 39 municipalities, which exhibit different patterns of concurrency, are omitted from the plot. See Figure A.1 in the appendix for a visualization of concurrency patterns in all 401 municipalities. For an overview over concurrency patterns see also Table A.1 in the appendix.

We analyze the council elections of 2001 (9 September), 2006 (10 September), and 2011 (11 September). On these dates, some municipalities in Lower Saxony concurrently elected their mayors while others did not do so because of the reasons outlined above.¹¹ Figure 1 illustrates the variation in the timing of mayoral elections in our sample between 1997 and 2014. We see a first clustering of municipalities with mayoral election timing in 2001, 2006, and 2013 (denoted by symbol ∇ in Figure 1). They hold mayoral elections every five years and concurrently until 2006, and then with the new eight-year term in 2013. Another clustering of municipalities held first direct mayoral elections before 2001, and then concurrently with local elections in 2006; they are therefore out of sync in 2001 and 2011 (\blacktriangledown). A third larger clustering of municipalities held first direct mayoral elections after 2001, and then concurrently with local elections in 2011; they are therefore out of sync in 2001 and 2006 (\blacksquare). Overall, 188 municipalities held CMEs in 2001, 110 did so in 2006, and 249 did in 2011.

Altogether, these patterns of (non-)concurrency that we observe depend first on individual retirement decisions of mayors before 1996 that led to differences in running terms back then, and additionally on reforms explicitly aimed at desynchronizing electoral cycles affecting different municipalities at different times. More importantly, because of these multiple reforms, we observe almost all municipalities both under treatment and control status for different elections – only 41 municipalities never held CMEs (\circ) during our period of study, and only five always held CMEs. These circumstances provide plausibly exogenous variation for analyzing the effect of CMEs on electoral results for council elections. To substantiate this claim, we conduct a series of placebo tests, which we explain along with the research design described in the following section.

¹¹ Additionally, in some municipalities, county administrators were elected. Counties (*Landkreise* in German) are an administrative layer above municipalities with very limited competences. For this reason, we do not consider this variation explicitly in the following analysis.

4 Research Design

We draw on a perfectly balanced panel of 401 municipalities i for which we obtained data on three municipal council elections at points in time $t = \{2001, 2006, 2011\}$. Our main explanatory variable C_{it} is a dummy variable indicating whether a municipality i held concurrent mayoral elections (CMEs) at time t . We then estimate the effects of CMEs on three sets of dependent variables Y_{it} . First, we regress turnout (absolute number of voters in the council election relative to the voting-eligible population¹²) on our treatment dummy. Second, we move to electoral outcomes: we look at the vote share of the party holding the mayoralty at the time of the council election (‘incumbent party’), the combined vote share of the two large mainstream parties (‘major party’) as well as the vote share of individual parties at council elections (we consider the most important parties SPD, CDU, FDP and Greens, all represented in the state assembly, and a residual ‘other’ category). Third, we consider aggregate outcomes at the council level: a dummy variable indicating one-party majorities in the local council (i.e., a party with $> 50\%$ of votes), Laakso and Taguepeera’s (1979) effective number of legislative parties, and a dummy variable indicating alignment of mayoralty and the party holding the plurality of council votes occurred.¹³

We include time (θ_t) and unit (γ_i) fixed-effects in our regressions to control for common election-year shocks and time-constant confounders at the municipality level, clustering standard errors at the level of treatment, i.e., municipalities. Our estimation equation therefore is: $Y_{it} = \theta_t + \gamma_i + \beta C_{it} + \epsilon_{it}$.

The empirical strategy builds on the assumption that absent mayoral elections, the ‘treated’ municipalities with concurrent council elections would follow similar trends as ‘untreated’ municipalities with stand-alone council elections. Hence, we rely on a difference-in-differences framework (Lechner 2011). The idiosyncrasies in the timing of mayoral elections described above make it highly likely that the assumptions of the de-

¹² Registration is automatic in Germany.

¹³ Summary statistics for these variables are provided in Appendix Table A.7.

sign are met in our case. Parallel trends in the pre-treatment period, placebo tests on unrelated outcomes (federal and European election results) in the treatment period, and balance tests on potential confounders provide further evidence that our empirical strategy provides valid estimates of the causal effect of concurrency.

First, we assess parallel trends in council elections in the pre-treatment period 1981 to 1991. We do this for the three most sizable clusters of municipalities based on their pattern of election timing in the treatment period, i.e. the top three panels of Figure 1.¹⁴ As presented in Appendix Section A.2.1, these three groups exhibit very similar trends in turnout, major party vote shares or SPD/CDU vote shares. This indicates that we do not expect that municipalities selected into (early) concurrency based on turnout or vote share trends.

Second, we conduct two types of placebo tests on federal and European elections in the treatment period 1998-2014: On the one hand, as reported in Appendix Section A.2.2, the three most sizable clusters of municipalities (see above) show very similar trends in turnout and electoral outcomes in the treatment period. On the other hand, we formally test for an effect of CME on turnout and electoral outcomes in temporally close federal and European parliament elections. While by definition, we cannot observe counterfactual outcomes directly, we capture through this analysis both minimum and maximum turnout potential in the municipalities as these elections represent the most salient as well as the least salient of elections in which German voters can vote.¹⁵ Regressing turnout and vote shares in federal and European parliament elections on our original treatment variable, concurrency of mayoral and council elections, we find differences between treatment and control group which are minuscule and statistically insignificant (see Appendix Section A.2.3).¹⁶

¹⁴ This is municipalities holding CME in 2001 and again in 2006, those only with CME in 2006, and those only with CME in 2011. We do this, as almost all municipalities are observed in treated and in control state in the three election years in the treatment period.

¹⁵ Vetter (2015: 5) using German “Politbarometer” survey data shows that European elections are even less important to German citizens than local elections and that federal election trump all other elections in terms of importance.

¹⁶ Interestingly mayoral elections held concurrently with federal or European elections do increase turnout in these elections. For the latter Leininger et al. (2018) show that this represents a strong causal effect of concurrent mayoral elections on turnout in European elections.

Third, we conduct balance tests for several geographic, demographic, and socio-economic control variables: Comparing means across all three election years and individually, we see differences between treated and control municipalities significant at or below the 5%-level in only five out of sixty comparisons.¹⁷ These results all serve to confirm that idiosyncratic events in the wake of the initial reform have set municipalities on a long-term trajectory of electoral timing. Later reforms affected all municipalities equally and provided no room for strategic election timing.¹⁸ Collectively, these tests imply that our estimates have high internal validity.

5 Results

In the following, we present and discuss our results on how concurrent elections affect aggregate turnout and vote choice. Table 1 shows estimates for the average effect of CMEs on turnout, SPD and CDU vote shares in council elections. Model 1 in Table 1 confirms the assumption, undergirding all our hypotheses, that concurrency raises turnout. Compared to an average control group observation, the treated municipalities see an increase in turnout of about 3%-points – an increase of 5.4% relative to average turnout in the control group municipalities.¹⁹ Our results are in line with what we would expect given earlier findings from concurrent local elections in France, Germany, and Japan, where effects range between 2 and 5 percentage points (Fauvelle-Aymar and François 2015; Garmann

¹⁷ See Appendix Table A.8. Balance also holds when comparing municipalities that hold CME for the first time with municipalities that still have not seen any CME (Table A.10).

¹⁸ Consequently, we observe differences, as expected, in indicators relevant for treatment assignment (see Appendix Table A.9). Incumbents' time in office is higher in the treatment group, as mayors stepping down (mainly due to retirement age) lead to non-concurrent elections. However, concerning partisanship SPD vs. CDU, mayoral incumbency is balanced in the overall sample. Note that SPD mayoral incumbents are more prevalent in earlier CME elections and CDU mayoral incumbents in later CME elections – this is, as the staggered reform process had incentives for SPD mayors to switch earlier and CDU mayors to switch later to CMEs. Similarly, although CME municipalities with CDU or SPD incumbents are broadly comparable, they do cluster somewhat geographically, and the center-right CDU is more dominant in more affluent areas (see Table A.11).

¹⁹ Table A.14 in the appendix shows that a single election does not drive this average effect but that a sizable treatment effect occurs consistently for all instances of concurrency. These estimates remain substantively unchanged when we include additional control variables, giving further credibility to our design (see Table A.14).

2016; Fukumoto and Horiuchi 2016). They confirm these prior findings that even two concurrent low-salience elections increase turnout.²⁰

To test our first hypothesis, Table 1 also reports individual estimates for the SPD and CDU council vote, i.e., the components of our ‘major party vote’-variable, in models 2 and 3. In line with Tingsten’s (1937) law, the political left (SPD) profits from CMEs. However, the political center profits more generally as we also see a positive but slightly less substantial effect for the center-right CDU. In model 2, the SPD’s vote share increases by about 0.73 percentage points, significant at the 5%-level, if mayoral elections are held concurrently. Model 3 estimates the corresponding increase of the CDU council vote share to be slightly smaller, at about 0.47 percentage points, significant at the 10%-level. This increase in the vote for the two parties goes hand in hand with a corresponding decline for all other parties.²¹ The sum of both effects forms the ‘major party vote’ as reported in Table 2.

Table 1: The effect of concurrent mayoral elections (CMEs) on turnout and the vote shares of CDU and SPD

	(1)	(2)	(3)
	Turnout	SPD vote (%)	CDU vote (%)
CME	3.03*** (0.19)	0.73** (0.31)	0.47* (0.28)
Year fixed effects	✓	✓	✓
Municipality fixed effects	✓	✓	✓
N	1203	1203	1203
Municipalities	401	401	401
Within R^2	0.60	0.081	0.31
Control group mean	56.3	34.8	41.4
Control group SD	6.29	12.8	16.1

Year and municipality fixed-effects estimation with standard errors clustered by municipality.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

Table 2 reports the central tests for our second and third hypotheses. Model 1 shows

²⁰ Contrary to the even larger increases in turnout of about 11 percentage points (20%) observed with concurrent European and mayoral elections in Lower Saxony (Leininger et al. 2018), we suppose that council and mayoral elections attract a more similar sub-set of the electorate and therefore provide a somewhat lower stimulus to political participation.

²¹ See Table A.15 in the appendix.

that concurrent elections increase combined center-left (SPD) and center-right (CDU) council election vote share ('major party vote') by about 1.2 percentage points. This provides evidence in support of our second hypothesis that with majoritarian elections concurrent to PR elections, centrist parties see electoral gains in the PR contest. Given that both major parties already win a vast majority of seats, the effect is relatively low at about 1.5% of an average control municipality.

The dependent variable in model 2 of Table 2 is the vote share of the incumbent mayor's party in the respective council race. Note that we have many independent candidates (about a third of the sample) – per definition, they have no corresponding political party in the council. We, therefore, exclude them from the analysis.²² Note also that we code party incumbency, not personal incumbency. In the case of Lower Saxony that we analyze here, the effects for party and personal incumbency should be very similar because most mayors chose to run for re-election (Wollmann 2014). We also believe in erring on the side of caution by estimating the effect of party incumbency: a mayor rerunning likely has a slightly stronger effect than a party running a new candidate in cases of a mayor retiring. Hence, what we provided here is a conservative estimate of the incumbency effect. Still, results are in line with what we would expect: The council vote share of the incumbent mayor's party increases with concurrency by about 0.95 percentage points. Given a 46% baseline, this is about a 2% increase in control group vote shares.

Table 3 provides detailed evidence on the incumbent coattails, which are one of the driving factors behind the effects on vote shares we documented in Tables 1 and 2. For this, we split the CME dummy variable to distinguish between CMEs with SPD and CDU incumbents as well as incumbents from other national parties (FDP and Greens) and municipalities with independent or no elected incumbents.²³ Municipalities with SPD incumbents holding concurrent mayoral elections see substantially larger increases in the

²² We observe 907 incumbent mayors in total. Of these are 314 CDU (35%), 302 SPD (33%), 8 minor party (FDP or Greens) (1%) and 283 independent (31%) mayors.

²³ Similar to major party vote, which captures the sum of the effects on SPD and CDU, Green/FDP vote captures the combined losses of both parties. As can be seen in Table A.15, both parties suffer equally from concurrency.

Table 2: The effect of concurrent mayoral elections on major party vote share and incumbent party vote share

	(1)	(2)
	Major party vote (%)	Incumbent vote (%)
CME	1.20*** (0.40)	0.95** (0.48)
Year fixed effects	✓	✓
Municipality fixed effects	✓	✓
N	1203	624
Municipalities	401	291
Within R ²	0.34	0.20
Control group mean	76.2	46.1
Control group SD	15.7	14.8

Year and municipality fixed-effects estimation with standard errors clustered by municipality. Major party vote is the combined vote share of SPD and CDU. Incumbent vote is the vote share for the incumbent mayor's party. This model is estimated on a reduced sample of municipalities, which excludes municipalities with independent (non-aligned) mayors and those lacking information on incumbency.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

SPD vote of around 2.2 percentage points. While a similar pattern emerges for CDU incumbents, the effect is much smaller with 0.9 percentage points. For the SPD, the effect amounts to 6.4%, and for the CDU to 2.1% vis-à-vis their control group vote share. Note that we interpret these results as speaking for a genuine incumbency advantage mechanism because incumbency is only weakly related to local party strongholds, i.e., a party doing very well in these municipalities in other contexts, too.²⁴ Nevertheless, local party strongholds potentially constitute a relevant topic for further research into the effects of concurrency on electoral outcomes. Finally, for incumbents of FDP or Greens, a similar association evolves, with large effects (2.3 percentage points) significant at the 10%-level (note that there are very few of these cases, only four in total). Incumbents of the other party have in tendency a small negative effect on a party's vote share. Finally, model 4 of Table 3 reports whether mobilization differs by incumbency type. As can be seen, turnout increases relatively stronger with incumbents from FDP or Green party (around 4.8 percentage points) and least with independent/no elected incumbents (around

²⁴ See Tables A.12 and A.13 in the appendix.

2.9 percentage points).

The benefits of concurrency to the two centrist parties are not driven by incumbency spill-over effects alone. Instead, the political center also profits from CMEs where we would expect incumbency effects to be irrelevant, i.e., with independent or no elected incumbents. This finding is in line with the electoral-systems mechanism that we theorized: The turnout stimulus of the CME under majority rule seems to induce centrist voters, in particular, to turn out, as, in an average municipality, only a centrist mayoral candidate has a chance of winning. In summary, both an electoral-systems and an incumbency mechanism together contribute to gains for centrist parties when majoritarian executive and PR legislative elections are held simultaneously.

Table 3: The effect of CME on party vote shares and turnout depending on party affiliation of the incumbent mayor

	(1)	(2)	(3)	(4)
	SPD vote (%)	CDU vote (%)	Green/FDP vote (%)	Turnout (%)
CME (SPD inc.)	2.24*** (0.60)	-0.045 (0.43)	-0.57 (0.43)	3.32*** (0.32)
CME (CDU inc.)	-0.20 (0.43)	0.90** (0.44)	-0.73** (0.29)	3.03*** (0.31)
CME (FDP/Green inc.)	-0.81 (0.86)	-1.24 (2.88)	2.66* (1.37)	4.81*** (0.91)
CME (indep./no elected inc.)	0.64* (0.36)	0.48 (0.38)	-0.36 (0.27)	2.87*** (0.24)
Year fixed effects	✓	✓	✓	✓
Municipality fixed effects	✓	✓	✓	✓
N	1203	1203	1203	1203
Municipalities	401	401	401	401
Within R ²	0.099	0.31	0.33	0.61
Control group mean	34.8	41.4	9.90	56.3
Control group SD	12.8	16.1	7.36	6.29

Year and municipality fixed-effects estimation of a regressio of the dependent variable (vote share of turnout) given in model header on a split indicator of type of CME by party affiliation of the mayoral incumbent. Base category is a stand-alone, non-concurrent municipal council election. Standard errors clustered by municipality. 35.0% of municipalities have CDU incumbent mayors (35.8% within overall CME treatment group); 32.3% have SPD incumbents majors (33.0% within overall CME treatment group).

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

6 Discussion

Our theoretical framework laid out expectations regarding the consequences of increasing turnout through concurrent elections, which we saw confirmed through our empirical analysis. First of all, we saw a tendency towards a relatively stronger performance of the center-left SPD under concurrency. As both SPD and CDU hold about a third of incumbents and both parties compete at relatively high levels of political support²⁵, we would not expect the relatively stronger aggregate vote effect of concurrency for the SPD to be a consequence of a lop-sided distribution of incumbents. Rather, Tingsten’s law seems to appear through the backdoor again. We observe both larger coattails and higher vote share boosts for the left with concurrency. This is consistent with either more marginal voters on the left side of the political spectrum or a larger mobilization potential of left voters with concurrent elections.

Second, we find evidence that the political center, not just the center-left, profits from concurrency. Both the SPD and the CDU see increases in their vote shares under concurrency. Importantly, these two parties also profit from concurrency in cases where independents or no elected incumbents are in place, i.e., in cases where mayoral incumbency effects cannot be the driver of the vote share increase for major parties. This provides support for our second hypothesis positing electoral system effects: A majoritarian contest concurrent with a PR race will lead to electoral spillovers that impose the former’s two-party logic on the latter contest.

Third, we find clear evidence that the vote share of an incumbent mayor’s party is positively affected by concurrency – when we look at incumbents independent of partisan affiliation and when we disaggregate incumbents and vote shares by party. These findings are in line with our second hypothesis: Coattail effects are a general feature of concurrency. Note, however, that incumbents from the center-left SPD see stronger coattails compared to the center-right CDU. This implies that the size of coattails may depend on the relative

²⁵ The SPD receives 36% of the council vote on average, while the CDU receives 42%.

voting costs of supporters of the incumbent mayor, the distribution of partisan leaning among marginal voters, or both.

While we cannot exclude other mechanisms with our research design, we deem it likely that turnout is an essential part of the electoral effects observed with CMEs. Taking our mobilization estimate of on average three percentage points literally, an average control group municipality has 14611 eligible citizens and would see an increase in the voting population of 443 voters. Comparing to the control group electoral outcomes, if these additional 443 voters were to vote for the SPD exclusively, the party would see an increase in 3.3 percentage points, which is about 4.5 times higher as our estimated coefficient (as not only the left profits from CMEs). However, the maximum increase of the major parties combined would be 1.2 percentage points, which is exactly what we find empirically. Finally, if all additional voters were to vote for the incumbent mayor's party exclusively, a vote share increase of 2.8 percentage points would follow, again larger than our estimate of 0.95 in Table 2, but only slightly larger than the decomposed effects for SPD/FDP/Green incumbents we find in Table 3. Overall, this makes sense as we would not expect a perfect relation between turnout increase and additional voters for the centrist or incumbent parties.

Finally, we discuss the broader implications of our findings, drawing on additional evidence: Do concurrency-induced shifts in the electoral balance meaningfully affect local politics? A precondition for any effect of concurrency on policymaking would be a substantive shift in observed political competition at the municipality level. Therefore, we investigate how municipal councils' composition and the alignment of legislative and executive majorities change through concurrency. Since coattails and electoral systems effects benefit the two dominant parties in our case, we should expect that concurrency reduces fragmentation in the council and, given the electoral strength of the parties, increases the occurrence of single-party majorities in the council. Coattails should also make it more likely for the mayor's party to hold a plurality in the council. Making some additional simplifying assumptions that we explain below, we can conduct three empirical tests on

these conjectures, the results of which we report in Table 4.

Table 4: The effect of CMEs on the probability of one party having an absolute majority in the municipal council (one-party dominance), the effective number of parliamentary parties in the municipal council, and the probability of one party commanding both a majority in the council and controlling the mayoralty (executive-legislative alignment).

	(1)	(2)	(3)
	One-party dominance in local council	Effective number of parliamentary parties	Executive-Legislative Alignment
CME	0.043** (0.021)	-0.062*** (0.018)	0.068*** (0.026)
Year fixed effects	✓	✓	✓
Municipality fixed effects	✓	✓	✓
N	1203	1203	1062
Municipalities	401	401	394
Within R ²	0.042	0.32	0.011
Control group mean	0.35	2.79	0.53
Control group SD	0.48	0.69	0.50

Municipality fixed-effects models with standard errors clustered by municipality.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

Our first dependent variable is a dummy variable indicating whether a single party list obtained more than 50% of the vote or not, which we then use as a proxy for single-party majorities in municipal councils.²⁶ As can be seen from model 4-1, results indicate that, with concurrency, municipalities are 4.3 percentage points more likely to have a one-party majority in the municipal council. This is a substantial increase (of 12.3 percent) compared to the control group mean of 35 percent.

Our second dependent variable is the effective number of parliamentary parties (ENPP), which provides a measure of the number of parties weighted by their size (Laakso and Taagepera 1979).²⁷ As expected, given the increasing seat share of the major parties, ENPP decreases. As can be seen from model 4-2, the decrease of about 0.06 is rather small compared to the control group mean of 2.8 effective parties. Nevertheless, findings are still in line with our electoral system hypothesis. Concurrency focuses on the electoral

²⁶ This is a conservative approach to such majorities, as the natural threshold imposed by the seat distribution system implies that vote shares of less than 50% regularly suffice for a council majority.

²⁷ For practical reasons, we simplify the approach somewhat. As we do not have data on seat shares, we use the PR vote shares. Parties other than CDU, SPD, Greens, FDP, Left, and Independents, which usually see only a fraction of the vote, are subsumed in an ‘Others’ category.

competition of the two dominant parties and thereby reduces fragmentation. Our third and last dependent variable is an indicator of partisan alignment between legislature and executive. We construct a dummy that equals one if the party receiving a plurality of the votes and the mayoral party coincide after a council election, and zero otherwise. Concurrent elections raise the probability that this occurs. As can be seen from model 4-3, concurrency raises the likelihood of alignment by 6.8 percentage points (or 13% compared to the control group mean of 53%).

Collectively, these findings provide a clear indication that concurrent elections have the potential to affect the political game in municipalities meaningfully. The combination of PR and mayoral elections shifts the balance of power in the municipality legislatures in the direction of the executive leadership, the mayor, as expected from Campbell's (1960) "surge and decline" argument. In the case of multiparty systems, this leads to a consolidation of the party system in favor of the center-left and also to a lesser extent the center-right party.

7 Conclusion

Elections are often held concurrently to raise turnout. However, the electoral consequences of concurrent elections, in particular when it comes to horizontal concurrency and concurrency of different electoral systems, are still under-explored. We put forward a theoretical argument that generalizes and extends the turnout effects of Campbell's (1960) "surge and decline" hypothesis to PR systems. We propose that when holding majoritarian elections concurrently to proportional (party-list) elections, both electoral system effects and electoral coattails lead to an electoral gain for centrist parties as well as incumbents in the PR race. This is because these parties are dominant in the majoritarian arena. The two-party tendency of majoritarian elections benefits the large centrist parties in the concurrent PR election. Additionally, incumbents mobilize their latent supporters to turn out in higher numbers for the concurrent election.

Drawing on a unique case in Germany, where we can observe quasi-random variation in the concurrency of local executive and legislative elections, we show that combined elections increase turnout, even though both elections – municipal elections in our case – are at a low level of salience. Concurrency affects the composition of the electorate through increased turnout and, thereby, who wins. While we find that gains are slightly more pronounced for the center-left, we nevertheless find significant gains for the center-right as well. This finding relates to the broader literature on turnout effects, which shows conflicting electoral effects of turnout, likely due to different contexts and institutional settings in which variation in turnout is observed (e.g. Bechtel et al. 2016; Cepaluni and Hidalgo 2016; Ferwerda 2014; Finseraas and Vernby 2014). In line with our theoretical arguments, concurrency leads to an increase in council votes for the incumbent mayor’s party. Although we cannot, of course, know with certainty the extent to which concurrency affects electoral outcomes through turnout (only), we believe we have good reasons to think that the change in electoral outcomes is driven by the increase in turnout to a large extent.

Nevertheless, explicitly disentangling contamination from turnout effects is the first of four distinct theoretical and empirical challenges, which future research should address. Campbell’s (1960) “surge and decline” argument entails two propositions. On the one hand, it has been argued that mobilization efforts matter for electoral outcomes in concurrent elections (Fukumoto and Horiuchi 2016), which is also the theoretical argument we focus on in this article. On the other hand, core voters may change their minds, i.e., we observe contamination by which the characteristics of candidates for one vote feed into the decision making calculus of the other vote (Hainmueller and Kern 2008). While aggregate predictions on the consequences of concurrency do not differ, future research on the exact mechanisms would inform theories of voting behavior. For such research on who exactly is mobilized by concurrency, individual-level survey data of voters and non-voters in comparable voting districts with and without concurrency would be a crucial prerequisite.

Second, how do concurrent legislative elections affect competition in the mayoral race? There is no research on whether concurrent elections increase the likelihood that parties field candidates or whether it increases the competitiveness of mayoral elections to the best of our knowledge. Note that these effects can, in a causal framework, can only be identified with a case where the researcher observes variation in the occurrence of concurrent legislative elections while mayoral elections take place in all municipalities at the same time, i.e., inverting the characteristics of our set-up.

Third, do concurrent elections affect policy-making? A growing literature investigates the policy consequences of institutional designs that affect turnout. All in all, conflicting arguments have been made in the literature, from the introduction of postal voting, where increasing turnout brought lower welfare spending (see Hodler et al. 2015), to compulsory voting, where increasing turnout brought higher welfare spending (see Fowler 2013). To the best of our knowledge, so far, only few articles have looked at the policy consequences of concurrently elected political representatives, based on school board elections concurrent with more salient elections in the US with conflicting results (Anzia 2012b; Berry and Gersen 2011).²⁸

Fourth, do we observe heterogeneity in both average treatment effects and the importance of the mechanisms leading to it when the electoral stimulus provided by concurrent elections increases? Even concurrency in low salience elections can have vastly differing turnout effects, depending on the type of elections that are combined (Leininger et al. 2018). As reported by Kogan et al. (2018), for a given low-salience election, the change in the composition of the electorate is more substantial when the concurrent election is of higher salience and most pronounced with first-order national elections. Hence, we would expect that the relative importance of the electoral participation of peripheral voters, spill-overs of incumbency, and differential mobilization from the electoral system also changes with the extent of the turnout stimulus provided by concurrency. More particular, we would expect that the equality-enhancing effect of concurrent elections via increased

²⁸ See also Kogan et al. (2018) for evidence from concurrent referendums.

participation of disadvantaged voters, and a corresponding increase in leftist party vote shares, least traceable in our case, is more pronounced with a stronger electoral stimulus (but see Rudolph 2020; Finseraas and Vernby 2014), whereas the incumbency spill-over and electoral system effects are more pronounced when the electoral stimulus is lower, and the elections combined are of similar salience.

Gaining a better understanding of the implications of concurrent elections is essential because, as we have shown, concurrency induced turnout increases, while generally considered desirable, are not outcome-neutral but seem to rest strongly on the nature of concurrency. Concurrency has potentially significant implications for accountability, representation, and the structure of the party system. For instance, the incumbency advantage is widely considered as problematic for accountability because it reduces turnover (Ansolabehere and Gerber 1997). Concurrency extends the incumbency advantage to another electoral arena. Even if the incumbency effect would only reflect candidate quality (Ashworth and Bueno de Mesquita 2008), a spill-over implies an undeserved electoral gain in an unrelated electoral contest and biases electoral selection in this contest. As shown by De Benedictis-Kessner (2018), concurrent elections can even cement the incumbency advantage of mayors, with a potential of reinforcing cycles. Note, however, that further research is needed to assess whether this is also detrimental to voter welfare (Prato and Wolton 2018). Nevertheless, one may also consider some of the effects of concurrent majoritarian and PR elections as positive. For instance, one may view the centripetal electoral system effect as positive because it reduces fragmentation in the legislature. After all, fragmentation is particularly strong at the local level and in low-salience elections more generally. Such electoral consequences ultimately bear implications for policy outcomes as well. For instance, in cases of horizontal concurrency, the partisan alignment of executive and legislature becomes more likely, which potentially allows the governing party to govern more effectively, also enhancing its accountability via voters (due to greater clarity of responsibility under unified government) (Leyden and Borrelli 1995; Wu and Huang 2007). Future research along the three lines of inquiry that we have proposed

above should help to better understand the broader implications of the often-used tool of concurrency for democracy.

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Online Appendix for ‘Coattails and Spillover-Effects: Quasi-Experimental Evidence from Concurrent Executive and Legislative Elections’

A.1 Case description

Council elections in Lower Saxony are held every five years on the same date across the federal state. In this paper, we analyze the council elections in 2001, 2006, and 2011 and the impact that holding concurrent mayoral elections (CMEs) had on them. We exploit the fact that the timing of mayoral elections follows a haphazard pattern with municipalities dropping in and out of treatment status (i.e., holding CME).

The reasons behind this pattern are various electoral reforms enacted by the state legislature. In 1996, under SPD-party rule and contested by the opposition, the direct election of these local executives was introduced with five-year terms. Mayors were until then indirectly elected by the municipal council for 12-year terms and had a largely ceremonial and representative role. The municipal administration’s day-to-day business was overseen by a professional municipal director, who was appointed by the council. When elected mayors were introduced in 1996, the latter position ceased to exist. Mayoral elections were to be held concurrently to council elections beginning in 1996 (Detjen 2000). However, transitional rules did not force municipal executives to face reelection in 1996 and 2001 if their original 12-year term was still running (Armbrust 2007: 60f.). This reform introduced desynchronization of the timing of mayoral elections because some mayors, due to idiosyncratic reasons such as their age, chose to hold early elections while others served out their full term. The initial reform put municipalities on very different trajectories concerning the timing of mayoral elections. Some held their first mayoral elections concurrently with 1996 council elections, while others did not.

Additionally, in 2005, under CDU rule and again contested by the opposition, the term length of municipal executives was prolonged to eight years (Armbrust 2007: 60f.). The

explicit political aim of the reform was to desynchronize the electoral cycles of municipal executives and councils. This became effective for all municipal executive elections from 2005. This reform pushed municipalities with concurrent elections out of concurrency. However, it did also push some formerly non-concurrent municipalities into concurrency. Lastly, exceptional mayoral elections occur with the death, retirement, or resignation of mayors and lead to new terms, inducing additional desynchronization of council and mayoral elections.

Figure A.1 and Table A.1 provide an overview over the patterns of concurrency that we observe. Among 401 municipalities, we can distinguish eight different patterns of concurrency. Further explanations can be found in the captions of the Figure and Table.

Type of concurrency	2001	2006	2011	N	Symbol (Fig. 1)
CMEs in 2001 and 2006 but not 2011	1	0	1	156	▽
CME in 2006 only	0	1	0	105	▼
CMEs in 2011 only	0	0	1	60	■
Never held CME	0	0	0	41	○
CMEs in 2001 and 2011 but not 2006	1	0	1	21	△
CMEs in 2006 and 2011 but not 2001	0	0	1	7	□
CMEs in 2001 only	1	0	0	6	▲
CMEs in 2001, 2006 and 2011	1	1	1	5	●
Sum of CMEs (per year)	188	110	249	401	

Table A.1: The figure presents one marker for each mayoral election since 1997 in all 401 municipalities in our sample. Vertical dashed lines indicate state-wide council elections in 2001, 2006 and 2011. If a marker overlaps the vertical dashed line, a municipality holds mayoral elections concurrently with council elections. We align municipalities along the y-axis by groups defined by patterns of concurrency: 156 municipalities held concurrent mayoral elections (CMEs) in 2001 and 2006 but not 2011 (◇), 105 held CMEs in 2006 only (□), 60 held CMEs in 2011 only (■), 41 never held mayoral elections concurrent with council elections (○), 21 held CMEs in 2001 and 2011 but not 2006 (▽), 7 held CMEs in 2006 and 2011 but not 2001 (▼), 6 held CMEs in 2001 only (▲), and 5 held CMEs in 2001, 2006 and 2011 (●).

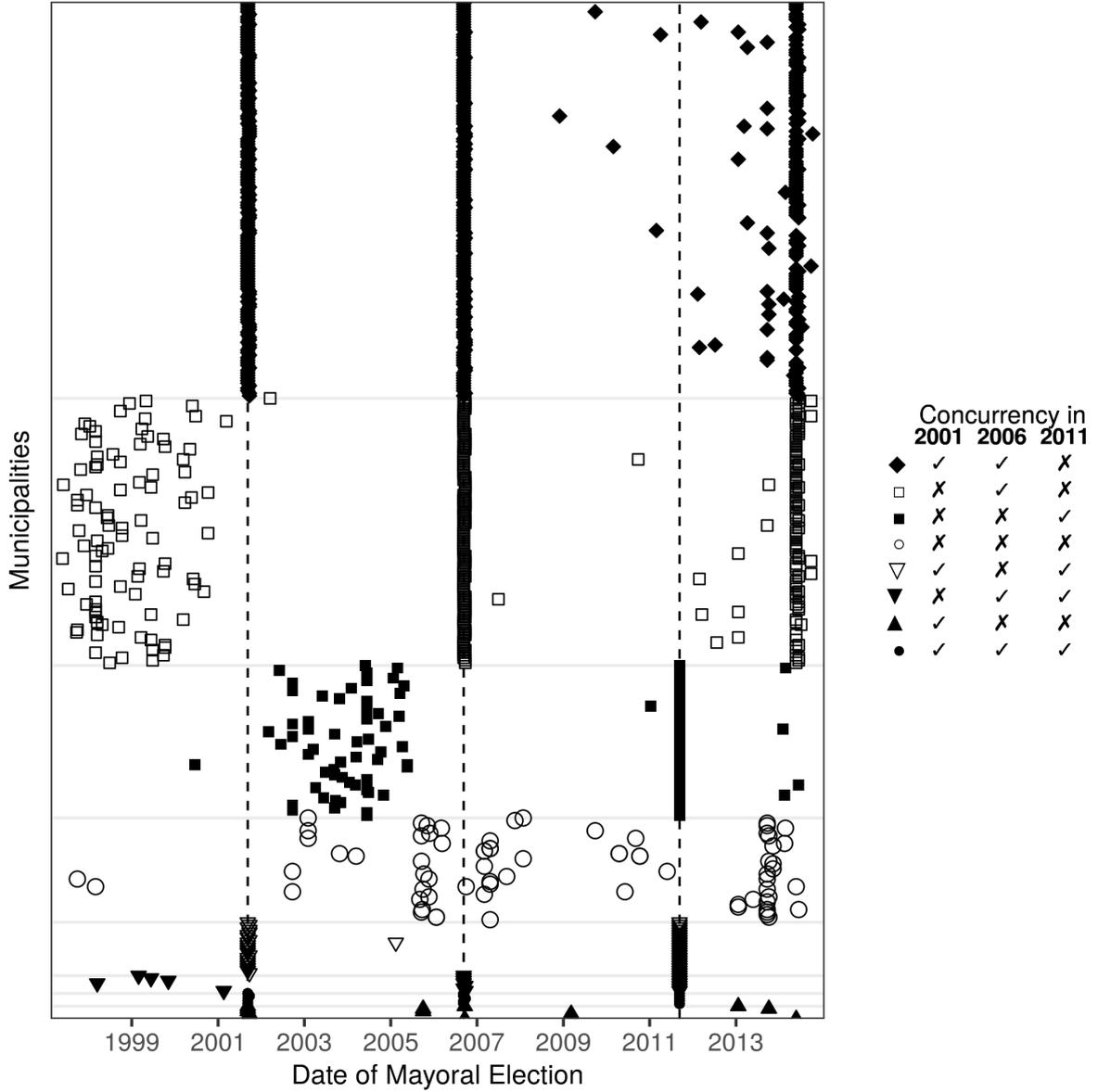


Figure A.1: The figure presents one marker for each mayoral election since 1997 in the 401 municipalities in our sample. Vertical dashed lines indicate state-wide council elections. Municipalities are aligned on the y-axis based on the pattern of concurrency in the 2001, 2006 and 2011 council elections: 156 municipalities held concurrent mayoral elections (CMEs) in 2001 and 2006 but not 2011 (Δ), 105 held CME in 2006 only (∇), 60 held CMEs in 2011 only (\blacksquare), 41 never held mayoral elections concurrent with council elections (\circ), 21 held CMEs in 2001 and 2011 but not 2006 (∇), 7 held CMEs in 2006 and 2011 but not 2001 (\square), 6 held CMEs in 2001 only (\blacktriangle), and 5 held CMEs in 2001, 2006 and 2011 (\bullet).

A.2 Checks on the plausibility of identifying assumptions of the research design

Our empirical strategy builds on the assumption that absent mayoral elections, the ‘treated’ municipalities with concurrent council elections, would follow similar trends as ‘untreated’ municipalities with stand-alone council elections.

To plausibilize this assumption, we conduct several tests: tests for parallel trends in the pre-treatment period, tests on unrelated outcomes (Federal and European elections in the treatment period), and balance tests that compare municipality and election characteristics between treated and control municipalities.

A.2.1 Parallel trends in pre-treatment period

This subsection describes parallel trends in the pre-treatment period. As our treatment period comprises three years, and almost every municipality falls into the treatment group in one or even two of the election years and falls into the control group in the other election years, we cannot separate municipalities in a group that is overall “treated” and a group that is overall “control”. However, as depicted in Figure 1, we can differentiate municipalities by types of election time clustering. For the following tests, we take the three largest clusters of municipalities, i.e., municipalities holding CME in 2001 and again in 2006, those only with CME in 2006, and those only with CME in 2011 (cf. groups depicted the top three panels of Figure 1).

Figure A.2 shows group means for these three groups of municipalities in the pre-treatment period 1981 to 1991. As can be seen, these groups follow very similar trends over time for turnout (top left panel), major party vote share (top right panel), and SPD and CDU vote shares (bottom panels). If we look at levels, we see that the group holding CME only in 2011 has slightly different levels and an average municipality in this group leans more towards the CDU in this group. This indicates that some political determinants might have played a role for the question of which municipalities selected

into concurrency earlier. However, as trends are still parallel, this is no danger to our estimation strategy. Table A.2 provides statistical estimates for the similarity of these trends, which are not statistically different at conventional levels.

The regression models presented in this table test for parallel trends between different groups of municipalities as defined by concurrency. “CME in ...” are dummy variables, which indicate whether a given municipality held concurrent mayoral elections in that year only. A group of municipalities holding CME in both 2001 and 2006 serves as base category in the regression analysis. Smaller groups of municipalities are omitted from the analyses. Any year number represents a dummy variable, which is 1 for all observations from that year and 0 for all others. These variables capture trends in the dependent variables from one election to the other. We always omit the first year because it represents the base category (if all year-dummies are zero, we are dealing with an observation from that year). Finally, we interact the year dummies (indicating trends) with the CME-dummies (indicating groups of municipalities) to test whether there are significant differences in time trends between the groups of municipalities. Coefficients on these interaction terms are substantially close to zero and always statistically insignificant, thus, confirming the parallel trends assumption under-girding our empirical analyses.

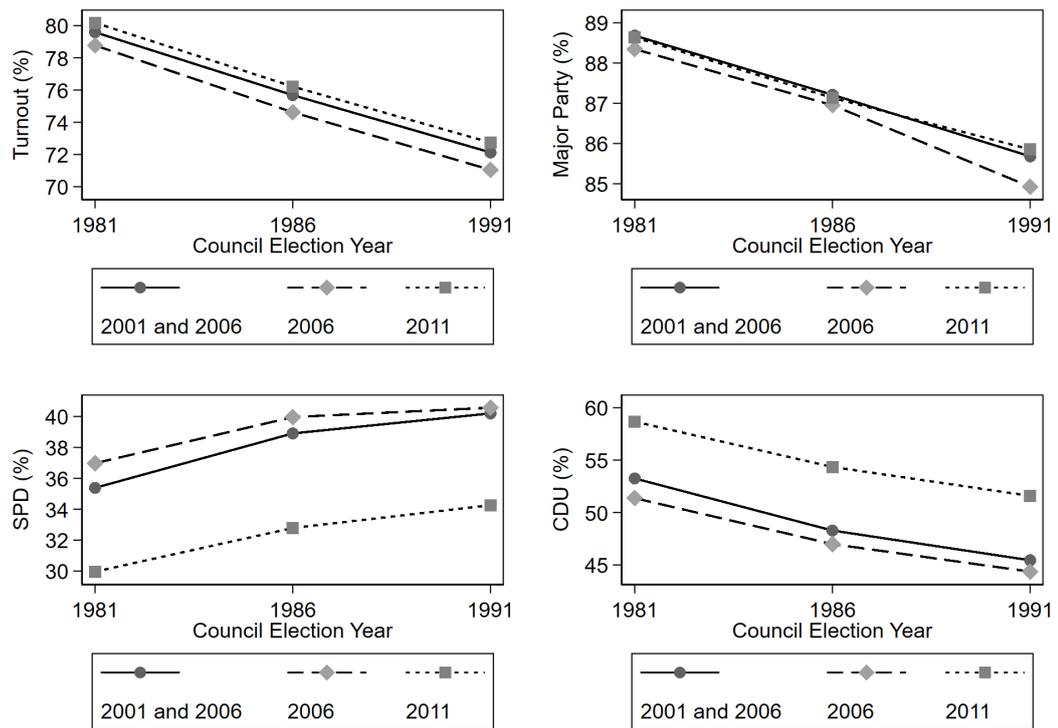


Figure A.2: The figure displays average levels and trends for turnout and vote shares (major party, SPD, CDU) in council elections 1981, 1986, and 1991 for three types of municipalities: those holding mayoral elections concurrent with council elections (CME) in 2001 and 2006, holding first and only CME in 2006, and holding first and only CME in 2011.

	(1)	(2)	(3)	(4)
	Turnout	Major Party	SPD	CDU
1986	-3.91*** (0.50)	-1.47 (0.90)	3.52** (1.27)	-4.97*** (1.38)
1991	-7.46*** (0.50)	-3.00*** (0.90)	4.82*** (1.27)	-7.81*** (1.38)
CME in 2006	-0.82 (0.58)	-0.33 (1.04)	1.60 (1.48)	-1.88 (1.60)
CME in 2011	0.59 (0.64)	-0.04 (1.16)	-5.42** (1.65)	5.42** (1.79)
1986 x CME in 2006	-0.24 (0.82)	0.07 (1.48)	-0.54 (2.10)	0.59 (2.27)
1986 x CME in 2011	-0.05 (0.91)	-0.03 (1.65)	-0.70 (2.34)	0.64 (2.53)
1991 x CME in 2006	-0.26 (0.82)	-0.42 (1.48)	-1.23 (2.10)	0.80 (2.27)
1991 x CME in 2011	0.03 (0.91)	0.22 (1.65)	-0.52 (2.34)	0.72 (2.53)
Intercept	79.59*** (0.35)	88.68*** (0.64)	35.38*** (0.90)	53.25*** (0.98)
<i>N</i>	1185	1179	1182	1179

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.2: OLS regression models to test for parallel trends in turnout and vote shares (major party, SPD, CDU) in council elections 1981–1991.

A.2.2 Parallel trends in unrelated elections

We also investigate whether these three groups of municipalities show parallel trends in turnout and election results in unrelated elections in the treatment period. These tests help us to assess whether time-varying confounders might be present that bias our estimates.

As can be seen (again, descriptively) in Figure A.3, parallel trends hold for the case of average turnout and vote shares in federal elections (1998-2013), and also the case of average turnout and vote shares in European elections (see Figure A.4) in the treatment period (1999-2014). All variables exhibit quite similar levels in all three groups of municipalities and almost perfectly parallel trends – the only exception being the groups of

municipalities holding “CME in 2011” only for the case of turnout in European Elections in 2004 and 2014. Note that these deviations in average turnout are due to municipalities of type “CME in 2011” holding mayoral elections concurrently with European elections in 2004 but not in 2014 – see also Figure 1 in the manuscript. The other groups of municipalities hold no mayoral elections concurrent with European elections in 2004 but do so in 2014. Leininger et al. (2018), analyzing European elections in the same state, have shown that mayoral elections exert a strong positive effect on turnout in European elections.

Again, Tables A.3 and A.4 provide formal tests for these parallel trends. The results in these tables show that, after controlling for the occurrence of concurrent second-order elections (CSOE) in 2004 and 2014, trends between groups are perfectly parallel. Figure A.5 shows this graphically. It plots predicted values generated from the models in Table A.4.

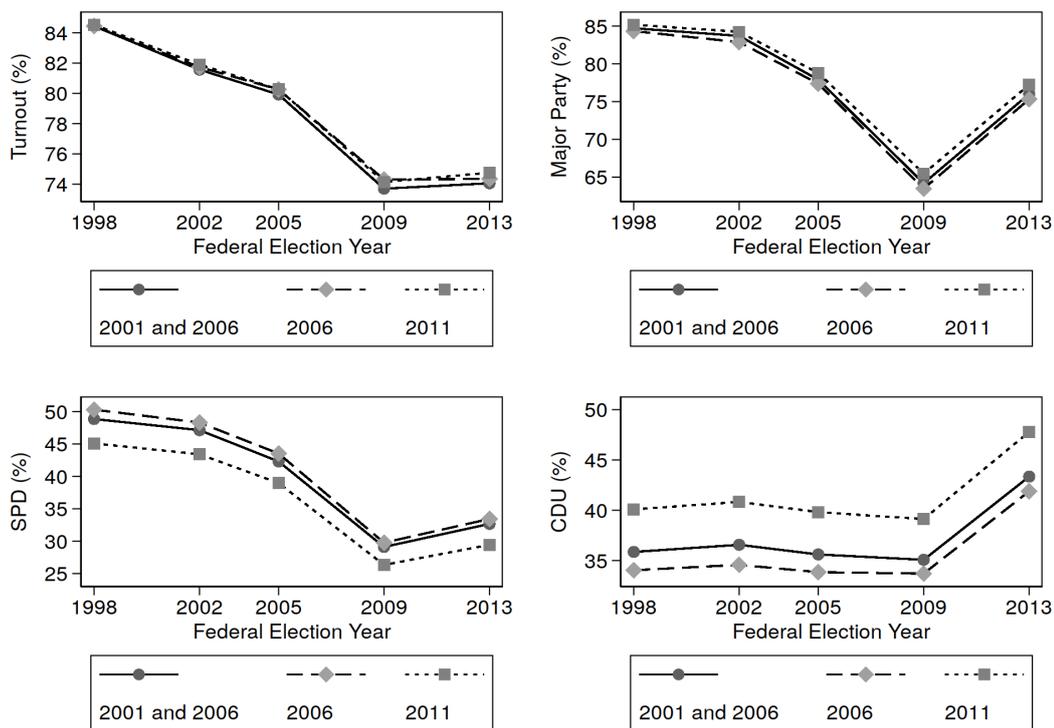


Figure A.3: The figure displays average levels and trends for turnout and vote shares (major party, SPD, CDU) in federal elections 1998–2013 for three types of municipalities: those holding mayoral elections concurrent with council elections (CME) in 2001 and 2006, holding first and only CME in 2006, and holding first and only CME in 2011.

	(1)	(2)	(3)	(4)
	Turnout	Major Party	SPD	CDU
2002	-2.88*** (0.38)	-1.01* (0.46)	-1.72 (0.90)	0.71 (1.06)
2005	-4.52*** (0.38)	-6.81*** (0.46)	-6.56*** (0.90)	-0.25 (1.06)
2009	-10.74*** (0.38)	-20.53*** (0.46)	-19.76*** (0.90)	-0.78 (1.06)
2013	-10.40*** (0.39)	-8.72*** (0.47)	-16.29*** (0.91)	7.56*** (1.08)
CME in 2006	0.13 (0.43)	-0.24 (0.53)	1.69 (1.02)	-1.93 (1.20)
CME in 2011	0.09 (0.51)	0.46 (0.62)	-3.77** (1.20)	4.23** (1.42)
2002 x CME in 2006	0.04 (0.61)	-0.59 (0.74)	-0.53 (1.43)	-0.06 (1.69)
2002 x CME in 2011	0.33 (0.74)	-0.07 (0.90)	0.18 (1.74)	-0.25 (2.05)
2005 x CME in 2006	0.21 (0.61)	-0.30 (0.74)	-0.47 (1.43)	0.17 (1.69)
2005 x CME in 2011	0.25 (0.72)	0.41 (0.88)	0.43 (1.70)	-0.02 (2.01)
2009 x CME in 2006	0.48 (0.61)	-0.47 (0.74)	-1.03 (1.43)	0.56 (1.69)
2009 x CME in 2011	0.35 (0.72)	0.82 (0.88)	1.00 (1.70)	-0.19 (2.01)
2013 x CME in 2006	0.21 (0.61)	-0.40 (0.74)	-0.77 (1.43)	0.37 (1.69)
2013 x CME in 2011	0.62 (0.73)	0.78 (0.88)	0.64 (1.71)	0.14 (2.02)
CSOE	0.25 (1.00)	0.30 (1.22)	1.38 (2.37)	-1.09 (2.79)
CSOE x CME in 2006	-1.80 (1.49)	-2.12 (1.81)	-4.68 (3.51)	2.56 (4.14)
CSOE x CME in 2011	-1.15 (1.76)	1.15 (2.14)	-2.74 (4.15)	3.89 (4.90)
Intercept	84.45*** (0.27)	84.72*** (0.33)	48.86*** (0.63)	35.86*** (0.75)
<i>N</i>	1605	1605	1605	1605

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.3: OLS regression models to test for parallel trends in turnout and vote shares (major party, SPD, CDU) in federal elections 1998–2013.

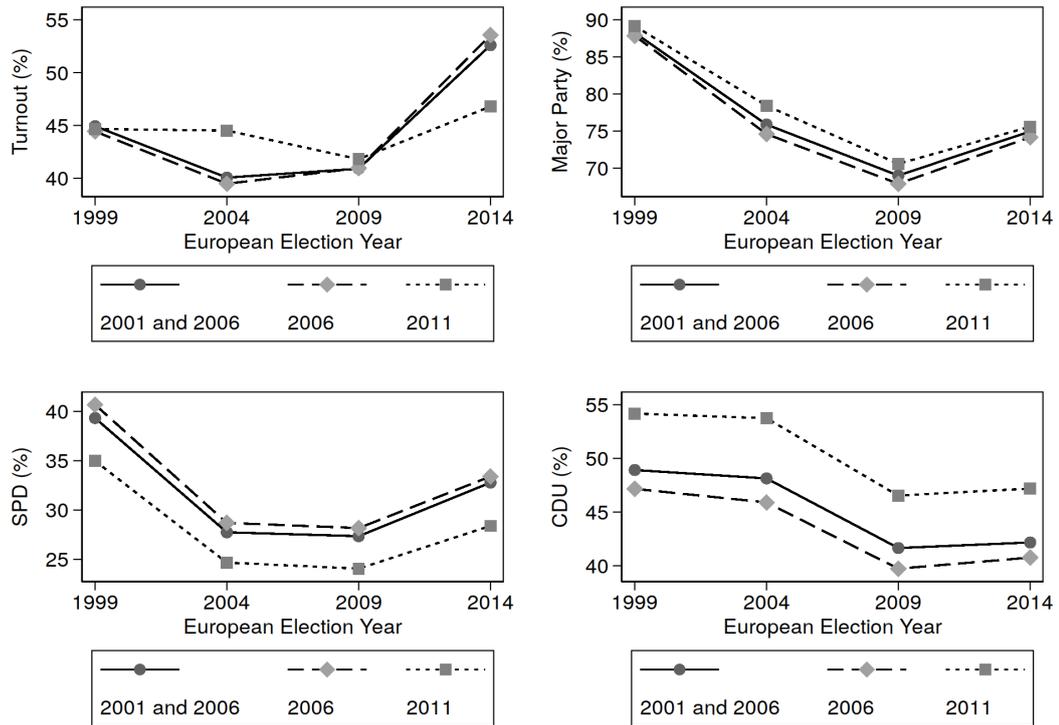


Figure A.4: The figure displays average levels and trends for turnout and vote shares (major party, SPD, CDU) in European elections 1999–2014 for three types of municipalities: those holding mayoral elections concurrent with council elections (CME) in 2001 and 2006, holding first and only CME in 2006, and holding first and only CME in 2011.

	(1)	(2)	(3)	(4)
	Turnout	Major Party	SPD	CDU
2004	-4.87*** (0.59)	-12.36*** (0.64)	-11.58*** (0.97)	-0.78 (1.28)
2009	-4.03*** (0.59)	-19.24*** (0.64)	-11.98*** (0.97)	-7.27*** (1.28)
2014	0.41 (0.92)	-14.96*** (1.00)	-8.15*** (1.50)	-6.81*** (1.99)
CME in 2006	-1.21 (0.66)	-0.42 (0.72)	1.39 (1.09)	-1.82 (1.44)
CME in 2011	-0.27 (0.80)	0.91 (0.86)	-4.34*** (1.30)	5.26** (1.72)
2004 x CME in 2006	0.63 (0.94)	-0.86 (1.02)	-0.44 (1.53)	-0.42 (2.03)
2004 x CME in 2011	0.63 (1.19)	0.48 (1.29)	2.13 (1.94)	-1.66 (2.56)
2009 x CME in 2006	1.27 (0.94)	-0.67 (1.02)	-0.57 (1.53)	-0.10 (2.03)
2009 x CME in 2011	1.17 (1.13)	0.67 (1.22)	1.05 (1.84)	-0.38 (2.43)
2014 x CME in 2006	1.31 (1.37)	1.04 (1.49)	1.28 (2.24)	-0.24 (2.97)
2014 x CME in 2011	1.45 (1.33)	1.32 (1.44)	1.62 (2.17)	-0.30 (2.87)
CSOE	9.84*** (0.95)	2.27* (1.03)	2.19 (1.56)	0.09 (2.06)
CSOE x CME in 2006	0.81 (1.41)	-1.91 (1.53)	-2.76 (2.30)	0.85 (3.04)
CSOE x CME in 2011	6.52*** (1.78)	2.32 (1.93)	-5.63 (2.90)	7.95* (3.83)
Intercept	44.93*** (0.42)	88.24*** (0.46)	39.33*** (0.69)	48.92*** (0.91)
<i>N</i>	1284	1284	1284	1284

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.4: OLS regression models to test for parallel trends in turnout and vote shares (major party, SPD, CDU) in European elections 1999–2014 while controlling for concurrency of EP election with mayoral elections, i.e., concurrent second-order elections (CSOE).

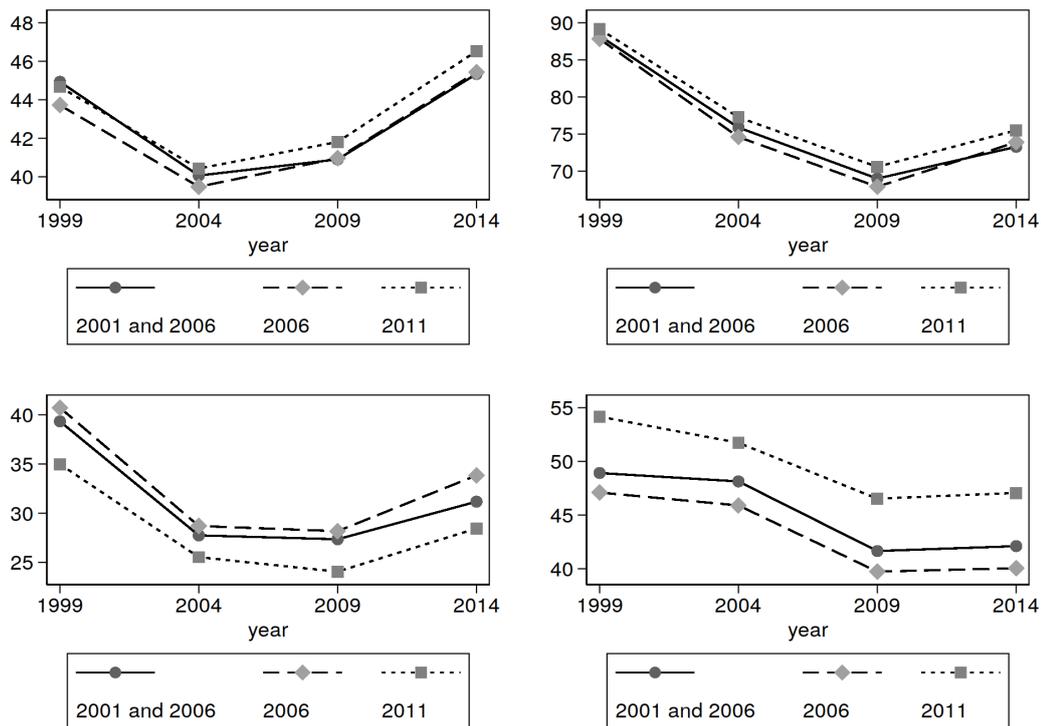


Figure A.5: The figure displays predicted levels and trends for turnout and vote shares (major party, SPD, CDU) in European elections 1999–2014 for three types of municipalities: those holding mayoral elections concurrent with council elections (CME) in 2001 and 2006, holding first and only CME in 2006, and holding first and only CME in 2011. Predictions are based on the models presented in Table A.4. Before generating the predicted values we have set the variable CSOE to zero for all municipalities to simulate predicted values if there would have been no concurrency of European elections with mayoral elections in some municipalities.

A.2.3 Placebo tests on temporally proximate federal and European parliament elections

Next, we provide formal tests, for the full sample, that a CME effect is not present for neither federal nor European election turnout (Table A.5) and for neither federal nor European election major party vote shares (Table A.6). We conduct these tests as placebo tests, i.e., we code a municipality as “placebo treated” in the federal election preceding (Models 1), in the federal election temporally closest (Models 2) or in the European election preceding (Models 3) a concurrent mayoral to local council election. Note that while placebo effects are close to zero and statistically insignificant (first row), whenever

a municipality held genuine concurrent mayoral elections to federal/European elections, this appears as a significant effect for both turnout and vote shares (second row).

Table A.5: Placebo Effect of Mayoral Elections Concurrent to Local Council Elections on Federal and European Election Turnout

	Federal Elect. (1) Turnout (%)	Federal Elect. (2) Turnout (%)	Europ. Elect. (3) Turnout (%)
CME with Council Election	0.067 (0.076)	0.039 (0.061)	0.19 (0.18)
CME with European/Federal Election	0.52* (0.29)	0.52* (0.29)	11.4*** (0.48)
Election Year == 2002	-2.76*** (0.071)	-2.81*** (0.066)	
Election Year == 2004			-4.44*** (0.20)
Election Year == 2005	-4.37*** (0.074)	-4.38*** (0.086)	
Election Year == 2009	-10.5*** (0.11)	-10.5*** (0.11)	-3.56*** (0.19)
Election Year == 2013	-10.2*** (0.13)	-10.2*** (0.12)	
Election Year == 2014			0.50 (0.36)
Constant	84.4*** (0.076)	84.5*** (0.067)	44.4*** (0.15)
N	2005	2005	1604
Clusters	401	401	401
Within R ²	0.94	0.94	0.77

Municipality fixed-effects estimation with municipality-clustered standard errors. Column 1: “Preceding Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections after this federal election (1998 FE and 2001 LCE; 2005 FE and 2006 LCE; 2009 FE and 2011 LCE). Column 2: “Closest Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections matched to the temporally closest federal election (2002 FE and 2001 LCE; 2005 FE and 2006 LCE; 2009 FE and 2011 LCE). Column 3: “Preceding Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections after this european election (1999 EE and 2001 LCE; 2004 EE and 2006 LCE; 2009 EE and 2011 LCE). CME indicates municipalities that actually held mayoral elections concurrent to a federal/european election in a given election year.
 ** (*,***) indicates $p < 0.05$ (0.1, 0.01)

Table A.6: Placebo Effect of Mayoral Elections Concurrent to Local Council Elections on Federal and European Election Vote Shares

	Federal Elect.		Europ. Elect.
	(1)	(2)	(3)
	SPD and CDU Vote (%)	SPD and CDU Vote (%)	SPD and CDU Vote (%)
CME with Council Election	0.036 (0.12)	0.14 (0.11)	-0.021 (0.13)
CME with European/Federal Election	0.51* (0.27)	0.51* (0.27)	1.87*** (0.18)
Election Year == 2002	-1.13*** (0.090)	-1.21*** (0.087)	
Election Year == 2004			-12.4*** (0.16)
Election Year == 2005	-6.72*** (0.087)	-6.81*** (0.11)	
Election Year == 2009	-20.5*** (0.15)	-20.5*** (0.14)	-19.3*** (0.18)
Election Year == 2013	-8.68*** (0.14)	-8.69*** (0.12)	
Election Year == 2014			-14.6*** (0.18)
Constant	84.8*** (0.092)	84.8*** (0.071)	88.4*** (0.13)
N	2005	2005	1604
Clusters	401	401	401
Within R ²	0.97	0.97	0.94

Municipality fixed-effects estimation with municipality-clustered standard errors. Column 1: “Preceding Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections after this federal election (1998 FE and 2001 LCE; 2005 FE and 2006 LCE; 2009 FE and 2011 LCE). Column 2: “Closest Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections matched to the temporally closest federal election (2002 FE and 2001 LCE; 2005 FE and 2006 LCE; 2009 FE and 2011 LCE). Column 3: “Preceding Placebo SME” variable indicates municipalities that held concurrent mayoral and local council elections after this european election (1999 EE and 2001 LCE; 2004 EE and 2006 LCE; 2009 EE and 2011 LCE). CME indicates municipalities that actually held mayoral elections concurrent to a federal/european election mirror this model toitsan for differences in a given els (in federal and European election) between treatment and control groupection year.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

A.2.4 Descriptive statistics and balance tests

This subsection presents descriptive statistics for all election-year observations on all time-varying variables used in the analyses for the control group (left panel), treatment group (mid panel), and full sample (right panel) (see Appendix Table A.7).

Subsequently, we present balance tests on population, geographical, fiscal, and economic indicators as well as mayoral-incumbent characteristics of municipalities with and without concurrent mayoral elections.

Appendix Table A.8 does so for population, geographical, fiscal and economic indicators for each municipal election year (panels 1-3) and pooled for all election-year observations (panel 4). As can be seen, while some differences are discernible (particularly some municipality income-related variables in the full sample), the overall pattern is one of marginal differences, and particularly so for the comparisons within election years.

Appendix Table A.9 does so for incumbent characteristics – while SPD incumbents are more prevalent in the 2006 treatment group, CDU incumbents are more present in the 2011 treatment group, and average effects cancel out (see panel 3). Notably, mayors in the control group are substantially longer in office (row 3). This is a feature of the selection process, as mayors that step-back early select their municipalities into early elections (and hence the control group).

Next, Appendix Table A.10 presents a last comparison for a particular group of municipalities (where selection arguably is most likely), those that held their first concurrent mayoral election in a certain council election year. As can be seen from panels 1-4, the general picture is one whereby also first-time CME municipalities do not differ starkly from the respective control group. Note that data on fiscal and economic indicators is only available from 2001, and data on incumbents only from 2006.

Finally, Appendix Table A.11 presents balance tests within the treatment group (i.e., only for CME municipalities) separated by whether the municipality has a CDU or SPD mayor. These tables show that CME municipalities with CDU or SPD incumbents are broadly comparable, although they do cluster somewhat geographically, and the center-right CDU is more dominant in more affluent areas (see Table A.11).

Table A.7: Summary statistics reported for full sample and by treatment group for the dependent and independent variables used in the analyses

	CME == 0					CME == 1					Full sample				
	mean	sd	min	max	count	mean	sd	min	max	count	mean	sd	min	max	count
Turnout (%)	56.3	6.29	38.8	78	649	58.7	6.69	39.6	90.5	554	57.4	6.59	38.8	90.5	1203
Incumbent vote (%)	37.0	21.0	0	100	508	38.8	21.3	0	100	399	37.8	21.2	0	100	907
Major party vote (%)	76.2	15.7	0	100	649	78.9	14.3	0	100	554	77.5	15.1	0	100	1203
SPD vote (%)	34.8	12.8	0	64.7	649	37.1	13.2	0	68.9	554	35.9	13.0	0	68.9	1203
CDU vote (%)	41.4	16.1	0	90.2	649	41.8	15.4	0	90	554	41.6	15.8	0	90.2	1203
FDP vote (%)	3.62	4.28	0	26.4	649	3.90	4.27	0	25	554	3.75	4.27	0	26.4	1203
Green vote (%)	6.28	5.90	0	29.3	649	4.98	4.88	0	34.4	554	5.68	5.49	0	34.4	1203
Other parties	13.9	15.6	0	100	649	12.2	14.5	0	100	554	13.1	15.1	0	100	1203
One-party dominance in local council	0.35	0.48	0	1	649	0.41	0.49	0	1	554	0.38	0.48	0	1	1203
Effective number of parliamentary parties	2.79	0.69	1	4.80	649	2.67	0.59	1	4.54	554	2.74	0.64	1	4.80	1203
Executive-Legislative Alignment	0.53	0.50	0	1	508	0.60	0.49	0	1	554	0.57	0.50	0	1	1062
Concurrent mayoral election (CME)	0	0	0	0	649	1	0	1	1	554	0.46	0.50	0	1	1203
CME with SPD mayoral incumbent	0	0	0	0	649	0.24	0.43	0	1	554	0.11	0.32	0	1	1203
CME with CDU mayoral incumbent	0	0	0	0	649	0.26	0.44	0	1	554	0.12	0.32	0	1	1203
CME with Green/FDP mayoral incumbent	0	0	0	0	649	0.0072	0.085	0	1	554	0.0033	0.058	0	1	1203
CME with indep./other mayoral incumbent	0	0	0	0	649	0.49	0.50	0	1	554	0.23	0.42	0	1	1203

Table A.8: Balance in population, geographical, fiscal and economic indicators of municipalities with and without concurrent mayoral elections (CME)

	(1) 2001					(2) 2006					(3) 2011					(4) Full				
	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T
Eligible citizens	13817.28	16422.95	-2605.67 (2513.51)	213	188	12763.39	16639.06	-3875.67 (2711.21)	128	273	15927.06	14051.08	1875.98 (3032.49)	308	93	14610.67	16131.28	-1520.60 (1465.58)	649	554
AGS-Region == 1	0.17	0.21	-0.04 (0.04)	213	188	0.17	0.19	-0.02 (0.04)	128	273	0.20	0.15	0.05 (0.05)	308	93	0.18	0.19	-0.01 (0.02)	649	554
AGS-Region == 2	0.22	0.21	0.01 (0.04)	213	188	0.23	0.21	0.01 (0.04)	128	273	0.22	0.22	0.00 (0.05)	308	93	0.22	0.21	0.01 (0.02)	649	554
AGS-Region == 3	0.25	0.26	-0.01 (0.04)	213	188	0.28	0.24	0.04 (0.05)	128	273	0.26	0.25	0.01 (0.05)	308	93	0.26	0.25	0.01 (0.03)	649	554
AGS-Region == 4	0.36	0.32	0.04 (0.05)	213	188	0.32	0.35	-0.03 (0.05)	128	273	0.33	0.39	-0.06 (0.06)	308	93	0.34	0.35	-0.01 (0.03)	649	554
Debt market	11373.40	17080.41	-5707.00 (4461.73)	194	180	9289.80	14997.19	-5707.39 (4582.63)	112	259	15203.85	9158.85	6045.00 (6164.38)	279	85	12801.32	14765.74	-1964.42 (2681.74)	585	524
Log(Debt Market)	8.58	8.74	-0.16 (0.13)	194	180	8.46	8.74	-0.28** (0.14)	112	259	8.76	8.55	0.20 (0.16)	279	85	8.64	8.71	-0.07 (0.08)	585	524
Tax	537.84	531.18	6.66 (23.86)	208	182	673.80	643.62	30.18 (31.87)	125	265	775.17	799.52	-24.35 (39.69)	298	92	676.85	632.26	44.59** (17.94)	631	539
Log(Tax)	6.23	6.22	0.01 (0.03)	207	182	6.43	6.40	0.03 (0.04)	125	265	6.59	6.61	-0.02 (0.04)	298	92	6.44	6.37	0.07*** (0.02)	630	539
Tax income real	242.03	235.06	6.97 (16.54)	208	182	367.68	341.88	25.81 (24.17)	125	265	402.43	418.19	-15.76 (30.18)	298	92	342.67	318.84	23.84* (13.29)	631	539
Lag(Tax income real)	5.37	5.34	0.03 (0.05)	207	182	5.74	5.71	0.03 (0.05)	125	265	5.88	5.90	-0.02 (0.06)	298	92	5.68	5.61	0.07** (0.03)	630	539
Population size	16504.48	18197.84	-1693.36 (2955.43)	205	177	15549.72	18319.09	-2769.37 (3147.27)	124	258	17603.30	14914.89	2688.42 (3430.47)	293	89	16831.75	17699.94	-868.18 (1697.03)	622	524
Population density	184.04	194.11	-10.07 (20.45)	205	177	163.58	202.49	-38.91* (21.83)	124	258	189.96	168.00	21.96 (23.74)	293	89	182.75	193.80	-11.05 (11.76)	622	524
Unemployment rate	3.82	3.97	-0.15 (0.11)	205	177	4.79	4.99	-0.20 (0.14)	124	258	2.99	2.79	0.20* (0.12)	293	89	3.62	4.27	-0.65*** (0.08)	622	524
Working-age population	65.79	65.88	-0.09 (0.22)	205	177	64.30	64.49	-0.19 (0.25)	124	258	64.75	64.89	-0.14 (0.25)	293	89	65.00	65.03	-0.03 (0.13)	622	524
Observations	401					401					401					1203				

Comparison of balance of covariates between municipalities without CME (control group C) and with CME (treatment group T). Panels 1 to 3 are, from left to right, comparisons within one election year only (2001, 2006, 2011) and in panel 4 for the pooled sample. Within each panel, the columns present control group mean, treatment group mean, the difference in means (with standard errors in parentheses) and the number of control and treatment group observations.

For Unemployed and Working age population: 2000 values for 2001 and 2005 values for 2006 due to limited data availability; The AGS-Region variables are indicators to which of the four, in 2005 abolished, administrative regions of Lower Saxony a municipality belongs.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

Table A.9: Balance in incumbent characteristics of municipalities with and without concurrent mayoral elections (CME)

	(1) 2006					(2) 2011					(3) Full				
	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T
SPD incumbent	0.20	0.35	-0.15*** (0.05)	110	256	0.37	0.23	0.14** (0.06)	301	93	0.32	0.32	0.01 (0.03)	411	349
CDU incumbent	0.46	0.34	0.12** (0.06)	110	256	0.30	0.45	-0.15*** (0.06)	301	93	0.35	0.37	-0.02 (0.03)	411	349
Incumbent's time in office	961.74	2357.32	-1395.58*** (72.93)	110	250	2682.69	2913.83	-231.13* (138.77)	301	93	2222.10	2508.21	-286.11*** (81.82)	411	343
Female incumbent	0.19	0.14	0.05 (0.04)	128	273	0.12	0.04	0.08** (0.04)	308	93	0.14	0.11	0.03 (0.02)	436	366
Observations	401					401					802				

Comparison of balance of covariates between municipalities without CME (control group C) and with CME (treatment group T). Panels 1 to 2 are, from left to right, comparisons within one election year only (2006, 2011) and in panel 3 for the pooled sample. Within each panel, the columns present control group mean, treatment group mean, the difference in means (t-test, with standard errors in parentheses) and the number of control and treatment group observations.

Comparisons for 2001 are not possible as incumbent characteristics for the non-CME sample are not recorded.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

Table A.10: Balance between (first-time) CME and non-CME municipalities in 1996, 2001, 2006 and 2011. For each election we compare municipalities which hold CME for the first time with municipalities which still have not seen any CME.

	(1) CME 1996					(2) CME 2001					(3) CME 2006					(4) CME 2011				
	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T	C/mean	T/mean	Diff-In-Means/se	N C	N T
Population	14052.79	17519.54	-3466.75* (1936.80)	306	50	15369.87	13431.40	1938.48 (1469.26)	183	121	14143.87	16721.82	-2577.95 (2093.11)	89	94	13754.35	13742.64	11.72 (2666.08)	34	55
Eligible citizens	13067.24	15764.26	-2697.02 (2414.95)	368	57	13036.28	13282.50	-246.22 (1949.19)	191	129	11121.31	15355.82	-4234.51* (2171.11)	90	101	11302.06	11159.32	142.74 (2164.70)	34	56
AGS region == 1	0.18	0.23	-0.05 (0.06)	370	57	0.17	0.20	-0.03 (0.04)	191	129	0.12	0.21	-0.09 (0.05)	90	101	0.12	0.12	-0.01 (0.07)	34	56
AGS region == 2	0.22	0.21	0.01 (0.06)	370	57	0.18	0.18	-0.00 (0.04)	191	129	0.21	0.15	0.06 (0.06)	90	101	0.32	0.14	0.18** (0.09)	34	56
AGS region == 3	0.28	0.21	0.07 (0.06)	370	57	0.26	0.29	-0.03 (0.05)	191	129	0.24	0.28	-0.03 (0.06)	90	101	0.24	0.25	-0.01 (0.09)	34	56
AGS region == 4	0.32	0.35	-0.03 (0.07)	370	57	0.39	0.33	0.07 (0.05)	191	129	0.42	0.37	0.06 (0.07)	90	101	0.32	0.48	-0.16 (0.11)	34	56
Debt market						10499.41	12828.26	-2328.85 (3204.82)	180	123	8105.60	11512.65	-3407.05 (2609.12)	85	94	9246.31	7985.14	1261.17 (2597.49)	32	50
Log(Debt Market)						8.48	8.58	-0.09 (0.15)	180	123	8.39	8.58	-0.19 (0.19)	85	94	8.44	8.42	0.02 (0.30)	32	50
Tax						534.11	501.36	32.75 (27.06)	186	125	675.49	606.09	69.40* (39.70)	89	97	773.63	793.49	-19.86 (61.71)	34	55
Log(Tax)						6.22	6.17	0.05 (0.04)	185	125	6.43	6.36	0.07 (0.05)	89	97	6.61	6.61	0.00 (0.07)	34	55
Tax income real						241.26	218.71	22.55 (19.13)	186	125	372.77	311.85	60.92** (30.24)	89	97	412.24	424.59	-12.34 (47.55)	34	55
Lag(Tax income real)						5.36	5.28	0.08 (0.05)	185	125	5.76	5.64	0.11 (0.07)	89	97	5.92	5.93	-0.01 (0.10)	34	55
SPD incumbent											0.14	0.32	-0.18*** (0.06)	79	87	0.15	0.14	0.00 (0.08)	34	56
CDU incumbent											0.51	0.31	0.20*** (0.08)	79	87	0.32	0.54	-0.21* (0.11)	34	56
Incumbent's time in office											786.73	2731.95	-1945.22*** (65.18)	79	83	1627.82	2682.30	-1054.48*** (126.27)	34	56
Female incumbent											0.18	0.19	-0.01 (0.06)	90	101	0.09	0.05	0.03 (0.05)	34	56
Observations	427					320					191					90				

With each panel (election in year indicated in model header) we compare municipalities which hold CME for the first time with municipalities which still have not seen any CME. Within each panel, the columns present control group (no CME so far) mean, treatment group (first time CME) mean, the difference in means (t-test, with standard errors in parentheses) and the number of observations in the groups. For empty cells, covariates are not available for comparison in that election year.
 ** (*,*** indicates $p < 0.05$ (0.1, 0.01)

Table A.11: Balance in population, geographical, fiscal and economic indicators of municipalities with concurrent mayoral elections (CME) and CDU or SPD incumbents.

	(1) 2001					(2) 2006					(3) 2011					(4) Full				
	CDU/mean	SPD/mean	Diff-In-Means/se	N CDU	N SPD	CDU/mean	SPD/mean	Diff-In-Means/se	N CDU	N SPD	CDU/mean	SPD/mean	Diff-In-Means/se	N CDU	N SPD	CDU/mean	SPD/mean	Diff-In-Means/se	N CDU	N SPD
Eligible citizens	22905.93	12690.80	10215.13 (6584.43)	14	25	17822.94	21943.43	-4120.48 (5442.25)	87	89	13626.98	20297.10	-6670.12 (4190.42)	42	21	17088.20	19973.88	-2885.69 (3674.76)	143	135
ags_region== 1	0.21	0.36	-0.15 (0.16)	14	25	0.14	0.25	-0.11* (0.06)	87	89	0.10	0.19	-0.10 (0.09)	42	21	0.13	0.26	-0.13*** (0.05)	143	135
ags_region== 2	0.07	0.12	-0.05 (0.10)	14	25	0.13	0.28	-0.15** (0.06)	87	89	0.14	0.29	-0.14 (0.11)	42	21	0.13	0.25	-0.13*** (0.05)	143	135
ags_region== 3	0.14	0.24	-0.10 (0.14)	14	25	0.31	0.20	0.11 (0.07)	87	89	0.31	0.19	0.12 (0.12)	42	21	0.29	0.21	0.09* (0.05)	143	135
ags_region== 4	0.57	0.28	0.29* (0.16)	14	25	0.43	0.27	0.16** (0.07)	87	89	0.45	0.33	0.12 (0.13)	42	21	0.45	0.28	0.17*** (0.06)	143	135
Debt market	18681.15	10751.17	7929.99 (7266.64)	13	24	14293.49	23618.25	-9324.75 (8997.74)	85	81	6270.75	14447.45	-8176.70*** (2183.84)	36	20	12563.80	19680.44	-7116.64 (5884.19)	134	125
Log(Debt Market)	9.14	8.76	0.38 (0.38)	13	24	8.83	8.92	-0.09 (0.22)	85	81	8.29	9.21	-0.92** (0.36)	36	20	8.72	8.93	-0.22 (0.17)	134	125
Tax	524.01	567.18	-43.17 (69.90)	13	24	665.01	670.84	-5.83 (44.14)	86	83	843.46	815.55	27.90 (104.04)	42	21	705.16	675.14	30.02 (38.45)	141	128
Log(Tax)	6.21	6.28	-0.07 (0.12)	13	24	6.43	6.43	0.00 (0.06)	86	83	6.66	6.62	0.04 (0.10)	42	21	6.48	6.43	0.05 (0.05)	141	128
Tax income real	226.81	245.20	-18.39 (41.80)	13	24	363.73	350.15	13.58 (33.51)	86	83	461.38	410.50	50.88 (77.04)	42	21	380.19	340.37	39.82 (28.39)	141	128
Lag(Tax income real)	5.34	5.38	-0.04 (0.16)	13	24	5.77	5.71	0.06 (0.08)	86	83	6.00	5.85	0.15 (0.14)	42	21	5.80	5.67	0.13** (0.06)	141	128
Population size	20190.17	16280.00	3910.17 (4898.53)	12	24	18075.45	24565.24	-6489.79 (6561.72)	83	79	14066.95	20145.37	-6078.42** (2900.04)	41	19	17053.60	22247.02	-5193.42 (4223.17)	136	122
Population density	200.34	234.26	-33.92 (65.27)	12	24	181.61	283.72	-102.11** (40.42)	83	79	138.11	255.12	-117.00*** (29.02)	41	19	170.15	269.53	-99.39*** (27.54)	136	122
Unemployment rate	3.37	4.45	-1.07*** (0.37)	12	24	4.65	5.21	-0.56*** (0.20)	83	79	2.33	3.41	-1.08*** (0.25)	41	19	3.84	4.78	-0.94*** (0.18)	136	122
Working-age population	66.49	65.98	0.51 (1.02)	12	24	64.51	64.59	-0.08 (0.39)	83	79	65.02	64.94	0.07 (0.53)	41	19	64.84	64.92	-0.08 (0.31)	136	122
Observations	39					176					63					278				

Comparison of balance of covariates between municipalities with CME and CDU incumbent ('comparison group 1' CDU) and municipalities with CME and SPD incumbent ('comparison group 2' SPD). Panels 1 to 3 are, from left to right, comparisons within one election year only (2001, 2006, 2011) and in panel 4 for the pooled sample. Within each panel, the columns present comparison group 1 mean, comparison group 2 mean, the difference in means (t-test, with standard errors in parentheses) and the number of observations in the groups.

For unemployed and working age population: 2000 values for 2001 and 2005 values for 2006 due to limited data availability; The AGS-region variables are indicators to which of the four, in 2005 abolished, administrative regions of Lower Saxony a municipality belongs.

** (***) indicates $p < 0.05$ (0.1, 0.01)

A.3 Additional robustness tests

This section presents one set of further robustness tests. As one reviewer suggested, the effect of mayoral party incumbency may be due to other differences across municipalities (correlated with the incumbent mayor’s party) that potentially moderate the impact of concurrent elections. To address this point, we identify ‘strongholds’ of the SPD and CDU based on electoral returns of the 1998, 2005, and 2009 federal elections, instead of using the party of the incumbent mayor. We focus on the party list vote, the so-called “Zweitstimme,” in federal elections for two reasons: First, turnout in highly salient national elections indicate the maximum turnout potential in a municipality. Correspondingly, the result a party achieved in a federal election indicates the maximum number of votes a party is able to garner. Second, by focusing on the “Zweitstimme” on the federal level, we abstract away from local personalities, such as mayors or local candidates, who could drive a party’s popularity. Focusing on the federal level makes sure we focus on how popular a given party label is in a municipality. We code a municipality as either stronghold of the SPD or CDU if the party has achieved a plurality of votes by garnering at least 40% of the vote in the federal election preceding the respective municipal elections (in 2001, 2006, or 2011). We then cross-tabulate and correlate the dummy variables indicating party strongholds with our treatment dummy CME. For the SPD, Table A.12 shows that there is only a weak relationship between party strongholds and incumbency. For the CDU, Table A.13 shows that there is a relatively stronger but still overall weak relationship between party strongholds and incumbency.

Table A.12: SPD strongholds and incumbents

SPD stronghold	SPD incumbent		N
	Yes	No	
Yes	381 (345.5)	137 (172.5)	518
No	224 (259.5)	165 (129.5)	389
N	605	302	907

Cramer's V: 0.17

Cross-tabulation of SPD party strongholds and SPD incumbents. There is only a weak connection between a municipality being a stronghold and a municipality having an SPD incumbent. We coded strongholds based on the electoral returns of the 1998, 2005, and 2009 federal elections. Here, we focus on party list vote, the so-called "Zweitstimme." We code a municipality as a stronghold of the SPD if the party has achieved a plurality of votes by garnering at least 40% of the vote in the federal election preceding the respective municipal elections (in 2001, 2006 or 2011).

Table A.13: CDU strongholds and incumbents

CDU stronghold	CDU incumbent		N
	Yes	No	
Yes	536 (483.8)	204 (256.2)	740
No	57 (109.2)	110 (57.8)	167
N	599	314	907

Cramer's V: 0.31

Cross-tabulation of CDU party strongholds and CDU incumbents. There is only a weak connection between a municipality being a stronghold and a municipality having a CDU incumbent. We coded strongholds based on the electoral returns of the 1998, 2005, and 2009 federal elections. Here, we focus on party list vote, the so-called “Zweitstimme.” We code a municipality as a stronghold of the if the party has achieved a plurality of votes by garnering at least 40% of the vote in the federal election preceding the respective municipal elections (in 2001, 2006 or 2011).

A.4 Additional results

In this section, we provide further evidence on the turnout and ensuing vote-share effects of CMEs. Model 1, Table A.14 is the same model as Model 1 in Table 1 but presents the estimates for the year fixed effects. Model 2 adds control variables and provides further evidence that the timing of CMEs follows a random pattern. The coefficient on CME barely changes after the inclusion of control variables. Readers may refer to the table's caption for a list of control variables employed. Models 3 and 4 estimate CMEs' effect on turnout separate by year, with and without control variables, showing that the effect occurs every time that mayoral and council elections are held simultaneously. Table A.15 provides estimates of the effect of CMEs on the electoral fortunes of all major parties and retainer category ‘Other parties.’

Table A.14: Average turnout effect and year-by-year turnout effect of concurrent mayoral elections

	(1)	(2)	(3)	(4)
	Turnout (%)	Turnout (%)	Turnout (%)	Turnout (%)
CME	3.03*** (0.19)	3.08*** (0.19)		
CME 2001			2.16*** (0.30)	2.22*** (0.30)
CME 2006			4.51*** (0.31)	4.41*** (0.34)
CME 2011			2.45*** (0.43)	2.59*** (0.42)
Election year=2006	-5.25*** (0.17)	-6.32*** (0.49)	-6.66*** (0.27)	-7.64*** (0.53)
Election year=2011	-3.83*** (0.19)	-3.60*** (0.66)	-4.11*** (0.24)	-4.00*** (0.69)
Controls	No	Yes	No	Yes
N	1203	1145	1203	1145
Clusters	401	382	401	382
Within R ²	0.60	0.65	0.62	0.66
Control group mean	56.3	56.3	56.3	56.3
Control group SD	6.29	6.29	6.29	6.29

Municipality fixed-effects estimation with municipality-clustered standard errors. Control variables (unemployment rate, employment share, population density, logged population, log tax rate, log market debt, time trends for three regions of Lower Saxony, time trends for four municipality types) included where indicated. Other party vote is the combined vote share of all other minor parties.

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)

Table A.15: Vote share effect of concurrent mayoral elections

	(1)	(2)	(3)	(4)	(5)
	SPD vote (%)	CDU vote (%)	FDP vote (%)	Green vote (%)	Other parties
CME	0.73** (0.31)	0.47* (0.28)	-0.26* (0.15)	-0.22 (0.23)	-0.71* (0.38)
Election year=2006	-0.96*** (0.25)	-0.90*** (0.26)	0.52*** (0.12)	0.44*** (0.12)	0.90*** (0.33)
Election year=2011	-2.06*** (0.33)	-4.79*** (0.32)	-1.67*** (0.15)	5.33*** (0.25)	3.19*** (0.41)
N	1203	1203	1203	1203	1203
Clusters	401	401	401	401	401
Within R ²	0.081	0.31	0.28	0.56	0.11
Control group mean	34.8	41.4	3.62	6.28	13.9
Control group SD	12.8	16.1	4.28	5.90	15.6

Municipality fixed-effects estimation with municipality-clustered standard errors. Other parties is the sum of vote shares for all parties not present in the three state level legislatures in our treatment period (cf. 2003 to 2013).

** (*, ***) indicates $p < 0.05$ (0.1, 0.01)