



# Coattails and spillover-effects: Quasi-experimental evidence from concurrent executive and legislative elections

Lukas Rudolph<sup>a,b,\*</sup>, Arndt Leininger<sup>c</sup>

<sup>a</sup> LMU Munich, Germany

<sup>b</sup> ETH Zurich, Switzerland

<sup>c</sup> Freie Universität Berlin, Germany

## ARTICLE INFO

### Keywords:

Concurrency  
Turnout  
Electoral outcomes  
Election timing  
Second-order elections  
Quasi-experiment

## 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 proportional representation (PR) legislative elections, the centripetal tendency of majoritarian elections colors off to the concurrent PR race. Third, concurrency also entails spillovers 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.

## 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,<sup>1</sup> and for combinations of proportional representation (PR) legislative and majoritarian executive elections.<sup>2</sup>

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 spectrum (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.,

\* Corresponding author. ETH Zurich, Switzerland.

E-mail addresses: [lukas.rudolph@gess.ethz.ch](mailto:lukas.rudolph@gess.ethz.ch) (L. Rudolph), [arndt.leininger@fu-berlin.de](mailto:arndt.leininger@fu-berlin.de) (A. Leininger).

<sup>1</sup> 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).

<sup>2</sup> 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.

<https://doi.org/10.1016/j.electstud.2020.102264>

Received 3 March 2020; Received in revised form 17 November 2020; Accepted 20 November 2020

Available online 13 January 2021

0261-3794/© 2021 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

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 they frequently combine different electoral systems – in our case, we assess a combination of executive elections with majoritarian voting system and legislative elections under a proportional representation system. 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 spillovers – 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). We thereby link to a literature that has extensively documented coattails from high-salience electoral contests to concurrent low-salience races ([Magar 2012](#); [Campbell, 1987, 1991](#); [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.<sup>3</sup>

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 with concurrency. In short, concurrent elections consolidate party systems and political power by producing less fragmented municipal councils and more unified local governments.

<sup>3</sup> 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](#)).

## 2. Theoretical argument

We start with the observation that a combination of elections increases turnout. This effect is well-known and was already formulated in [Boyd's \(1989\) ballot attractiveness hypothesis](#) (whereby turnout increases if salient elections are added to a ballot). Since then, a broad literature has established that turnout increases in low-salience elections when they are held concurrent to high-salience elections (see [Geys 2006](#) for a review). 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 for the electorate on average. However, it is likely that only part of the electorate, not necessarily the whole electorate, experiences this turnout stimulus. Hence, the composition of voters likely differs when an election 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 low-salience elections are combined with other low-salience elections, compositional effects are less pronounced. We therefore propose:

**Hypothesis 1.** Concurrent second-order elections increase the participation of peripheral voters and thereby provide electoral benefits to left-wing parties.

Second, a simultaneous election brings with it a specific coattail effect that can but does not have to benefit the political left.<sup>4</sup> 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 positive externalities from mobilization in any individual electoral contest. Mobilizational alliances for different

<sup>4</sup> 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”.

political seats under the same party brand increase the mobilization efforts of these 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 on aggregate.

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 candidates (usually the dominant centrist parties) for the majoritarian election (Cox 1997), will plausibly invest in mobilization efforts for these candidates, and will 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 (1986: 72) for mixed-member systems that combine majoritarian with PR elections. We therefore propose:

**Hypothesis 2.** Concurrent second-order elections that combine majoritarian and PR electoral systems lead to electoral benefits for centrist parties in the PR race.

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 for 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 (2018) 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 who’s name they recognize against a lesser-known challenger (see also Bracco and Revelli (2018), Rudolph (2017), but Trounstein (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 her are also more inclined to vote for her 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 for an incumbency advantage to 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. We therefore propose:

**Hypothesis 3.** Concurrent second-order elections that combine executive and legislative elections lead to electoral benefits for the parties of executive incumbents in the other race.

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 – we address this 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 can 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 variables (turnout levels and electoral outcomes), and our independent variable (the occurrence of a concurrent election). We therefore first describe our case – municipal council and mayoral elections in the German state of Lower Saxony – and how it provides us with credibly exogenous variation in the occurrence of concurrent mayoral elections (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.<sup>5</sup> 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.

The state of Lower Saxony, with 47.600 km<sup>2</sup> and 7.9 million inhabitants, is Germany’s second-largest and fourth-most populous state. Lower Saxony comprises 414 municipalities with directly elected mayors.<sup>6</sup> 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 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.

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

<sup>6</sup> 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 (see Lower Saxony law on local government, NKomVG). Around 80% of municipalities in Lower Saxony have united to form *Samtgemeinden*. 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.

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 the direct election of mayors was introduced in 1996, the position of municipal director 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.<sup>7</sup> Turnout in municipal elections in Lower Saxony is relatively high when compared, for instance, to turnout in the US. On average, 50%–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 article. Even stand-alone mayoral elections draw almost half of the electorate to the voting booth. Turnout in these elections is on par with European elections turnout.<sup>8</sup>

Next, we explain why the timing of mayoral elections has an exogenous component. 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 as long as their original 12-year term was still running (Armbrust 2007: 60f.). The reform thereby introduced a desynchronization of the timing of mayoral elections because some mayors (due to idiosyncratic reasons such as their age) chose to hold elections before their term ended, while others served out their full term. Note that in 1996, the term lengths of mayors was 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 a second reform in 2005, under CDU rule and again contested by the opposition, the term length of mayors 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.<sup>9</sup> This became effective for all mayoral 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.<sup>10</sup>

We analyze the council elections of 2001 (9 September), 2006 (10 September), and 2011 (11 September). On these dates, some

<sup>7</sup> 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.

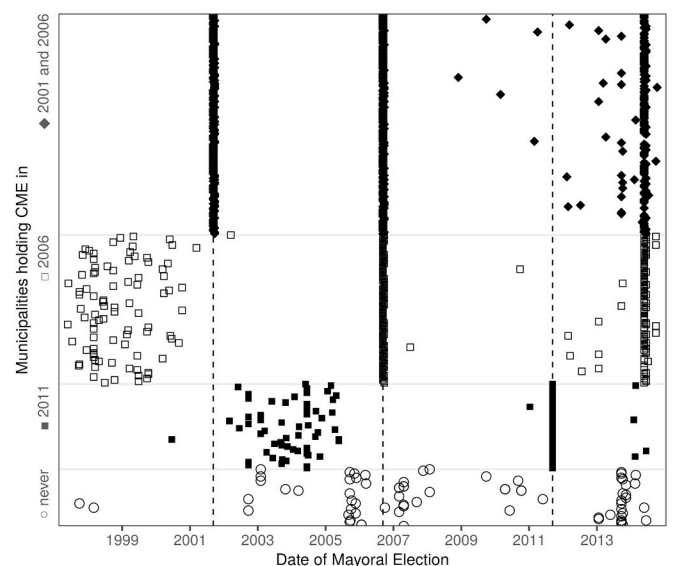
<sup>8</sup> See Leininger et al. (2018) who contrast turnout in 2014 European elections in Lower Saxony and turnout in mayoral run-off elections in the same year.

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

<sup>10</sup> 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).

municipalities in Lower Saxony concurrently elected their mayors while others did not do so because of the reasons outlined above.<sup>11</sup> Fig. 1 illustrates the variation in the timing of mayoral elections in our sample between 1997 and 2014. We see four broad patterns of timing that evolved: A first cluster of municipalities held mayoral elections in 2001, 2006, and 2013 (denoted by symbol  $\blacklozenge$  in Fig. 1), i.e., every five years and concurrently until 2006, and then with the new eight-year term in 2013. A second cluster 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 ( $\square$ ). A third cluster 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 ( $\blacksquare$ ). A fourth, smaller cluster never held CMEs ( $\circ$ ). 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 on individual retirement decisions of mayors before 1996 that led to differences in running terms back then, as well as 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 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



**Fig. 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 ( $\blacklozenge$ ), 105 held CMEs in 2006 only ( $\square$ ), 60 held CMEs in 2011 only ( $\blacksquare$ ), 41 never held mayoral elections concurrent with council elections ( $\circ$ ). 39 municipalities, which exhibit different patterns of concurrency, are omitted from the plot. See Fig. 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.

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

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.

#### 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 population<sup>12</sup>) 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 vote'), the combined vote share of the two large mainstream parties ('major party vote') 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 more than 50% of votes), Laakso and Tagepeera'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.<sup>13</sup>

We include time ( $\theta_t$ ) and unit ( $\gamma_i$ ) 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:  $Y_{it} = \theta_t + \gamma_i + \beta C_{it} + \varepsilon_{it}$ .

The empirical strategy builds on the assumption that had mayoral elections not occurred, the outcome variables in 'treated' municipalities with CME would follow similar trends as in '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 design are met in our case. We conduct three sets of tests to justify this assumption: 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 all indicate 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 Fig. 1.<sup>14</sup> 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.<sup>15</sup> 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).<sup>16</sup>

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.<sup>17</sup> 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.<sup>18</sup> Collectively, these tests imply that our estimates have high internal validity.

#### 5. Results

In the following, we present 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 percentage points – an increase of 5.4% relative to average turnout in the control group municipalities.<sup>19</sup> 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 2016; Fukumoto and Horiuchi 2016). They confirm these prior findings that even two concurrent low-salience elections

<sup>15</sup> 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.

<sup>16</sup> 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.

<sup>17</sup> 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 (see Table A.10).

<sup>18</sup> 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 in the appendix).

<sup>19</sup> 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.

<sup>12</sup> Registration is automatic in Germany.

<sup>13</sup> Summary statistics for these variables are provided in Appendix Table A.7.

<sup>14</sup> 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.

increase turnout.<sup>20</sup>

To test our first hypothesis, Table 1 reports estimates for the SPD and CDU council vote 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.<sup>21</sup> The sum of both effects forms the ‘major party vote’ as reported in Table 2.

Table 2 reports the central tests for our second and third hypotheses. Model 1 shows 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.<sup>22</sup> 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 spillover effect. Still, results are in line with what we would expect from our third hypothesis: 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%

**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 <sup>2</sup>	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).

<sup>20</sup> 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.

<sup>21</sup> See Table A.15 in the appendix.

<sup>22</sup> We were able to obtain data on 907 incumbent mayors in total. Of these, 314 are CDU (35%), 302 SPD (33%), 8 minor party (FDP or Greens) (1%) and 283 independent (31%) mayors.

**Table 2**

The effect of concurrent mayoral elections on major party vote share and incumbent mayor’s party vote share.

	(1)	(2)
	Major party vote (%)	Incumbent party vote (%)
CME	1.20*** (0.40)	0.95** (0.48)
Year fixed effects	✓	✓
Municipality fixed effects	✓	✓
N	1203	624
Municipalities	401	291
Within R <sup>2</sup>	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 party vote is the vote share for the party of the incumbent mayor. This model is estimated on a reduced sample of municipalities, which excludes municipalities with independent (non-aligned) mayors and those lacking information on mayoral incumbency. \*\* (\*, \*\*\*) indicates p < 0.05 (0.1, 0.01).

increase in control group vote shares.

Table 3 provides detailed evidence on the coattails of mayoral incumbents we propose with hypothesis 3. 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.<sup>23</sup> Municipalities with SPD incumbents that hold CMEs see substantially larger increases in the SPD vote of around 2.2 percentage points compared to municipalities with non-SPD incumbents (model 1). While a similar pattern emerges for CDU incumbents, the effect is much smaller with 0.9 percentage points (model 2). For the SPD, the effect amounts to 6.4%, and for the CDU to 2.1% vis-à-vis their control group

**Table 3**

The effect of concurrent mayoral elections 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 <sup>2</sup>	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 with standard errors clustered by municipality. Dependent variables are municipal council party vote shares or turnout, as given in model header. Independent variable is 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. \*\* (\*, \*\*\*) indicates p < 0.05 (0.1, 0.01).

<sup>23</sup> 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.

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 elections, too.<sup>24</sup> Nevertheless, local party strongholds potentially constitute a relevant topic for further research into the effects of concurrency on electoral outcomes. Finally, for municipalities with incumbents of the FDP or the Greens (model 3), a similar association evolves, with large effects of around 2.7 percentage points, significant at the 10%-level (note that there are very few of these cases). 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 2.9 percentage points).

Note that the results also indicate that the benefits of concurrency to the two centrist parties are not driven by incumbency spillover 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 concurrent elections under majority rule seems to induce centrist voters to turn out, as centrist parties are much more likely to field viable mayoral candidates in an average municipality. To summarize, both an electoral system and an incumbency mechanism contribute to gains for centrist parties when majoritarian executive and PR legislative elections are held simultaneously.

## 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 find a tendency towards a relatively stronger performance of the center-left SPD compared to the center-right CDU under concurrency. As both the SPD and the CDU hold about a third of mayoral seats and both parties compete at similarly high levels of political support,<sup>25</sup> we would not expect this to be the consequence of a lop-sided distribution of mayoral incumbency. Rather, as proposed in hypothesis 1, Tingsten's law seems to appear through the backdoor: Effects are consistent with either marginal voters being more on the left side of the political spectrum, or a larger mobilization potential of left-leaning marginal 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 electoral system effects (as outlined in hypothesis 2): 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, as proposed in hypothesis 3, we find clear evidence that the vote share of an incumbent mayor's party is positively affected by concurrency – both when we look at incumbency coattail effects in aggregate, and when we assess party-specific incumbency coattails. These findings indicate that 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 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 with 14,611 eligible citizens would see an increase in the voting population of 443 voters. 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.

In the following, 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 concurrent mayoral elections on the composition of local councils and the probability of unified government.

	(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 <sup>2</sup>	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. Dependent variables are the probability of one party having an absolute majority in the municipal council (one-party dominance, model 1), the effective number of parliamentary parties in the municipal council (model 2), and the probability of one party commanding both a majority in the council and controlling the mayoralty (executive-legislative alignment, model 3). \*\* (\*, \*\*\*) indicates  $p < 0.05$  (0.1, 0.01).

<sup>24</sup> See Tables A.12 and A.13 in the appendix.

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

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.<sup>26</sup> As can be seen from model 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%) compared to the control group mean of 35%.

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).<sup>27</sup> As expected, given the increasing vote share of the major parties, ENPP decreases. As can be seen from model 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 benefits 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 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 likely influence both politics and policy. 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 one would expect based on 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 underexplored. 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 argue that elections under a majoritarian system held concurrently to elections under a system of (party-list) proportional representation affect the outcome of the latter contest. We propose that both electoral system effects and incumbent coattails lead to electoral gains for centrist parties in general as well as gains for the party of the incumbent in the legislative race. This is because these parties are dominant in the majoritarian arena and the two-party tendency of majoritarian elections spills over to 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 observe quasi-random variation in the timing 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. This turnout increase affects the composition of the electorate and, thereby, who wins. While we find that electoral gains are slightly more pronounced for the center-left, we nevertheless find significant gains for the center-right as well. In line with our theoretical argument,

<sup>26</sup> 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.

<sup>27</sup> 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.

concurrency also leads to a particular increase in the PR votes of the incumbent mayor's party. Our findings relate to the broader literature that 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). Although we cannot ascertain with certainty the extent to which concurrency affects electoral outcomes (only) through turnout, the effects we observe are in line with what we would expect from a turnout-driven effect.

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? To the best of our knowledge, there is no research on whether concurrent elections increase the likelihood that parties field candidates or whether it increases the competitiveness of mayoral elections. Note that these effects can, in a causal framework, 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). So far, only few articles have looked at the policy consequences of concurrently elected political representatives, and with conflicting results (Anzia 2012b; Berry and Gersen 2011).<sup>28</sup>

Fourth, do we observe heterogeneity in 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, spillovers of incumbency, and differential mobilization from the electoral system also changes with the extent of the turnout stimulus provided by concurrency. In particular, we would expect that the equality-enhancing effect of concurrent elections via increased 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 spillover and electoral system effects are more pronounced when the electoral stimulus is lower, and the elections combined are of similar salience.

<sup>28</sup> See also Kogan et al. (2018) for evidence from concurrent referendums.



Gaining a better understanding of the implications of concurrent elections is essential: While the turnout increase induced by concurrency is generally considered desirable (Lijphart, 1997), it is not outcome-neutral but seems to rest strongly on the nature of concurrency. Hence, 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 spillover 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 approve of the centripetal electoral system effect because it reduces fragmentation in the legislature. After all, fragmentation is particularly strong at the local level and in low-salience elections more generally. Overall, the electoral consequences we document 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 four 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.

#### Data availability

Replication materials are available at the Harvard Dataverse at <https://doi.org/10.7910/DVN/XFUJOO>.

#### Acknowledgements

We thank the editors of *Electoral Studies* and three anonymous reviewers, as well as Yusaku Horiuchi, Konstantin Kaepfner, Susumu Shikano, Peter W. Wielhouwer, Jerome Schäfer, participants at the MPSA 2017, EPSA 2017 and EPOP 2017 conferences and seminar audiences at LMU Munich, ETH Zurich, FU Berlin and University of Bern for thoughtful comments. The Office of the Elections Administrator, the Ministry of the Interior, Lower Saxony as well as the Statistical Office of Lower Saxony provided data and helpful background on election timing in Lower Saxony. We thank Alexia Sotelo Beyza, Anton Könnike, Elena Kalter, Fabio Best, Jan Menzner, Jette Bergen, and Robert Welz for excellent research assistance.

#### Appendix A. Supplementary material

Supplementary material to this article can be found online at <https://doi.org/10.1016/j.electstud.2020.102264>.

#### References

Ansolabehere, S., Gerber, A., 1997. Incumbency advantage and the persistence of legislative majorities and the persistence of legislative majorities. *Legis. Stud. Q.* 22, 161–178. <https://doi.org/10.2307/440380>.

Anzia, S.F., 2012a. Partisan power play: the origins of local election timing as an American political institution. *Stud. Am. Polit. Dev.* 26, 24–49. <https://doi.org/10.1017/S0898588X11000149>.

Anzia, S.F., 2012b. The election timing effect: evidence from a policy intervention in Texas. *Q. J. Polit. Sci.* 7, 209–248. <https://doi.org/10.1561/100.00011056>.

Armbrust, P., 2007. *Einführung in das niedersächsische Kommunalrecht*. LIT Verlag Münster.

Ashworth, S., Bueno de Mesquita, E., 2008. Electoral selection, strategic challenger entry, and the incumbency advantage. *J. Polit.* 70, 1006–1025. <https://doi.org/10.1017/S0022381608081024>.

Bechtel, M.M., Hangartner, D., Schmid, L., 2016. Does compulsory voting increase support for leftist policy? *Am. J. Polit. Sci.* 60, 752–767. <https://doi.org/10.1111/ajps.12224>.

Bechtel, M.M., Hangartner, D., Schmid, L., 2017. Compulsory voting, habit formation, and political participation. *Rev. Econ. Stat.* 100, 467–476. [https://doi.org/10.1162/rest\\_a\\_00701](https://doi.org/10.1162/rest_a_00701).

Berry, C.R., Gersen, J.E., 2011. Election timing and public policy. *Q. J. Polit. Sci.* 6, 103–135. <https://doi.org/10.1561/100.00010070>.

Boyd, R.W., 1989. The effects of primaries and statewide races on voter turnout. *J. Polit.* 51, 730–739. <https://doi.org/10.2307/2131504>.

Bracco, E., Revelli, F., 2018. Concurrent elections and political accountability: evidence from Italian local elections. *J. Econ. Behav. Organ.* 148, 135–149. <https://doi.org/10.1016/j.jebo.2018.02.006>.

Campbell, A., 1960. Surge and decline: a study of electoral change. *Publ. Opin. Q.* 24, 397–418. <https://doi.org/10.1086/266960>.

Campbell, J.E., 1987. The revised theory of surge and decline. *Am. J. Polit. Sci.* 31, 965–979. <https://doi.org/10.2307/2111231>.

Campbell, J.E., 1991. The presidential surge and its midterm decline in congressional elections, 1868–1988. *J. Polit.* 53, 477–487. <https://doi.org/10.2307/2131768>.

Cepaluni, G., Hidalgo, F.D., 2016. Compulsory voting can increase political inequality: evidence from Brazil. *Polit. Anal.* 24, 273–280. <https://doi.org/10.1093/pan/mpw004>.

Cox, G.W., 1997. *Making Votes Count: Strategic Coordination in the World's Electoral Systems*. Cambridge University Press.

Cox, G.W., 2015. Electoral rules, mobilization, and turnout. *Annu. Rev. Polit. Sci.* 18, 49–68. <https://doi.org/10.1146/annurev-polisci-060414-035915>.

de Benedictis-Kessner, J., 2018. Off-cycle and out of office: election timing and the incumbency advantage. *J. Polit.* 80, 119–132. <https://doi.org/10.1086/694396>.

DeNardo, J., 1980. Turnout and the vote: the joke's on the Democrats. *Am. Polit. Sci. Rev.* 74, 406–420. <https://doi.org/10.2307/1960636>.

Detjen, J., 2000. *Demokratie in der Gemeinde: Bürgerbeteiligung an der Kommunalpolitik in Niedersachsen*. Niedersächsische Landeszentrale für politische Bildung.

Dewan, T., Shepsle, K.A., 2011. Political economy models of elections. *Annu. Rev. Polit. Sci.* 14, 311–330. <https://doi.org/10.1146/annurev-polisci.12.042507.094704>.

Duverger, M., 1986. Duverger's law: forty years later. In: Grofman, B., Lijphart, A. (Eds.), *Electoral Laws and Their Political Consequences*. Agathon Press, New York, pp. 69–84.

Fauvelle-Aymar, C., François, A., 2015. Mobilization, cost of voting and turnout: a natural randomized experiment with double elections. *Publ. Choice* 162, 183–199. <https://doi.org/10.1007/s11127-014-0212-0>.

Ferejohn, J.A., Calvert, R.L., 1984. Presidential coattails in historical perspective. *Am. J. Polit. Sci.* 28, 127–146. <https://doi.org/10.1017/CBO9781107415324.004>.

Ferrara, F., Herron, E.S., Nishikawa, M., 2005. *Mixed Electoral Systems. Contamination and its Consequences*. Palgrave Macmillan, New York.

Ferwerda, J., 2014. Electoral consequences of declining participation: a natural experiment in Austria. *Elect. Stud.* 35, 242–252. <https://doi.org/10.1016/j.electstud.2014.01.008>.

Finseraas, H., Vernby, K., 2014. A mixed blessing for the left? Early voting, turnout and election outcomes in Norway. *Elect. Stud.* 33, 278–291. <https://doi.org/10.1016/j.electstud.2013.07.003>.

Fowler, A., 2013. Electoral and policy consequences of voter turnout: evidence from compulsory voting in Australia. *Quarterly Journal of Political Science* 8, 159–182. <https://doi.org/10.1561/100.00012055>.

Fowler, A., 2015. Regular voters, marginal voters and the electoral effects of turnout. *Political Science Research and Methods* 3, 205–219. <https://doi.org/10.1017/psrm.2014.25>.

Freier, R., 2015. The mayor's advantage: causal evidence on incumbency effects in German mayoral elections. *Eur. J. Polit. Econ.* 40, 16–30. <https://doi.org/10.1016/j.ejpoleco.2015.07.005>.

Fukamoto, K., Horiuchi, Y., 2016. Identifying the effect of mobilization on voter turnout through a natural experiment. *Elect. Stud.* 44, 192–202. <https://doi.org/10.1016/j.electstud.2016.08.003>.

Garmann, S., 2016. Concurrent elections and turnout: causal estimates from a German quasi-experiment. *J. Econ. Behav. Organ.* 126, 167–178. <https://doi.org/10.1016/j.jebo.2016.03.013>.

Geys, B., 2006. Explaining voter turnout: a review of aggregate-level research. *Elect. Stud.* 25, 637–663. <https://doi.org/10.1016/j.electstud.2005.09.002>.

Hainmueller, J., Kern, H.L., 2008. Incumbency as a source of spillover effects in mixed electoral systems: evidence from a regression-discontinuity design. *Elect. Stud.* 27, 213–227. <https://doi.org/10.1016/j.electstud.2007.10.006>.

Halberstam, Y., Montagnes, B.P., 2015. Presidential coattails versus the median voter: senator selection in US elections. *J. Publ. Econ.* 121, 40–51. <https://doi.org/10.1016/j.jpubeco.2014.10.002>.

Hartney, M., Nickerson, D.W., 2012. *Elect Your Own Employer! Endogenous Election Timing or Interest Group Advantage?* University of Notre Dame, Mimeo, pp. 1–32.

Hodler, R., Luechinger, S., Stutzer, A., 2015. The effects of voting costs on the democratic process and public finances. *Am. Econ. J. Econ. Pol.* 7, 141–171. <https://doi.org/10.1257/pol.20120383>.

Kayser, M.A., 2005. Who surfs, who manipulates? The determinants of opportunistic election timing and electorally motivated economic intervention. *Am. Polit. Sci. Rev.* 99, 17–27. <https://doi.org/10.1017/S0003055405051464>.

- Kogan, V., Lavertu, S., Peskowitz, Z., 2018. Election timing, electorate composition, and policy outcomes: evidence from school districts. *Am. J. Polit. Sci.* 62, 637–651. <https://doi.org/10.1111/ajps.12359>.
- Kohler, U., 2011. Estimating the potential impact of nonvoters on outcomes of parliamentary elections in proportional systems with an application to German national elections from 1949 to 2009. *Elect. Stud.* 30, 497–509. <https://doi.org/10.1016/j.electstud.2011.01.008>.
- Laakso, M., Taagepera, R., 1979. “Effective” number of parties. A measure with application to West Europe. *Comp. Polit. Stud.* 12, 3–27. <https://doi.org/10.1177/001041407901200101>.
- Lechner, M., 2011. The estimation of causal effects by difference-in-difference methods. *Found. Trends Econ.* 4, 165–224. <https://doi.org/10.1561/08000000014>.
- Leininger, A., Rudolph, L., Zittlau, S., 2018. How to increase turnout in low-salience elections: quasi-experimental evidence on the effect of concurrent second-order elections on political participation. *PSRM* 6, 509–526. <https://doi.org/10.1017/psrm.2016.38>.
- Leyden, K.M., Borrelli, S.A., 1995. The effect of state economic conditions on gubernatorial elections: does unified government make a difference? *Polit. Res. Q.* 48, 275–290. <https://doi.org/10.1177/106591299504800203>.
- Lijphart, A., 1997. Unequal participation: democracy’s unresolved dilemma. *Am. Polit. Sci. Rev.* 91, 1–14. <https://doi.org/10.2307/2952255>.
- Lopes da Fonseca, M., 2017. Identifying the source of incumbency advantage through a constitutional reform. *Am. J. Polit. Sci.* 61, 657–670. <https://doi.org/10.1111/ajps.12287>.
- Lupia, A., Strom, K., 1995. Coalition termination and the strategic timing of parliamentary elections. *Am. Polit. Sci. Rev.* 89, 648–665. <https://doi.org/10.2307/2082980>.
- Magar, E., 2012. Gubernatorial coattails in Mexican congressional elections. *J. Polit.* 74, 383–399. <https://doi.org/10.1017/S0022381611001629>.
- Meredith, M., 2009. The strategic timing of direct democracy. *Econ. Polit.* 21, 159–177. <https://doi.org/10.1111/j.1468-0343.2008.00342.x>.
- Meredith, M., 2013. Exploiting friends-and-neighbors to estimate coattail effects. *Am. Polit. Sci. Rev.* 107, 742–765. <https://doi.org/10.1017/S0003055413000439>.
- Potrafke, N., Roesel, F., 2020. Opening hours of polling stations and voter turnout: evidence from a natural experiment. *Rev. Int. Organ.* 15, 133–163. <https://doi.org/10.1007/s11558-018-9305-8>.
- Prato, C., Wolton, S., 2018. Electoral imbalances and their consequences. *J. Polit.* 80, 1168–1182. <https://doi.org/10.1086/698757>.
- Rogers, S., 2019. Coattails, raincoats, and congressional election outcomes. *PS Political Sci. Polit.* 52, 251–255. <https://doi.org/10.1017/S1049096518002135>.
- Rudolph, L., 2017. Die Münchner Ergebnisse Im Bundes- Und Landesvergleich: Ein Ude-Effekt In München? In: Klima, A., Küchenhoff, H., Selzer, M., Thurner, P.W. (Eds.), *Exit Polls Und Hybrid-Modelle*. SpringerVS, Wiesbaden, pp. 21–35.
- Rudolph, L., 2020. Turning out to turn down the EU: the mobilization of occasional voters and Brexit. *J. Eur. Publ. Pol.* 27, 1858–1878. <https://doi.org/10.1080/13501763.2019.1706623>.
- Smith, A., 2003. Election timing in majoritarian parliaments. *Br. J. Polit. Sci.* 33, 397–418. <https://doi.org/10.1017/S0007123403000188>.
- STK, 2013. Kommunale Vertretungen und Hauptverwaltungsbeamte sollen künftig synchron gewählt werden – erste „neue“ Wahlen im Herbst 2014. Niedersächsische Staatskanzlei. <http://www.stk.niedersachsen.de/aktuelles/presseinformationen/kommunale-vertretungen-und-hauptverwaltungsbeamte-sollen-kuenftig-synchron-gewaehlt-werden-erste-neue-wahlen-im-herbst-2014-118124.html>.
- Tingsten, H., 1937. *Political Behavior: Studies in Election Statistics*. PS King.
- Trounstine, J., 2013. Turnout and incumbency in local elections. *Urban Aff. Rev.* 49, 167–189. <https://doi.org/10.1177/1078087412463536>.
- Vetter, A., 2015. Just a matter of timing? Local electoral turnout in Germany in the context of national and European parliamentary elections. *German Polit.* 24 (1), 67–84. <https://doi.org/10.1080/09644008.2014.984693>.
- Wollmann, H., 2014. The directly-elected mayor in the German Länder - introduction, implementation and impact. *Publ. Money Manag.* 34, 331–337. <https://doi.org/10.1080/09540962.2014.945798>.
- Wu, C., Huang, C., 2007. Divided government in Taiwan’s local politics: public evaluations of city/county government performance. *Party Polit.* 13, 741–760. <https://doi.org/10.1177/1354068807080085>.