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Strategic Alignment in Times of Crisis: Voting at the Dawn of a Global Pandemic

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Abstract

Natural disasters are likely to increase in the near future. How does the emergence of such events influence voting behavior? While the literature has focused on the electoral repercussions after disaster has already struck, we investigate whether imminent disaster influences vote choice. We study the effect of the onset of the COVID-19 pandemic on electoral choice in a setting that allows for causal identification: the local elections in Germany's southern state Bavaria in March 2020, where, at the time of the elections, only an as-if random sample of localities had recorded cases of COVID-19. We find that initial local outbreaks favored the political party governing at the state level and hurt the far right. These findings are most likely driven by a 'strategic alignment' mechanism, whereby voters choose the party or candidate they believe is best placed to help them through the crisis.

Keywords Voting · Elections · Natural disasters · Natural experiment · COVID-19

Introduction

As a consequence of global warming, natural disasters of various kinds are set to increase in both frequency and intensity in the decades to come (Hirabayashi, 2013; Knutson, 2010; McMichael et al., 2006). Citizens and policymakers will, therefore, increasingly have to make political decisions in the face of imminent disaster. How do voters decide to cast their ballot when faced with threats to their lives and livelihoods that have yet to materialize fully? While several studies have explored the

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effects of disasters on political attitudes and behavior *after* disasters have occurred, studies investigating how the *threat* of emerging disasters shapes political behavior are still rare.[1] Even rarer are studies carried out *while* catastrophic events are still unfolding. The COVID-19 pandemic has created an unprecedented—if unwanted—opportunity in this regard, and a number of scholars have investigated citizens' early reactions to the pandemic (see, for instance, Bol et al., 2021). Our study contributes to this literature by investigating the effects of the onset of the COVID-19 pandemic on electoral behavior through a natural experiment.

We derive testable implications from canonical theories of voter behavior to which we add a novel 'strategic alignment' explanation, which we then test with data from the Bavarian municipal elections, which took place on 15 March 2020, just as COVID-19 began to reach Germany. At that time, some but not all counties of Bavaria had registered first cases of COVID-19. We demonstrate that the virus' spread pattern was indistinguishable from random, allowing us to estimate the causal effect of the pandemic on electoral outcomes.

To guide our analysis, we draw on the rich literature on the electoral implications of external adverse events, including such diverse phenomena such as terrorism (Berrebi & Klor, 2008) and natural disasters (Boittin et al., 2020). This literature has identified multiple theoretical channels connecting adverse events to political outcomes, ranging from fear- and anger-driven withdrawal of support for incumbents after disaster has struck (Achen & Bartels, 2017), over 'rally round the flag' effects when a crisis unfolds (Boittin et al., 2020), to 'flight to safety' behavior (Bisbee & Honig, 2021). Most of these theories see voters faced with an existential crisis as driven by emotions such as anxiety (Bisbee & Honig, 2021).

Adding to this, we propose a novel theory of rational foresighted voting. By combining insights from the literatures on 'electoral balancing' (Bafumi et al., 2010; Kern & Hainmueller, 2006) and responsibility attribution in the wake of natural disasters (Gasper & Reeves, 2011; Malhotra & Kuo, 2008), we develop a theoretical mechanism that we call 'strategic alignment.' We argue that when faced with a looming disaster, apart from acting on their emotions, voters may choose the party or candidate they believe is best able to solicit support from other levels of government. In multi-level electoral systems, this will involve voting to bring the partisanship of their local government in alignment with the party that governs at higher levels of government.

Our findings demonstrate that the onset of the crisis in Bavaria benefited the governing party in the state (the center-right CSU) and hurt the radical right (the AfD), while not systematically affecting the vote shares obtained by any other party. We estimate that for every 30 known cases of COVID-19 per 100,000 inhabitants, the CSU's vote share in county council elections increased by about 3%, and incumbent CSU mayors' chances of re-election improved by 10–17%. In contrast, the right-wing AfD lost votes in areas affected by the early spread of the disease.

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[1] One exception is the literature on climate change concerns, which looks into attitudinal and behavioral implications of weather (induced) phenomena, such as heat, drought, wildfires, or flooding, as precursors of climate change (e.g., Baccini & Leemann, 2021; Hazlett & Mildenberger, 2020; Hoffmann et al., 2022).

We estimate that 10 cases of COVID-19 in the county are associated with a 1.2 percentage-point reduction in the party's vote share—a substantial effect relative to the AfD's overall vote share of 4.7%. Our results align with prior research, which found a positive effect of the pandemic on government support, and demonstrate that such changes in attitude also translate into electoral choices.

We make three contributions to the literature on natural disasters more generally and the COVID-19 pandemic more specifically. First, adding to the literature on the political effects of the COVID-19 pandemic, we demonstrate that widespread support of governments recorded by the extant literature also translates into voting. Our findings are most in line with a 'strategic alignment' mechanism, somewhat less with a 'rally round the flag,' and to a lesser degree, 'flight to safety' or a 'security threat' perspective and in contradiction to mechanisms rooted in outgroup hostility. Second, by investigating subnational variation in crisis affectedness and voting behavior, we show that even in all-encompassing disasters such as a global pandemic, local affectedness, at least in the early stages of a crisis, makes a difference. Our study, thereby, lends support to a growing literature linking localized weather extremes to climate change concerns and corresponding electoral behavior (for an overview, see Howe et al., 2019). Importantly, we provide evidence from a case that credibly allows for causal identification. Third, we add our 'strategic alignment' mechanism to the family of theories on prospective voting. While many scholars see prospective voting in the context of crises as driven by emotions, we argue that voters may also rationally use their vote to elicit support from higher levels of government.

Natural Disasters and Voting Behavior

How should we expect the unfolding COVID-19 pandemic to affect voting behavior? Our case differs from other natural disasters, many of which happen so quickly or unexpectedly that they can only be evaluated in hindsight. Instead, the dawning pandemic plausibly focused voters' attention on the future. We, therefore, discuss prospective theories of voting only.[2] As the spread of COVID-19, first and foremost, constitutes a threat to health and safety, it may be regarded as similar to other threats such as war and terrorism. Indeed, several world leaders declared their countries to be "at war" with the virus.[3] The fact that the pandemic originated in China and spread around the globe may have increased perceptions of the virus as an external threat. Throughout history, disease threats have been accompanied by heightened hostility towards outsiders (McNeill, 1976). In some cases, such hostility has taken extreme forms, such as the pogroms against the Jews in Europe at the time of the Black Death (Perry & Schweitzer, 2002). Also, in 2020, news reports

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[2] However, a discussion of retrospective theories of voting and how these may relate to the pandemic, along with empirical tests, can be found in Section A.1 of the Online Appendix.

[3] Former US President Donald Trump made such remarks at press briefings (https://time.com/5806657/donald-trump-coronavirus-war-china/, retrieved 08/04/2020), while Macron spoke of a war against the virus multiple times during a televised speech (https://www.politico.eu/article/emmanuel-macron-on-coronavirus-were-at-war/, retrieved 08/04/2020).

from around the world document a rise in discriminatory behavior against Asian-looking persons.[4] One interpretation of both historical and contemporary cases is that radicals see the disease as a strategy of a given minority group to gain influence. Violence against this group is then used to intimidate it and contain its influence. The analogous strategy at the ballot box would be to vote for the extreme right. Following this logic, we should expect *higher vote shares for the far-right in areas more severely impacted by the spread of the virus*.

More commonly, scholars have noted a 'rally 'round the flag'-effect in response to the pandemic (e.g., Kritzinger et al., 2021). Rally effects have been observed during international conflicts when incumbent politicians saw an increase in popular support (Baker & Oneal, 2016; Mueller, 1970). Such a rally effect may also apply to natural disasters (Boittin et al., 2020). Mueller (1970, p. 21) argues that events "must be international because only developments confronting the nation as a whole are likely to generate a rally 'round the flag effect" (p. 21) and "must be specific, dramatic and sharply focused in order to assure public attention and interest." All of these criteria arguably apply to the global COVID-19 pandemic. In fact, this perspective has often been invoked to explain the short-term rise in political support seen in many countries at the beginning of the pandemic (Esaiasson, 2021; Kritzinger, 2021; Schraff, 2020; Yam, 2020). It is questionable whether a pandemic and subnational politics are within the scope of the theory. However, if voters *rallied-'round-the-flag* at the onset of the pandemic, we would expect *a positive effect of COVID-19 exposure on the vote shares of the governing party*.

Other researchers argue that external threats may help incumbents, but mainly if the incumbents are from the political right because the right holds issue ownership over security (Berrebi & Klor, 2008; Getmansky & Zeitzoff, 2014). Although not of a military nature, the pandemic could be conceived of as a security threat. This should resonate in particular with older citizens who are a key electorate of conservative parties and are the most fearful age group (Yin, 1980). Hence, if one considers the pandemic a challenge for domestic security and a threat to the elderly population, this will lead one to expect the political right to benefit as it holds issue ownership over that issue and has more backing among older segments of society. Hence, rather than expecting support for incumbents across the political spectrum, we would expect this *support to be limited to incumbent parties and candidates on the right of the political spectrum*.

One aspect that most scholars can concur with is that the COVID-19 pandemic triggered fear and anxiety among the population (Petzold, 2020). Fear and anxiety are known to strengthen risk-aversion (Wagner & Morisi, 2019), which, in turn, is linked to increased support for incumbents, which, in times of crisis, incumbents represent a safer option compared to the riskier option of choosing a challenger without a track record in government (Kam & Simas, 2012; Merolla & Zechmeister, 2009). Evidence suggests that the onset of the COVID-19 pandemic increased support for mainstream candidates representing the status quo in the US (Bisbee & Honig, 2021) and incumbent governments in Europe (Schraff, 2020). Translating

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[4] See, for example, this New York Times article from March 23, 2020 (https://www.nytimes.com/2020/03/23/us/chinese-coronavirus-racist-attacks.html).

this *anxiety* perspective to our setting, we would expect *incumbent parties or candidates to do better in places with higher exposure to COVID-19.*

To these established theories, we add a novel 'strategic alignment' mechanism, which we position as a sub-class of the wider prospective-voting perspective. At the beginning of the pandemic, voters were faced with an evolving natural disaster. In such a situation, voters' minds are likely to be focused on the future, and they should have a strong interest in leadership that can steer them safely through the crisis. This argument implies that in multi-level electoral systems, voters will want to bring the partisanship of their local government in alignment with the party that governs at higher levels of government. In making this argument, we draw on scholarship on electoral balancing in federal systems, which has shown that voters can take into account interdependencies between different political levels when casting their vote (Bafumi et al., 2010; Erikson & Filippov, 2001), and on the electoral implications of natural disasters that has shown that voters take the responsibilities of different levels of government into account (Arceneaux & Stein, 2006; Gasper & Reeves, 2011; Malhotra & Kuo, 2008).[5] If a lower-level political entity is governed by the same party that governs at a higher level, similar political values and personal contacts across the two levels of government will facilitate better communication and a smoother flow of resources. Extant research, indeed, finds lower levels of government to secure more intergovernmental transfers (Larcinese et al., 2006; Sole-Olle & Sorribas-Navarro, 2008) and to be more likely to receive disaster relief (Gasper, 2015) if they are politically aligned with higher-level governments. We claim that voters aware of this will use the elections to politically align their local government with the state or national government to secure more effective disaster response and relief for their community—counter to electoral balancing in non-crisis times. We would, therefore, expect *voters in affected counties to opt for candidates of the party that wields power at a higher level of government.*

Citizens' Reactions to the Pandemic

While ours is among the first papers to focus on the effect of the pandemic on actual voter behavior, a burgeoning literature on the effects of the pandemic on political attitudes has produced several findings relevant to our research questions. Most studies found a positive effect of the pandemic, ensuing lock-downs, or both on the head of government's approval ratings (Lupu & Zechmeister, 2021; Yam, 2020), vote intentions for (Bol et al., 2021; Lupu & Zechmeister, 2021) or identification with (Vries et al., 2021) the governing party, trust in national governments (Bol et al., 2021; Eggers & Harding, 2021; Esaiasson, 2021; Kritzinger, 2021) and parliaments (Schraff, 2020), satisfaction with democracy (Bol et al., 2021), or a negative effect on challenger parties and candidates (Bisbee & Honig, 2021).

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[5] For instance, Arceneaux and Stein (2006), who study municipal elections in the wake of a flood, show that voters blame different levels of government, from the local to the national, depending on which level they hold responsible for disaster preparedness.

Although some of these articles emphasize different theoretical perspectives, they can, by and large, be read as lending support to theoretical perspectives emphasizing rally or risk-aversion effects when a nation is faced with danger. We add to the literature by testing all relevant theoretical perspectives, to which we add our strategic-alignment mechanism, based on a case where local affectedness by COVID-19 is credibly exogenous.

COVID-19 and the Local Elections in Bavaria

We study the unique setting of the 2020 Bavarian local elections, which took place on 15 March 2020, at the immediate onset of the global COVID-19 pandemic and over a week before national lockdown measures were implemented. Around ten million voters were called to the polls to elect county and municipal legislatures and executives. Bavaria's electoral system combines proportional voting for councils with majoritarian run-off voting for local mayors and district executive officials.

The virus spread through Bavaria in an erratic pattern. The first COVID-19 case was detected in the state capital Munich on 28 January 2020 by an employee working closely with a Chinese firm. The contact persons of this putative 'patient zero' were quickly identified. However, the virus re-appeared in Bavaria in early March 2020, this time imported from Austria, Italy, and regions in Germany that saw early major outbreaks.[6] Munich was again affected early on. However, the virus also sprung up in northern and eastern counties, including the rural counties Cham and Ostallgäu.[7]

Because the virus was imported through a variety of channels, no systematic pattern is detectable, as we show with a wide range of robustness tests. This—from a research perspective—fortuitous coincidence enables us to treat the early spread of the virus as a natural experiment, which also allows us to exclude a theoretically possible reverse-causal path from the pandemic to electoral politics. The election date had been set on 12 February 2019,[8] and individuals had to register their candidature by 23 January 2020, 5 days before the very first cases in Bavaria/Germany became known.[9] Therefore, candidates could not have registered or withdrawn their candidacy in response to the COVID-19 outbreak.

At the time of the election, the virus's arrival had yet to affect German society or its economy significantly. The country had only recorded twelve deaths, and limited countermeasures had been taken. Nevertheless, fueled by, among other developments, images from Italy (where a first major outbreak was underway), the threat of an all-out pandemic was becoming increasingly clear. For instance,

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[6] https://www.br.de/nachrichten/bayern/weitere-corona-faelle-in-bayern-allgaeuer-firma-schliesst-vorerst,RrzIckS, retrieved on 01/04/2020.

[7] https://www.br.de/nachrichten/bayern/erster-corona-fall-im-landkreis-cham,RsWdphv, retrieved on 01/04/2020.

[8] https://www.stmi.bayern.de/med/aktuell/archiv/2019/191112wahl/, retrieved on 01/04/2020.

[9] https://www.br.de/nachrichten/bayern/kommunalwahl-bayern-wie-wird-man-kandidat,RWYnKmG, retrieved on 01/04/2020).

COVID-19 featured prominently in Germany's leading news program "Tagesschau" on an almost daily basis from as early as January 2020, Bavaria's state broadcaster began to provide daily updates through its "Corona Ticker" in late January, and any county that registered its first-ever infection would make headlines in local and regional news. As case numbers gradually grew, so did public concern about COVID-19.[10]

This makes our study an investigation of the *buildup* to a major crisis, not unlike other disasters like certain types of storms or flooding where the threat is materializing, but the full damage they will bring is not yet clear. Importantly, at the time of the election, despite the global threat emanating from the virus, the reactions to the virus were still local. The main countermeasure consisted of a limited number of school closures in municipalities where there had been a verified case of COVID-19 among teaching staff or the student body—a fact we exploit for some additional analyses. A 'soft' national lockdown was agreed on between national and state governments on 22 March 2020, 1 week after the elections.

Central to our analysis are the electoral fortunes of the center-right CSU, the dominant party on all levels of government in Bavaria. As the 'sister party' of Angela Merkel's Christian Democratic Union (CDU), the CSU at the time participated in the national government. The CSU also led a coalition government at the state level. Moreover, the party held a plurality of seats in the local parliament of all but one of Bavaria's 96 counties, and it led the county executive in 67 counties.[11] Furthermore, the CSU held the mayoralty in more than a third of Bavaria's 2056 municipalities. The Social Democratic Party (SPD) came in a distant second with just over 200 mayors, mainly in larger cities. Other political players relevant to the theoretical arguments we consider include independents loosely organized under the umbrella party of the right-of-center Freie Wähler (Free Voters, FW), who served as a junior coalition partner of the CSU at the state level, the liberal FDP, and the populist radical right party AfD.[12]

Observable Implications

Based on the theoretical perspectives introduced above, how should we expect the governing CSU, other right-of-center parties, and mainstream or incumbent parties and candidates more generally to fare at the ballot box at the onset of the COVID-19 pandemic? If the pandemic triggered hostility against outgroups, we would expect a strengthening of vote shares of the AfD only as it was the only viable radical-right party in the election. In contrast, if one applies the 'rally round the flag' argument to the sub-national level, one would expect increased support for parties and candidates representing the national leadership or, possibly, the head of the state government, which in both cases would be the CSU. Although wanting to strengthen parties of the

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[10] For a timeline of key events and more information on public opinion, see Section A.2.

[11] Out of the 96 Landkreise and cities, 61 (64%) were led by a Landrat (council administrator) or Oberbürgermeister (mayor in independent cities) of the CSU, and 67 (70%) by the leader of a coalition involving the CSU.

[12] See Section A.4 for more information on the different political parties in Bavaria.

national or state executive could also predict a vote for the SPD, which participates in the national government, or the FW, which participates in the state government, we deem this less likely because 'rally round the flag' and other theories about voting in crisis strongly focus on the head of government.[13] If the anxiety created by the pandemic induced status-quo voting, this should benefit mainstream parties, which would be the CDU/CSU and SPD in Germany, no matter their ideology or incumbency status. Theories that see external security threats as helping politicians and parties of the political right would lead us to expect the rallying effect to be restricted incumbents from the CSU and other right-of-center parties.

Finally, if voters are interested in aligning their local governments with higher levels of government, this should benefit the CSU only as it heads the state government and participates in the national government. One exception would be mayoral races in which the CSU did not field a candidate. Here, we might expect a positive effect of COVID-19 cases on the electoral fortunes of the Free Voter's candidates—the junior coalition partner to the CSU in the state government. We summarize these observable implications in Table 1.

Data

To test these implications, we combine data on the local spread of the COVID-19 disease with electoral outcomes. Data on COVID-19 cases at the county level come from the Bavarian Ministry for Health and Consumer Protection, which began reporting cases on 9 March. Figure 1 depicts the distribution of cases on 15 March, the day of the election, and its evolution in the week before. On election day, the disease had affected all regions of Bavaria, but with substantial variation in local prevalence, including some counties that had not yet seen a single case of COVID-19. Spatial statistical tests and econometric models fail to detect *any* pattern in the distribution of COVID-19 cases. Balance statistics show that except for being somewhat older and having slightly higher unemployment rates, counties with a significant prevalence of COVID-19 are indistinguishable from counties without cases.[14] These differences vanish when we use a matched sample.

The electoral data come from the Bavarian returning officer and a local newspaper. As we analyze elections on different levels, we construct several separate datasets. The first dataset contains the election results for the councils of the counties and larger cities only (n = 96).[15] Elections to these bodies are based on a system of proportional representation. The second dataset contains the election results for executive officials in the counties, larger cities, and municipalities with more than 10,000 inhabitants, who are elected in a majoritarian electoral system with a run-off election between the top two candidates if no candidate obtains an absolute

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[13] Similarly, economic voting theory emphasizes that, in the case of coalition governments, voters tend to attribute responsibility to the head of government's party (Debus et al., 2014).

[14] See Table A4 and Section B.6.

[15] These larger cities (so-called *kreisfreie Städte*) unite municipal- and county-level responsibilities in one level of government.

majority in the first round.[16] This dataset is particularly useful for analyzing effects on incumbency. Since we are interested *changes* in voting behavior in response to being affected by the COVID-19 pandemic, we restrict our data to territorial units where parties fielded a candidate in both the 2014 and 2020 municipal elections. This reduces the sample slightly. For example, for the CSU, this was the case in 85 of the 88 counties and larger cities, and in 162 of the 189 larger municipalities, giving us a total of 247 observations. In addition, we compiled a third dataset of small municipalities with under 10,000 inhabitants comprising the election results in all of Bavaria's 2056 municipalities. However, since these data are not compiled by the state returning officer (but rather by a local newspaper), and we lack a fully reliable measure for the spread of COVID on this level, we delegate this analysis to the appendix.[17] All results replicate at this level.

Estimation Strategy

Our empirical strategy is to compare electoral outcomes in localities not yet affected by the pandemic with those in more heavily affected localities. Similar to the literature investigating the effect of local weather extremes on concern about climate change, we assume that local caseloads affect citizens' concern about the overall phenomenon. The first challenge is that individuals might not be attentive or reactive to the local spread of COVID-19. In mid-March, individuals all over Bavaria were exposed to the disconcerting reports from Italy where Europe's first major outbreak was underway. Yet, we investigate a point in time early in the pandemic where the spread of COVID-19 was still considered something abstract— except for, we argue, in places where COVID-19 cases had been detected. Where this was the case, this information would quickly become common knowledge, as national and regional news media had begun to report daily figures for individual counties. Furthermore, we can also ascertain empirically that individuals were attentive to local case numbers.

Table 2 tests the assumption that rising Covid-19 incidence rates go along with increased concern about the pandemic. Here, we use individual-level data (N = 829) that we collected between 17 April and 30 June 2020, which, admittedly, is shortly after the Bavarian municipal elections took place.[18] Therefore, the evidence of the relationship between concern and incidence rates should be interpreted as indicative rather than conclusive. However, we are unaware of any earlier individual-level data collection in Bavaria. Our survey included two outcomes of interest, the *level* of concern with the pandemic and the *change* in
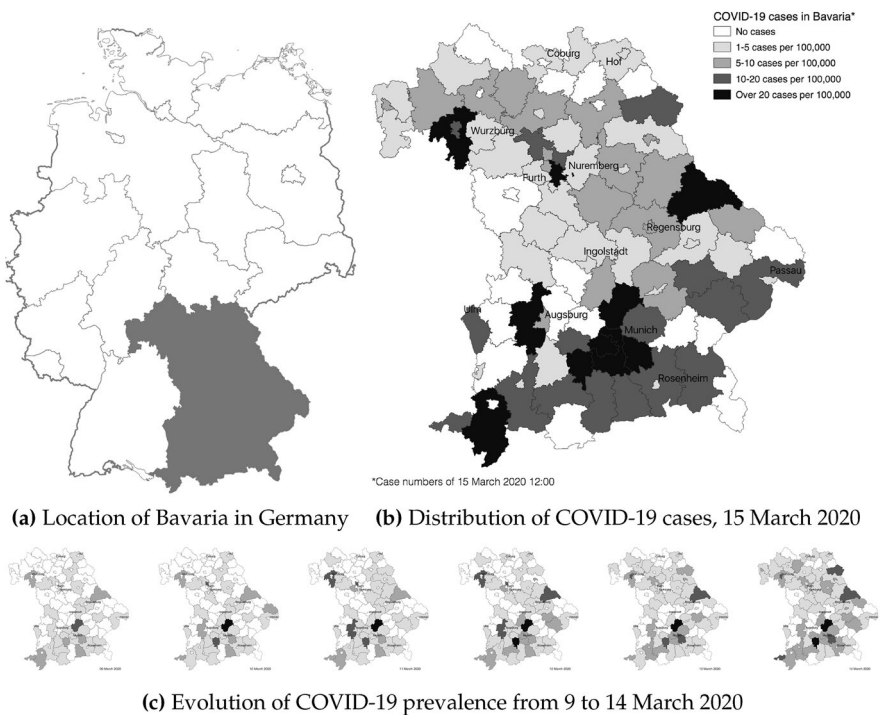
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[16] We analyze the first round of voting only because the spread of the disease at the time of the run-off elections, held 2 weeks later, can no longer be considered quasi-random. Note that elections to the county executive were held in only 88 instead of 96 counties in total because seven rural counties (Coburg, Dillingen a.d. Donau, Kronach, Lichtenfels, Roth, Neuburg-Schrobenhausen, and Regen) and one larger city (Memmingen) held off-cycle elections due to idiosyncratic reasons such as resignations or deaths of incumbents.

[17] See Section B.5.

[18] See Section D for more information on the survey.

Table 1 Observable implications of different theoretical perspectives on voting in the Bavarian local elections in March 2020

Perspective	Expectation
Outgroup hostility	*Positive* effect on vote shares received by the *AfD* and its candidates
Rally 'round the flag	*Positive* effect on vote shares received by the *CSU* and its candidates and, to a lesser degree, the *SPD* or *FW* and their candidates
Anxiety	*Positive* effect on vote shares received by the *CSU* and *SPD* and their candidates
Security threat	*Positive* effect on vote shares received by the *CSU*, *FDP*, *FW*, and *AfD* and their candidates
Strategic alignment	*Positive* effect on vote share received by the *CSU* and its candidates or the *FW* and its candidates if the *CSU* does not compete

(a) Location of Bavaria in Germany   (b) Distribution of COVID-19 cases, 15 March 2020

(c) Evolution of COVID-19 prevalence from 9 to 14 March 2020

Fig. 1 Prevalence and spread of COVID-19 in Bavaria in March 2020. The figure shows the location of Bavaria in Germany (**a**), the distribution of COVID-19 cases in Bavaria's 96 counties as of 15 March 2020, the day of the local elections (**b**), and the evolution of cases in the week leading up to the election, 9–14 March 2020 (**c**)

concern over the last 2 weeks before the interview, which we correlate with the local (county-level) 7-day incidence rate, the most reported measure in Germany during the pandemic.

Table 2 Effect of COVID-19 incidence on level and change in concern about the disease

	Level (1)	Level (2)	Change (3)	Change (4)
COVID-19 incidence	0.10*	0.07*	0.09*	0.10*
	(0.03)	(0.03)	(0.03)	(0.03)
Age (years)		0.09*		− 0.06
		(0.04)		(0.04)
Female		0.07*		0.03
		(0.03)		(0.03)
N children		0.03		0.06
		(0.04)		(0.04)
Medical conditions (N)		0.44*		0.06
		(0.04)		(0.04)
A-levels degree		0.03		0.03
		(0.03)		(0.03)
Intercept	*0.03	− 0.68*	0.02	− 0.07
	(0.04)	(0.07)	(0.03)	(0.08)
N	801	796	798	794
R2	0.01	0.16	0.01	0.02

OLS regression of level and change in concern about COVID-19 on local incidence rates. The level of concern is measured on a 5-point scale ranging from 'Not at all concerned' to 'Very concerned.' The change in concern is measured on a 5-point scale ranging from 'Much less concerned' to 'Much more concerned.' The independent variable is the 7-day incidence rate—the number of new COVID-19 cases per 100,000 inhabitants recorded in the past 7 days. All coefficients are standardized. Bootstrapped standard errors in parentheses, resampling at county level (where the incidence rates are reported), 1000 repetitions, $*p < 0.05$

All variables in the table are standardized. The Covid-19 incidence rate is consistently and strongly correlated with concern about the pandemic. For the level of concern, the strength of the relationship is similar to the effect of age, which is a strong predictor of concern since older people are much more likely to fall seriously ill from the virus. Even more striking, the incidence rate is the strongest predictor for the *change* in concern and the only one that reaches statistical significance. Individuals, our survey data shows, at least in the post-election period from April to June 2020 covered by our survey data, paid close attention to local incidence rates and adjusted their levels of concern accordingly.[19]

Second, for our county-level analysis to have a causal interpretation, we have to assert that localities affected by the pandemic were equal in pre-outbreak potential outcomes to non-affected localities. The erratic pattern in the spread of the disease and our spatial-econometric tests, reported in the appendix, makes this assumption

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[19] These concerns did not keep individuals from going to the polls. Turnout figures are unaffected by the local incidence of the disease in the cases of the county-level and small municipalities datasets and even appear to be slightly elevated in the case of the mayoral elections (see Table A19).

likely to hold.[20] We pursue several additional strategies to account for possible confounders. For one, we are comparing *changes* in vote shares for the same county between the current and the previous election. Support for the incumbent party could also have been influenced by dynamic developments in specific localities, such as diverging economic or demographic trends. While the time between the two elections was marked by stable economic growth and a strong labor market, counties may have been affected unequally. We, therefore, include indicators for population density, the total number of employees of all companies in a county, the unemployment rate, and the change in those variables. Further, the year 2015 saw the arrival of 1.5 million refugees in Germany. To account for the potential effects of hosting refugees, we include the level and change in the share of the foreign population. In addition, our model controls for the level and change in the population aged 60 years or more. This group is particularly important because it traditionally supports the CSU at higher rates and is at a much higher risk of contracting COVID-19.

Another potential confounder are local strong-beer festivals, held throughout the year in Bavaria and particularly during the period of Lent, which in 2020 coincided with early March (Güntner, 2020). Holding a festival can plausibly influence voting behavior, if only by lowering turnout (Atkinson & Fowler, 2014). At the same time, the conviviality provided by the festival offered optimal conditions for the virus to spread. We, therefore, include a count variable for the number of strong-beer festivals in our county-level analyses and a dummy for whether a municipality hosted a beer festival in our municipality-level analyses.[21] Finally, we control for the distance to Ischgl in Austria. The alpine ski resort gained notoriety for being a major Covid-19 hotspot in the early phase of the pandemic, and some early cases in Bavaria can be traced back to it (Felbermayr et al., 2021). While it is not immediately apparent why the distance to Ischgl should correlate with a change in party votes shares, we err on the side of caution and include the distance measure as a control variable. Our models take the form

$$\Delta EO_{c,t,p} = \alpha + \beta lnCOVID\text{-}19_{c,2020} + \gamma X_{c,t} + \theta \Delta X_{c,t-t_1} + \epsilon_{c,t,p}. \tag{1}$$

where the dependent variable $\Delta EO_{c,p,t}$ is the electoral outcome in a county c. This is either the change in party p's vote share between the current and the previous county council election or the change in the vote share received by a given party p's mayoral candidate. The independent variable is the logged number of COVID-19 cases per 100,000 inhabitants in a county.[22] X is a matrix with the mentioned control variables measured shortly before the outbreak of the epidemic (subscripted with t), and the trend in these variables between the two elections (subscripted with $t - t_1$).[23]

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[20] See Section B.6.

[21] Data on the timing and location of strong-beer festivals come from Güntner (2020).

[22] As our case count variable includes zeros, we add 1 to all case counts before taking the natural log.

[23] We use t and t_1 because not all data is available for the same years. Most variables are measured between 2012 and 2017, some between 2013 and 2018, and others between 2013 and 2019. As an alternative specification, we also estimate a difference-in-differences model (see Section B.1).

Results

To explore which of the theoretical expectations is best matched by our data, we analyze the electoral outcomes in the county council elections for the six major parties in Bavaria presented in Table 3, and their candidates in mayoral and county executive elections, Table 4.[24] Two observations immediately stand out. First, the far-right *lost* vote shares in areas more strongly affected by the spread of the virus (Column (4) in Table 3). The coefficient implies that 10 cases of COVID-19 in the county are associated with a 1.2 percentage point reduced vote share for the AfD—a substantial effect given that the AfD only received 4.7% of the total vote.[25] Despite the prominence in the literature of the idea that threatening situations go along with increased support for the far right, this hypothesis is emphatically rejected.

Second, the CSU and its candidates *gained* electoral support the more strongly a county was affected by the outbreak. Column (1) in Table 3 indicates that a one-unit increase in logged case numbers was associated with a 0.87 percentage point higher vote share for the CSU in the county council elections. This implies that, for instance, a county with 30 cases per 100,000 inhabitants had a roughly 3 percentage points higher CSU vote share than a county with no cases. We see no systematic effects for other parties. Finally, we also consider the possibility that voters in a situation of crisis focus their vote on the strongest party in the local council (Column (7) in Table 3). As the CSU held a plurality of votes in all but one of Bavaria's counties, the results are almost equivalent to Column (1). Similarly, CSU candidates running for the post of mayor or county executive also did better in areas where the CSU was the incumbent party and that were more strongly affected by the virus, as can be seen in Column (2) of Table 4.[26]

Our results are partially consistent with the idea that crises benefit (conservative) incumbents, as predicted by the rally-'round-the-flag, anxiety, and security-threat arguments. However, inconsistencies show up when one looks at the results in detail. A positive effect of the pandemic on the electoral fortunes of the CSU is line with anxious voters sticking to the status quo. However, if there had been a general 'flight to safety' towards officeholders or mainstream parties, we should see a general pro-incumbent effect no matter which party the incumbent belonged to, a positive effect on both mainstream parties, or both. However, we see neither. As a whole, incumbents fared better than non-incumbents in areas more strongly affected by the spread of the virus (Column (1), Table 4). However, the only incumbents that seem to have profited from local outbreaks of the pandemic are those of the CSU (Column (2),

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[24] Readers should note that we focus on incumbent parties. Our data do not allow us to distinguish personal from party incumbency because we do not have the names of incumbents or candidates.

[25] Also see Tables 3 and A6.

[26] As shown in Section B.4, these results are robust to a wide range of specifications, including varying the set of control variables, spatial-econometric specifications considering potential spatial spillovers, inverse probability weighting, matching, and several placebo tests, which all increase our confidence that the changes in party vote shares between 2014 and 2020 are unlikely to be driven by unobserved characteristics that systematically favor one party or another in areas affected by early COVID-19 outbreaks. Results are also robust to using 2020 vote shares instead of changes in vote share as dependent variable.

Table 3 Regression of change in party vote shares on COVID-19 prevalence (county council elections)

	ΔCSU (1)	ΔGreens (2)	ΔSPD (3)	ΔAfD (4)	ΔFW (5)	ΔFDP (6)	ΔPlu (7)
COVID-19/100,000 (logged)	0.87*	0.28	− 0.25	− 0.53*	− 2.19	0.16	0.85*
	(0.35)	(0.24)	(0.26)	(0.23)	(1.55)	(0.14)	(0.33)
Intercept	− 6.46	2.92	− 6.20	9.34*	35.16	− 0.72	− 6.08
	(6.40)	(5.03)	(6.34)	(4.40)	(28.09)	(3.18)	(6.11)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	96	96	96	83	93	91	96
R2	0.29	0.64	0.30	0.30	0.11	0.18	0.29

OLS regression of the change in party vote shares on COVID-19 prevalence. The dependent variable is the change in the vote share for the indicated party between the 2020 and the previous election. ΔPlu stands for the party winning the highest vote share, i.e., a plurality, in the previous election (in 95/96 cases the CSU, in one case the SPD). The independent variable is the logged number of COVID-19 per 100,000 inhabitants. All models control for both levels and changes in population density, share of foreign population, unemployment rate, percentage of the population aged 60 or older, and the number of citizens in employment, plus the number of strong-beer festivals held in a county and the distance to Ischgl. Bootstrapped standard errors in parentheses, resampling at county level, 1000 repetitions, *$p < 0.05$. Full results, including estimates for all control variables, are shown in Table A14 in the appendix

Table 4 Effect of COVID-19 prevalence on electoral outcomes for incumbents (elections of mayors and county executives)

	ΔAll incumbents (1)	ΔCSU incumbent (2)	ΔSPD incumbent (3)	ΔFW incumbent (4)	ΔOther incumbents (5)
COVID-19/100,000 (logged)	1.14	4.59*	− 2.92	− 8.97	0.33
	(1.97)	(1.92)	(8.21)	(71.09)	(6.56)
Intercept	− 53.14	− 46.48	− 118.53	231.30	− 148.57
	(35.01)	(38.76)	(133.62)	(2337.44)	(157.06)
Control variables	Yes	Yes	Yes	Yes	Yes
N	265	126	55	32	52
R2	0.04	0.11	0.07	0.40	0.31

OLS regression of the change in the vote share received by the candidate of incumbent mayor's or county executive's party on COVID-19 prevalence. All models control for both levels and changes in population density, share of foreign population, unemployment rate, percentage of population aged 60 or older and the number of citizens in employment, plus the number of strong-beer festivals held in a county and the distance to Ischgl. Missing observations compared to full sample of mayoral and county executives due to elections not following the dominant electoral cycle. There are no incumbents from the AfD. Bootstrapped standard errors in parentheses, resampling at county level, 1000 repetitions, *$p < 0.05$. Full results, including estimates for all control variables, are shown in Table A16 in the appendix

Table 4). And the CSU is the only mainstream party to profit—local COVID-19 did not affect the electoral outcomes of the SPD, Germany's other catch-all party. The fact that candidates of the conservative CSU did particularly well may be interpreted

as evidence for a strengthening of the political right in the face of threat, as observed in reaction to terror attacks. However, against this idea speaks the observation that neither the FW nor the FDP—although both can be considered to be conservative right—gained in the wake of the pandemic, not to speak of the already-mentioned radical-rightwing AfD, which lost vote shares.

These considerations leave 'rallying 'round the flag' as the last potential mechanism among the incumbency-centered explanations. Suppose rallying around the flag is conceived as a national phenomenon, as the original theory suggests. In that case, voters should mainly increase their support for the CSU since it is the Bavarian sister party of chancellor Angela Merkel's CDU but should also support the SPD, the coalition partner in the national government. Yet, as shown in Column (2), Table 3, and Column (3), Table 4, there are no effects of local affectedness by the virus on the SPD's vote share. If instead, rallying was targeted toward the state government, we would expect voters to flock to the CSU and, to a lesser degree, the FW (as its coalition partner in the state government). Again, this is not what we see, with vote shares for the FW being left unaffected (Column (5), Table 3 and Column (4), Table 4). The fact that the FW, although it participates in the state government, and the SPD, although it participates in the national government, did not benefit might be due to voters seeking to express support for the government first and foremost opting for the CSU as the party of the state prime minister. Although our results can be construed as broadly in line with 'rallying 'round the flag,' conceptual doubts about the theory's applicability to our case remain.

The overall best fit for our results appears to be provided by the strategic alignment mechanism, i.e., the idea that voters look ahead and align their local government with higher levels of government whom they suspect can best provide support during the crisis. In the Bavarian case, this mechanism predicts higher vote shares for the CSU and its candidates—and for them only—which is indeed what we find. Additional evidence for this mechanism is provided in Table A18 in the appendix, where we investigate what happened in cases where no CSU candidate was running. For this case, the alignment mechanism predicts that voters will opt for the solution that approximates alignment with the strongest political force as closely as possible. In Bavaria, they should align themselves with the FW, which forms a coalition government with the CSU at the state level. Indeed, COVID-19-related school closures reduced FW vote shares in municipalities where the FW was competing with the CSU locally but *increased* them where the FW was the only state-governing party running for local office. However, as the results fail to reach statistical significance, this evidence is merely suggestive rather than conclusive.[27]

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[27] In the survey we conducted toward the beginning of the pandemic, we included a survey experiment probing the plausibility of the strategic alignment mechanism. Respondents were presented with a choice of candidates for the municipal elections, a random subsample of which was portrayed as belonging to the same political party as the state prime minister. We find that affiliation of a local candidate with the higher-level political executive increased the stated propensity to vote for two of our three outcome measures (see Section D).

Conclusion

In this article, we analyzed the impact of an evolving crisis on political behavior by evaluating the early electoral effects of the spread of COVID-19. Using data from the March 2020 Bavarian municipal elections, held at the immediate onset of the pandemic, we tested different theoretical perspectives on voting at the dawn of a longer-term crisis, to which we add our novel 'strategic alignment' mechanism. The latter captures the idea that in times of impending crisis, voters use their vote to politically align local representatives with higher levels of government in order to facilitate access to support from these levels.

We found that early local exposure to the COVID-19 pandemic benefited the center-right CSU—the governing party of Bavaria at the time—and its candidates. Vote shares for the CSU in the county legislatures increased by about 3% in regions with 30 known cases per 100,000 inhabitants compared to counties that had not yet registered any cases. In contrast, the populist radical right AfD did worse in areas that experienced early outbreaks of the disease.

Our results are in line with findings from prior research, which found a positive effect of the pandemic on government support (e.g., Bol et al., 2021; Eggers & Harding, 2021; Schraff, 2020; Vries et al., 2021), and demonstrate that such changes in attitude can also translate into electoral choices. The fact that the far-right party AfD lost votes in places with higher case numbers makes us confident that what we are observing is not outgroup hostility guiding vote choices. Our results are partially but not entirely in line with anxious voters opting for mainstream parties and their candidates at the expense of the far-right. Hence, they also only partially align with a security-threat perspective suggesting a vote right-of-center incumbent parties. Our results broadly align with voters 'rallying around the flag' of the national or state government if one considers the scope of the theory to extend to subnational politics. However, our results, in our view, best fit the strategic alignment mechanism as voters opted for candidates of the CSU no matter their local incumbency status.

Of course, we are not claiming that strategic alignment is the only mechanism at work, although it is the only mechanism to be unequivocally supported by our results. Instead, several mechanisms might operate simultaneously as different voters employ different heuristics. Risk-averse voters, for instance, might vote for a mainstream party, while politically sophisticated voters engage in alignment voting. Given the political context in Bavaria, the CSU ends up profiting in most cases. Further case studies of elections under the impression of an emerging disaster should help clarify which mechanisms operate when and how they may interact. If voters were to rally around the national leadership or empower a right-wing party to protect their security, they would be well advised to put many of their copartisans in power at different levels of government. Thus, while the "alignment" mechanism describes a means of empowering government, the rallying and security-threat mechanism can be seen as describing which types of government the public wants to empower.[28] Finally, our data do not provide support for rational retrospective voting.

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[28] We thank one of our anonymous reviewers for suggesting this interpretation.

The elections took place early in the pandemic when it was very difficult, although not downright impossible, for voters to assess government performance, and our (admittedly rough) measures of crisis preparedness and response do not modify the effect of the COVID-19 outbreak on the electoral fortunes of the CSU candidates.

Beyond the immediate case under examination, where else should we expect the onset of a crisis to trigger support for the strongest political force? While rally-'round-the-flag effects and anxiety-induced status-quo voting have been observed in reaction to all types of disasters, alignment should be particularly prominent in crises that emerge or evolve over more extended periods. These include all types of global health emergencies, but also slow-moving environmental catastrophes such as droughts, repeated hurricanes, or rising water levels or floods—all of which are set to become increasingly frequent due to climate change. A growing literature links localized manifestations of climate change, such as heat (Hoffmann, 2022), wildfires (Hazlett & Mildenberger, 2020), or floods (Baccini & Leemann, 2021), to increased concern about climate change and corresponding voting behavior. Our findings add further evidence to this literature.

What are the implications of these findings for the future of democracy in a world where disasters and crises will become more common? Our findings may be viewed as telling a cautionary tale about the functioning of democracy when faced with an imminent threat. Even though voters' behavior can be considered forward-looking and rational when voting under the impression of an emerging crisis, it still means that they give a mandate to political actors that may reach well beyond the crisis—potentially at the expense of a full consideration of the parties' or candidates' record in office or the long-term consequences of their choices. As voters' behavior seems to be oriented toward strengthening the incumbent government or aligning legislatures and executives at different levels of government, politicians and parties that are already in a strong position in times of crisis gain in strength—to the detriment of smaller parties or factions and electoral pluralism more generally. This increase in strength, however, may invite abuse. In some countries, incumbent politicians have used the pandemic as an opportunity to expand their powers. Our findings show that elections, which in principle serve to reign in government power, rather than serving as a check, may further deepen divides between incumbents and opposition.

Declarations

Conflict of interest The authors have no competing interests to declare that are relevant to the content of this article.

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