

International Center for Public Policy

Working Paper 23-03

January 2023

**Floods, Terrorist Attacks and the COVID-19
Pandemic: How the (De)Centralization of Power
Affects the Rally around the Flag**

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Floods, Terrorist Attacks and the COVID-19 Pandemic: How the (De)Centralization of Power Affects the Rally around the Flag

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Abstract

This article examines whether rally effects when an unexpected calamity occurs are affected by the degree of (de)centralization of power. We argue that when the national government is exclusively in charge of the policy affected by the calamity, the rally should be comparatively greater than when the responsibility is shared between several levels of government. The argument is tested using observational data from national legislative and presidential elections after 423 major floods, 226 terrorist attacks and 61 pandemic elections. We find that it is only in centralized countries that incumbent governments perform better under a more severe pandemic.

Keywords: COVID-19, elections, floods, rally, terrorist attack

*We acknowledge support from the Spanish Ministry of Economy and Competitiveness [Grant number CSO2017-85024-C2-1-P (AEI/FEDER)] and ICREA under the ICREA Academia programme. We thank Soomin Oh, Jorge Martínez-Vázquez and participants in the *Decentralization and the Governance of Extreme Events* Workshop, Santiago de Compostela, 12-13 May 2022, for very helpful comments. Finally, we thank G.R. Brakenridge for sharing his data on floods with us and Rocío Baeza Fernández for her superb research assistance.

I. Introduction

When individuals are faced with collective threats, the conventional argument is that public opinion moves in favor of incumbents. This ‘rally around the flag effect’ was initially documented with respect to military and diplomatic crises (Mueller, 1970, 1973) and has been progressively extended to other external shocks such as international terrorist attacks, natural disasters, and the COVID-19 pandemic.

However, the story does not seem so simple when accounting for public opinion reaction to the COVID-19 pandemic. Interestingly, both in Canada and Portugal, Prime Ministers Justin Trudeau and António Costa were reelected in the pandemic elections held on September 20, 2021 and January 30 2022, respectively. However, while the electoral support for the Liberal Party decreased by 0.5 percent points, support for the Socialist Party increased by 5.1 percent points. How can we explain these different electoral results when the pandemic was severe in both countries?¹

Surprisingly, the ‘rally around the flag’ argument is developed without consideration of the crucial question of who is in charge when dealing with the external shock. While foreign and national security policies are exclusively in the hands of national governments, health is mostly a regional responsibility or at least it is shared between different levels of government. Therefore, the rally when an international terrorist attack takes place should only benefit the national government, but it should be comparatively lower or entirely undermined in the case of COVID-19. Not surprisingly, Canada is a federal country where provinces and territories enjoy autonomy

¹ The COVID-19 deaths per million people until the Election Day was 1024 in Canada and 1953 in Portugal according to the data compiled by Ritchie et al. (2020).

with respect to the management of their respective health systems, but in Portugal decisions about the health system are entirely in the hands of the national government.

This article extends the existing literature on rally effects by examining how the (de)centralization of power affects the rally around the flag. Our first goal in this research is to establish whether incumbent governments benefit electorally from the unexpected occurrence of calamities. We focus on three types of calamities: international terrorist attacks, floods, and the COVID-19 pandemic. The electoral consequence that we are interested in is the vote at the subsequent election. The question that we address is therefore whether incumbent governments are more likely to be re-elected, or obtain more votes, when they face severe terrorist attacks, floods, or COVID-19 deaths during their mandate. Our second goal is to examine whether the decentralization of power, measured with the Regional Authority Index (RAI), mutes or undermines public opinion surges for national executives in the wake of an unexpected calamity. Our argument is that the rally at a time of a collective threat should be greater when the policy affected by the calamity is in the hands of the national government than when it is shared between the national and the subnational governments. The hypotheses are tested using observational data from national legislative and presidential elections after 423 floods in 96 countries, 226 terrorist attacks in 60 countries, and 61 pandemic elections in 55 countries.

The rally around the flag hypothesis assumes that when faced with calamities voters feel the need for unity, they become more patriotic, and they are prone to support the incumbent government. This is a plausible hypothesis. But equally plausible is the blind retrospection thesis, according to which voters punish governments when things are not going well (see Achen and Bartels, 2016). And there is also the possibility that voters will sometime reason that the calamity is not the government's responsibility and will then reward/punish the government depending on

its competence in dealing with the crisis. In other words, voters' reactions to calamities may depend on the context, so that the overall tendency for a rally may be quite weak.

II. Arguments

The starting point of our inquiry is the 'rally around the flag' thesis. The thesis has been proposed primarily in the context of wars and diplomatic crises. In his seminal work, Mueller (1970, 1973) argued that Americans rally around the president in the wake of international events directly involving the United States in the hope of maximizing the nation's prospects in the crisis at hand. Mueller interprets this rally as a patriotic reflex but there are other explanations, an important one being the fact that in times of crisis the president has a virtual monopoly of information, which makes it impossible for the opposition to provide a critical view of the government's handling of affairs (Brody, 1991). In a piece relying on evidence from the surge in domestic public support for Russian President Vladimir Putin triggered by Russia's March 2014 annexation of Ukraine's Crimean Peninsula, Hale (2022: 580) argues that rallying is "a fast-moving, media-fueled process by which early and prominent expressions of support for a country's leader in the wake of conflict initiation start to create the impression that backing the leader is the most prevalent and thus socially desirable attitude to hold." In sum, while there is a debate about the exact mechanisms that produce the rally (see Baum, 2002), there is ample evidence that incumbent governments' popularity usually increases when a country is at war (see Chatagnier, 2012, for instance).

The 'rally round the flag' hypothesis was initially developed in the context of wars, and it has been progressively extended to other "big crises". The most logical extension is international terrorist attacks. Chowanietz's (2010) analysis of terrorist events in five countries (France,

Germany, Spain, the United Kingdom, and the United States) reveals that rallies around the flag are the rule, that is, most of the time, especially in the case of larger terrorist acts. opposition parties refrain from criticizing the government. A recent meta-analysis on how terrorism generates a rally around the flag effect shows that is a common finding, though it is far from universal (Godefroidt, 2022).

Outside of terrorism, natural disasters are the clearest instance of a huge crisis that could trigger a rally around the flag phenomenon. Some research suggests that incumbents benefit from the occurrence of natural disasters such as floods, wild- fires, and earthquakes (Boittin et al., 2019; Lazarev et al., 2014; Ramos and Sanz, 2020). But other research supports the blind retrospection hypothesis according to which incumbent governments are systematically punished for droughts and floods that are clearly outside their control (Achen and Bartels, 2016; Bechtel and Mannino, 2022; Cole, Healy and Werker, 2012; Gasper and Reeves 2011; Heersink et al., 2017). Birch's (2022) detailed study of the electoral consequences of floods in England between 2010 and 2019 calls into question both approaches, though there is some support for the rally hypothesis in two of the three elections that she examines. Finally, Zelin and Smith (2022) show that the Hurricane Michael in Florida affected voter behavior in the 2018 General Election; more specifically, turnout was lower among those directly impacted by the storm.

Then there are pandemics, such as COVID-19. Bol et al. (2021) find that COVID lockdowns increased support for the incumbent government; the authors reject, however, the rally around the flag hypothesis as the “most likely mechanism is retrospective performance evaluation, according to which citizens have had to understand that strict social confinement measures were necessary and have increased their support for those responsible for this policy.” (page 502). This conclusion is contested with respect to the Dutch case, where Schraff finds

evidence of a rally around the flag effect, whereby “the exceptional collective threat created by the pandemic fundamentally changes political trust formation” (page 1015). In Sweden and Denmark, Johansson et al. (2021) and Baekgaard et al. (2020) do find a rally effect, but that effect quickly disappears in the case of Sweden. Using panel data in the countries gathered during the months of the first wave of the COVID-19 crisis, Altiparmakis et al. (2021) found some evidence for the rally around the flag, but only in countries with comparatively low levels of polarization. Finally, Kritzinger et al. (2021) report a rally round the flag effect in Austria, a temporary one though, but not in France. The evidence is thus mixed with respect to the electoral consequences of COVID-19 though there is some support for the view that most governments did initially gain from the emergence of the pandemics. That benefit seems to have eroded quickly, however.

More recently, the conventional theory of rally events has been shown to require revisions related to the characteristics of the incumbent government or president. First, right-leaning incumbents may benefit more than left-leaning ones from a rally effect, at least in the case of terrorist attacks since right-wing parties enjoy a stronger reputation on national security issues (Merolla and Zeichmeister, 2013; Bélanger and Meguid, 2008; Chowanietz 2011; Berrebi and Klor, 2008). Second, a recent study by Holman et al. (2022) suggests that at least again in the case of terrorist events the gender of the prime minister or president may also matter. More precisely, the rally effect could be confined to governments led by a male prime minister or male presidents because “individuals threatened by terrorism further privilege masculine traits, which places women leaders at a disadvantage in those contexts” (page 250; see also Holman et al., 2011, 2016).

A third revision of the conventional theory of rally event is proposed in this paper. We argue that the rally round the flag theory has been developed without consideration of how citizens make attributions of responsibility when international terrorist attacks, natural disasters and the pandemic occur. A well-established proposition in the literature about representation in contemporary democracies is that “accountability, if it is to be properly exercised, first requires citizens to make attributions of responsibility” (Rudolph, 2003: 700). We expect stronger rally effects when individuals can easily assign political responsibilities in the particular policy area affected by the external shocks. The conventional argument formulated by Powell and Whitten (1993) is that the greater the perceived unified control of policymaking by the incumbent government, the more likely is the citizen to hold the incumbent government accountable for economic and political outcomes (page 398). Our expectation is that incumbent leaders are more likely to gain support when their country faces a major national threat in unitary than in federal countries. Roughly speaking, responsibility assignments for policy outcomes are more complicated in decentralized settings because the fragmentation of powers between levels of government diffuses responsibility for policymaking and implementation (León and Jurado, 2021).

However, not all policy areas are equally decentralized. Subnational governments play a significant role in education, health, and protection, but public order, safety, and defence are provided by the central government. If we focus on OECD member countries, when breaking the subnational expenditure by function, health is the second-largest spending item (after education), general public services and social protection are the third and the fourth most important sectors,

and defence and public order-related functions are the least important.² On average, in 2017, health spending accounted for 18% of subnational government expenditure and 2.9% of GDP. Health spending by subnational governments reached 48.6% in Italy, whereas it accounted for less than 0.5% in Greece, Iceland, Ireland, Israel and New Zealand. By contrast, defence and public order-related functions remain highly centralized in most OECD countries (OECD, 2020).

Of course, in decentralized countries, where competences are distributed between different levels of government, individuals find it more challenging to determine whom they should reward or punished than in centralized countries (Charbonneau and Anderson, 2021). As a result, even in health and education in decentralized countries, some individuals will hold the national government responsible. Our assumption is simply that, on average, individuals will consider the regional (national) government more (less) relevant in policymaking and implementation in highly decentralized countries/areas than in highly centralized countries/areas. For instance, the evidence from survey experiments conducted on April 2020 in Spain, one of the most decentralized countries in the world, shows that *only* 41 percent of respondents held the national government mainly responsible for the management of the COVID-19 pandemic (León and Jurado, 2021: 205).

When responding to the three external shocks we are examining, power is concentrated in the hands of the national government when dealing with a natural disaster and an international terrorist attack, but it is shared between the national and subnational government in decentralized states coping with the COVID-19 pandemic. First, the policy areas affected by international terrorist attacks are mainly safety, defence, and foreign affairs; all of them fall under the

² Expenditure by economic function follows the classification of the 10 functions of Government (COFOG): general public services; defence; public order and safety; economic affairs; environmental protection; housing and community amenities; health; recreation, culture, and religion; education; and social protection.

responsibility of the national government. Second, natural disaster response involves a spectrum of activities, including efforts to enhance preparedness and reduce risk, needs assessment, damage and loss assessment, emergency relief, and long-term recovery (Amin and Goldstein 2008: 2). Although post-disaster reconstruction is a complex process involving local, regional, national and international actors, the “central government is always responsible and accountable for managing a disaster response and for establishing policy to guide the reconstruction program.” (Jha et al., 2010: 9).

The evidence from earthquakes, tsunamis and floods in Indonesia, Mozambique and Pakistan, for instance, shows that the primary actors during the relief phase are the national government and the army, while the national institution coordinating relief and recovery is generally a central government entity (Amin and Goldstein, 2008). When international terrorist attacks and natural disaster occur the national government or president is the most visible actor in both unitary and federal countries and therefore any rally should benefit national incumbent administrations.

Things are different with respect to COVID-19 since in many jurisdictions, especially in federal countries, health is mostly a regional responsibility and most of the confinement measures are adopted at the regional level. In decentralized (federal) countries, therefore, any rally should benefit regional rather than national governments. If the COVID-19 pandemic produces rally effects, it should benefit national incumbent administrations in unitary countries where the health sector remains highly centralized.

Finally, an important contextual factor that needs to be considered is time. The economic voting literature suggests that voters are myopic and react to the economic conditions that prevail in the months preceding the election rather than on economic performance during the full

mandate (Dassonneville and Lewis-Beck, 2014: 378–79). In the same vein, we should not expect a rally effect when the calamity occurred years before the election.

We will therefore test the following hypotheses:

H1. International terrorist attacks, major floods, and COVID-19 produce boosts in the vote for incumbent governments and presidents.

H2. The electoral boost associated with international terrorist attacks and major floods is similar in centralized and highly decentralized countries.

H3. The electoral boost associated with COVID-19 is confined to centralized countries.

Throughout our analyses the dependent variable is the vote in the election that follows the occurrence of a given calamity. Most research on the rally effect examines the impact on the popularity of the government in the days, weeks, or months after an event; in certain cases, the authors look at the consequences on trust in the government or in political institutions at large.³ There is evidence that some of these effects are short-term and quickly dissipate (see Johansson et al., 2021). The bottom-line question, in our view, is whether these events have consequences at the ballot box, and this is the question that we focus upon. The implication is that we are bound to find weaker effects, since the boost that governments may enjoy in times of crisis may have disappeared by the time of the election. Additionally, when examining the electoral consequences of calamity at the ballot box, we are taking into account both the hypothetical rally effect and citizens' assessment of their government competence and performance in responding to the calamity. As incumbents' competence and performance will vary across countries, the

³ See Birch (2022) for a study that focuses entirely on the vote.

average rally effect is expected to be lower than when using poll data immediately after the calamity.

III. Explaining the Rally Around the Flag

a. Samples

Three samples were used to show whether floods, terrorist attacks and the COVID-19 pandemic produced rally effects and the extent to which the rallies were affected by the degree of decentralization of power. First, we employed the dataset built by Brakenridge (2021) about large flood events worldwide from January 1, 1985 to October 9, 2021. Second, using the Global Terrorism Database (GGTD, 2022), we collected information about all international terrorist attacks from 1970 to 2019 that were both logistically and ideologically international.⁴ Finally, we built a sample including all national legislative and presidential elections held after March 11, 2020, when the World Health Organization (WHO) declared the COVID-19 outbreak a global pandemic.⁵ The last election included in the sample was the parliamentary election in Grenada on June 23 2022.⁶ When there were more than one flood or attack within an electoral cycle in a given country, we selected the most harmful one. Only democratic elections (using the definition from Miller et al., 2022) were included. The datasets contain 423 floods in 96 countries, 226 terrorist attacks in 60 countries, and 61 pandemic elections in 55 countries. Finally, there are six countries (elections) where floods occurred after March, 11, 2020 and therefore two extreme

⁴ We have also used a less restrictive approach and examined any attack that involved an international component. The results were qualitatively the same.

⁵ Those countries/elections with caretaker governments when the shock took place were excluded from the sample. Additionally, the 2022 election in Philippines is also excluded given that the outgoing President Rodrigo Duterte refused to endorse a presidential candidate to succeed him and his party, the PDP-Laban, did not run the 2022 election with the same name (see <https://www.rappler.com/nation/elections/rodrigo-duterte-impact-2022-presidential-elections/>).

⁶ At the beginning of the pandemic, in some countries elections were postponed. More specifically, according to the data compiled by International IDEA (2020), from February 21, 2020 until February 21, 2022, 42 countries and territories across the globe decided to postpone national elections and referendums. This is no longer the case when examining elections held more than two years after the beginning of the pandemic.

events overlap. If they are excluded from the analyses, the results are similar.⁷ The datasets can be found at XXX.

b. Dependent variable

The dependent variable captures the electoral *swing* between the last parliamentary / presidential before the beginning of the flood, the terrorist attack and March 11, 2020, and the first parliamentary / presidential after the end of the flood, the terrorist attack and March 11, 2020.⁸ We exclusively focused on the party of the Prime Minister / President when the shock took place. Positive (negative) values mean that the incumbent did better (worse) in the post shock election.⁹ The sources of the election results are the respective Electoral Commissions.

c. Key independent variables

The severity of floods, attacks, and the pandemic is measured with the human damage they produce. First, the severity of floods is captured with the (log of the) number of deaths (+1) and the (log of the) number of displaced people (+1). Given that the two measures are highly correlated (0.52, $p < 0.001$ in our sample of 423 floods), the models are run separately for the two variables. The number of deaths varies between 0 in many countries and 160,000 in Thailand in 2004, while the number of displaced people varies between 0 in many countries and 40,000,000 in India in 2004. In other words, as can be seen in Table 1, variation in severity is huge.

Previous research on flood events used a metric based on the frequency and magnitude of floods (for instance, Kundzewicz et al., 2013). More specifically, Brakenridge (2021)

⁷ The six countries and the dates of the respective floods are as follows: Honduras (May 26, 2020), Mongolia (June 21, 2020), Canada (July 1, 2020), United States (August 22, 2020), Nicaragua (November 4, 2020) and Germany (July 14, 2021).

⁸ We focus on presidential elections in presidential regimes and we consider the first round. Elections boycotted by the opposition, such as the Serbia 2020 parliamentary election, are excluded, as well as elections in Switzerland since changes in government are only weakly tied to electoral results. Finally, in countries using parallel mixed-member systems, we focus on the election results of the dominant tier.

⁹ We also performed analyses including the lagged incumbent vote to control for possible floor and ceiling effects, and the results are the same. The results for the interactive models can be found in Appendix 1.

distinguishes severity class 1 (i.e., significant damage to structures or agriculture; fatalities; and/or 1–2 decades-long reported interval since the last similar event has occurred), severity class 1.5 (i.e., very large events whose return period is greater than 20 years but less than 100 years and affecting a large geographic region), and severity class 2 (i.e., truly extreme events, with an estimated return period equal to or greater than 100 years). Although interesting, this measure is more appropriate for analyses within countries over time than for cross-national analyses. For instance, the 1-day torrential rain occurred in New Zealand in June 2008 is coded as a severity class 2, although it implied no deaths and no displaced people. By contrast, the 13-day monsoon rain in Thailand in August 1997, whose human damage was very significant (45 deaths and 200,000 displaced people), is coded as severity class 1. The correlation between severity and the number of deaths and displaced people is *only* 0.25.

Second, the severity of terrorist attacks is captured with the (log of) number of deaths (+1). In an inductive exercise regressing presidential approval in polls on international terrorist attacks, Holman et al. (2022) see a positive relationship when the casualty count exceeds 15 deaths. In our analyses we also included a dummy variable coded 1 when the attack had 16 deaths or more, 0 otherwise. The number of casualties varies between 0 in many countries and 230 in Niger in 2015.

Finally, we employ two measures of the severity of the pandemic in the short-term and long term: the total number of deaths per million since the beginning of the pandemic until the day before the Election Day and the total number of deaths per million since the beginning of the pandemic until the day before the Election Day divided by the number of days between March 11, 2020 and the date of the election, respectively. The former goes from 0 in Burundi or New Zealand to 667.85 in Peru and the later varies from 0.001 in Burundi to 11.50 in Peru. Since the

number of total deaths increases as time goes by, in those countries whose elections are held closer to the beginning of the pandemic the pandemic seems less severe. When using a daily average, this problem disappears. The source is Ritchie et al. (2020). The correlation between the two variables is 0.69 ($p < 0.001$).

In order to test whether the rally effects were affected by the degree of decentralization of power, we use the Regional Authority Index (RAI). The sources are Hooghe et al. (2016) and Shair-Rosenfield et al. (2021).¹⁰ Unfortunately, the RAI scores are not available for all the countries in our samples. The scores range from 0 in Jamaica or Malta to 37.67 in Germany.

d. Control variables

The second set of variables is common to the three external shocks and is used to test other possible explanations of electoral swings, without dramatically reducing the number of observations. First, economic growth in the year prior to the election, in particular the rate of change in the (constant 2015 U.S. dollars) annual gross domestic product (GDP). The source is the World Bank. The expected effect of economic growth is positive. Second, a dummy variable coded 1 if the election is presidential, 0 if is parliamentary. Third, a dummy variable coded 1 if the country is an OECD member, 0 otherwise. As on average OECD country members are more economically developed than the non-members, we expect that the former will have more stable party systems and therefore smaller electoral swings. Finally, the number of days elapsed between the beginning of the pandemic (March 11, 2020) and the Election Day.¹¹

¹⁰ The **RAI** is a measure of the authority of regional governments across ten dimensions: institutional depth, policy scope, fiscal autonomy, borrowing autonomy, representation, law making, executive control, fiscal control, borrowing control, and constitutional reform. These ten dimensions constitute two domains of authority: *self-rule*, or the authority a regional government exerts within its territory; and *shared rule*, or the authority a regional government or its representatives exerts in the country as a whole. Country scores aggregate scores for each regional tier.

¹¹ We performed analyses including interactions between the severity of the shock and number of days, but they were not statistically significant.

The descriptive statistics of all variables are displayed in Table 1.

Table 1. Descriptive Statistics

| | Floods | | | | |
|----------------------------------|--------------------------|--------|-----------|--------|--------|
| | Obs | Mean | Std. dev. | Min | Max |
| Swing | 423 | -6.64 | 13.86 | -67.67 | 42.49 |
| (log of) Displaced people | 423 | 7.17 | 4.33 | 0 | 17.50 |
| (log of) Deaths | 423 | 2.86 | 2.13 | 0 | 11.98 |
| GDP _{t-1} | 423 | 3.28 | 4.05 | 15.14 | 17.29 |
| Presidential election | 423 | 0.47 | 0.50 | 0 | 1 |
| OECD member | 423 | 0.39 | 0.49 | 0 | 1 |
| Number of Days | 423 | 784.44 | 492.04 | 3 | 2375 |
| RAI | 361 | 12.53 | 10.35 | 0 | 37.67 |
| | Terrorist Attacks | | | | |
| | Obs | Mean | Std. dev. | Min | Max |
| Swing | 226 | -5.43 | 11.54 | -67.99 | 29.15 |
| (log of) Deaths | 226 | 0.97 | 1.23 | 0 | 5.44 |
| GDP _{t-1} | 226 | 3.36 | 4.01 | -7.75 | 34.39 |
| Presidential election | 226 | 0.31 | 0.46 | 0 | 1 |
| OECD member | 226 | 0.63 | 0.48 | 0 | 1 |
| Number of days | 226 | 662.0 | 493.77 | 1 | 2462 |
| RAI | 219 | 15.20 | 11.48 | 0 | 37.67 |
| | COVID-19 pandemic | | | | |
| | Obs | Mean | Std. dev. | Min | Max |
| Swing | 61 | -4.58 | 14.14 | -48.78 | 25.96 |
| Month deaths per million | 61 | 81.50 | 141.34 | 0 | 667.85 |
| Total deaths per million per day | 61 | 2.06 | 2.39 | 0.001 | 11.50 |
| GDP _{t-1} | 61 | -0.46 | 5.99 | -14.78 | 10.6 |
| Presidential election | 61 | 0.38 | 0.49 | 0 | 1 |
| OECD member | 61 | 0.38 | 0.49 | 0 | 1 |
| Number of days | 61 | 458.54 | 231.37 | 35 | 834 |
| RAI | 47 | 8.73 | 9.37 | 0 | 37.67 |

e. Methods

We ran ordinary least squares (OLS) models to test our hypotheses. As several elections were held at the same time or in a brief period of time in some countries after March 11 2020 (three in Bulgaria and two in Cape Verde, Portugal and South Korea), the standard errors were

clustered by country when ascertaining the rally effect in the pandemic. The rally effects were examined through additive specifications which included the severity measure of the external shock and the controls. To test whether the rally is affected by the degree of decentralization, we added an interaction between the severity measure and the RAI scores.¹²

IV. Results

Our models are run separately for the three external shocks.

Floods

Figure 1 displays the relationship between the electoral swing and our two measures of flood severity. The solid line represents the fitted values from a bivariate regression of swing on (the log of) the number of displaced people and (the log of) deaths, along with the two-tailed 95 percent confidence interval. Apart from the huge variation in the number of displaced people and deaths, it should be immediately clear that there are observations (for instance, Brazil in 1989, when the Brazilian Democratic Movement

Party dropped from the 72.73 percent of the votes to the 4.74 percent) which are distinct outliers.

¹² We have also run our interactive models through a robust regression. In particular, we used the Stata's `rreg` command. The results are qualitatively the same, as can be seen in Appendix 2.

Figure 1. The Rally Effects of Floods

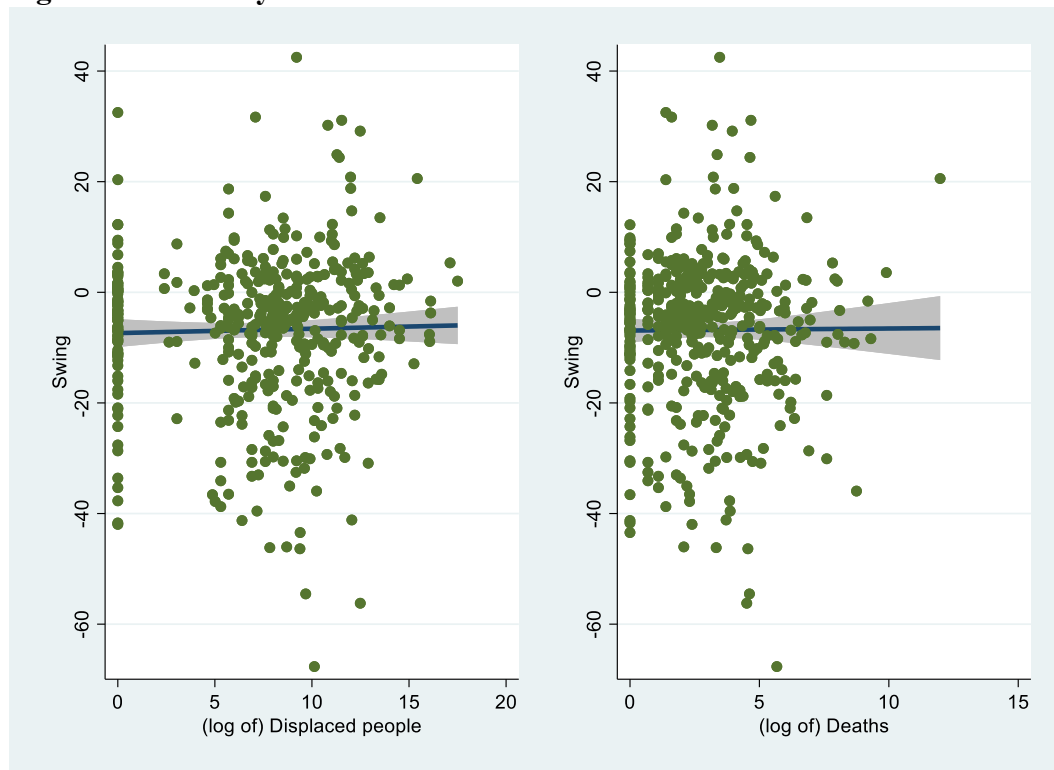


Table 2 displays the results when examining the rally effects of floods. Using a conventional rule-of-thumb, those observations with a studentized residual larger than 3 in absolute value have been removed from the analysis.¹³ The first model shows that floods produced a rally effect: the more displaced people due to the flood, the greater the electoral support of the party of the Prime Minister / President in the subsequent election. The variable is statistically significant at the 0.01 percent level. Economic growth, presidential elections and being an OECD member country have the expected signs and are statistically significant at the 0.05 percent level or better, while the number of days between the flood and the elections does not make a difference for the incumbent. When replacing (the log of) the number of displaced people with (the log of) deaths in model 2, however, there is no evidence of a rally. The latter has

¹³ Five observations, including Brazil in 1989, whose studentized residual is -4.27, have been deleted.

the expected positive sign, but it is not statistically significant. The controls behave similarly in both models. This suggests that floods have a more enduring effect when communities are displaced because the government has to adopt more policies in the short and long-term regarding their return of resettlement.

As a robustness check, in models 3 and 4 those observations that are more than two standard deviations away from the mean in the variables capturing the severity of floods have been also removed. As can be seen, the results are qualitatively the same.

Finally, in models 5 and 6 we test whether the rally effect produced by floods are affected by the degree of decentralization captured with the RAI scores. The number of observations drops because the RAI scores are not available for all countries. We dropped again those observations whose studentized residuals are larger than 3 in absolute value. The effect of the two interactions, *(log of) Displaced people × RAI* and *(log of) Deaths × RAI*, is erratic and not statistically significant, in line with our hypotheses. Economic growth and presidential elections are again statistically significant at the 0.01 percent level and have the same positive and negative effects on the electoral swing, respectively.

In sum, in the case of floods, then, there seems to be a rally around the flag, and that rally is independent of the degree of centralization.

Table 2. Floods and the Rally around the Flag

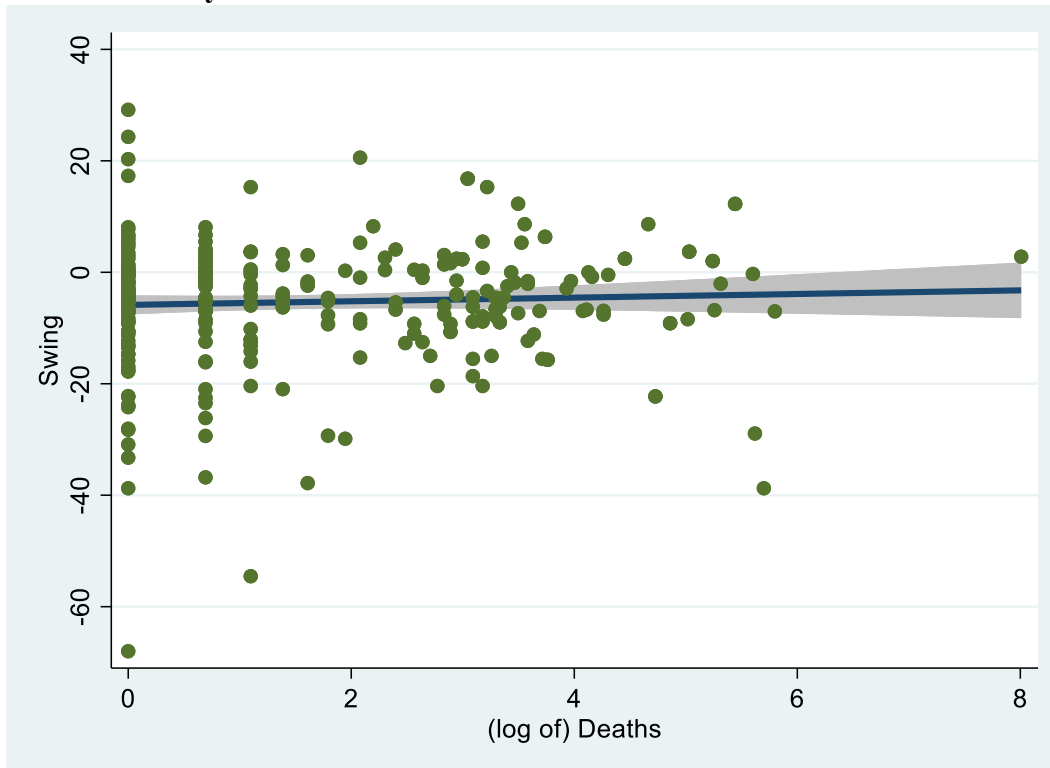
| VARIABLES | M1 | M2 | M3 | M4 | M5 | M6 |
|---------------------------------|-----------|----------|-----------|----------|----------|----------|
| (log of) Displaced people | 0.29*** | | 0.30*** | | 0.17 | |
| | (0.14) | | (0.15) | | (0.24) | |
| (log of) Deaths | | 0.42 | | 0.48 | | 0.33 |
| | | (0.31) | | (0.35) | | (0.49) |
| GDP _{t-1} | 0.58*** | 0.60*** | 0.59** | 0.61*** | 0.61*** | 0.64*** |
| | (0.18) | (0.18) | (0.18) | (0.18) | (0.19) | (0.19) |
| Presidential election | -4.39*** | -4.19*** | -4.59*** | -3.70** | -4.22*** | -4.06*** |
| | (1.35) | (1.37) | (1.39) | (1.44) | (1.43) | (1.45) |
| OECD member | 2.90** | 2.70** | 2.97** | 2.76** | 2.84 | 2.24 |
| | (1.29) | (1.26) | (1.29) | (1.28) | (1.53) | (1.54) |
| Number of days | 0.0010 | 0.0010 | 0.0012 | 0.0010 | -0.0007 | -0.0006 |
| | (0.0013) | (0.0013) | (0.0014) | (0.0014) | (0.0013) | (0.0013) |
| RAI | | | | | -0.017 | 0.079 |
| | | | | | (0.11) | (0.097) |
| (log of) Displaced people × RAI | | | | | 0.0064 | |
| | | | | | (0.011) | |
| (log of) Deaths × RAI | | | | | | -0.012 |
| | | | | | | (0.020) |
| Constant | -10.15*** | -9.36*** | -10.33*** | -9.75*** | -8.62*** | -8.50*** |
| | (1.90) | (1.78) | (1.94) | (1.86) | (2.68) | (2.31) |
| Observations | 418 | 418 | 412 | 403 | 357 | 357 |
| R-squared | 0.08 | 0.08 | 0.08 | 0.07 | 0.10 | 0.09 |

p < 0.05; *p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

International terrorist attacks

The relationship between the electoral swing and the number of casualties produced by international attacks using a 95 percent confidence interval is shown in Figure 2. The solid line representing the fitted values is flat and clearly suggests that there are no rally effects.

Figure 2. The Rally Effects of International Terrorist Attacks



In Table 3 the rally effects produced by terrorist attacks are examined following the same strategy as in Table 2. In models 1 and 2 those observations whose studentized residuals in absolute value are larger than 3 have been dropped, while in models 3 and 4 those observations that are more than two standard deviations away from the mean in the number of casualties have been also removed. There is no evidence of a rally. Both the (log of) the number of casualties and the dummy variable capturing whether the casualty count exceeds 15 deaths are not statistically significant, although they have the expected positive signs. Both economic growth and presidential elections are statistically significant at the 0.05 and 0.01 percent levels, respectively, and affect the electoral support of the incumbent in the expected positive and negative directions, respectively. When testing whether the rally is a function of the

decentralization of power in models 5 and 6, the interactions are far from being statistically significant. Again, this is in line with our hypotheses.

Table 3. Terrorist Attacks and the Rally around the Flag Effect

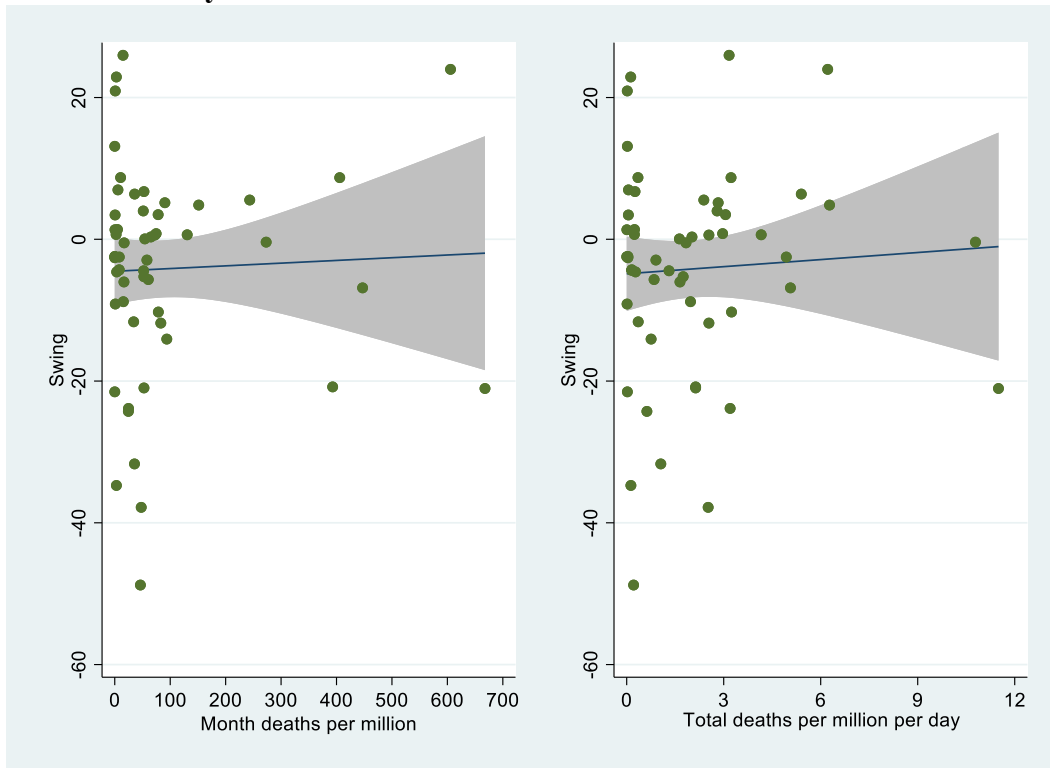
| VARIABLES | M1 | M2 | M3 | M4 | M5 | M6 |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| (log of) Deaths | 0.54 (0.59) | | 0.055 (0.64) | | 0.39 (1.36) | |
| Dummy (16 deaths or more) | | 2.33 (2.05) | | 0.91 (2.46) | | 5.04 (5.83) |
| GDP _{t-1} | 0.51** (0.20) | 0.51** (0.20) | 0.51** (0.20) | 0.51** (0.20) | 0.53** (0.21) | 0.53** (0.21) |
| Presidential election | -5.79*** (1.77) | -5.73*** (1.78) | -6.01*** (1.84) | -5.95*** (1.85) | -5.90*** (1.89) | -5.94*** (1.86) |
| OECD member | 1.51 (1.69) | 1.52 (1.67) | 1.92 (1.70) | 1.99 (1.68) | 1.75 (1.80) | 1.70 (1.80) |
| Number of days | -0.0008 (0.001) | -0.0007 (0.001) | -0.0007 (0.001) | -0.0006 (0.001) | -0.0008 (0.001) | -0.0009 (0.001) |
| RAI | | | | | 0.087 (0.072) | 0.090 (0.051) |
| (log of) Deaths × RAI | | | | | -0.022 (0.055) | |
| Dummy (16 deaths) × RAI | | | | | | -0.22 (0.23) |
| Constant | -6.02*** (2.17) | -5.89*** (2.05) | -6.05*** (2.18) | -6.17*** (2.05) | -7.31*** (2.56) | -7.28*** (2.27) |
| Observations | 223 | 223 | 217 | 217 | 210 | 212 |
| R-squared | 0.14 | 0.14 | 0.15 | 0.15 | 0.17 | 0.17 |

p < 0.05; *p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

The COVID-19 pandemic

The relationship between our two metrics capturing the severity of the COVID-19 pandemic and support for the incumbent is displayed in Figure 3. In comparison with the two previous analyses, outliers are clearly less relevant here. More specifically, there are no observations with studentized residuals larger than ± 3 . The largest studentized residuals in model 2 in Table 4, for instance, is -2.82 (Mongolia)

Figure 3. The Rally Effects of the COVID-19 Pandemic



In Table 4 we test whether the number of deaths per million in the month before the Election Day and the total number of deaths per million since the beginning of the pandemic until the day before the Election Day divided by the duration of the pandemic in days produced a rally effect. As can be seen in models 1 and 2, both variables have a positive sign, but are not statistically significant. In both models, support of the party of the Prime Minister / President increases with economic growth and decreases in presidential elections. The two variables are statistically significant at the 0.05 percent levels.

In models 3 and 4 the interaction terms *Month deaths per million* \times *RAI* and *Total deaths per million per day* \times *RAI* and are added to the previous specifications. In model 3, *Month deaths per million* has the expected positive effect and is statistically significant at the 0.05 percent level, while the interaction is not. By contrast, in model 4 *Total deaths per million per day* \times *RAI*

is statistically significant at the 0.05 percent level and has the expected negative sign. This means that the rally effect drops when decentralization increases. Interestingly, the principal effect *Total deaths per million per day* is positive and statistically significant at the 0.05 percent level; in highly centralized countries (i.e., in those countries with a value 0 in the RAI), the more severe the pandemic, the larger the rally. In our sample of 47 countries, 9 of them score 0 in the RAI (for instance, Bahamas, Jamaica or Malta) and 14 between 0.08 and 5.

Finally, in models 5 and 6 the same interactive specifications are run, but after deleting those observations that are more than two standard deviations away from the mean in the variables capturing the severity of the pandemic. In Model 5 the principal effect *Month deaths per million* is no longer statistically significant. In Model 6 the results are qualitatively the same. When dropping the only observation whose *Total deaths per million per million per day* is two standard deviations away from the average (Peru), the effect of RAI on the rally is even stronger. The interaction *Total deaths per million per day* \times *RAI* and *Total deaths per million per day* are again statistically significant at the 0.05 and 0.01 percent levels and with the expected negative and positive effects, respectively.

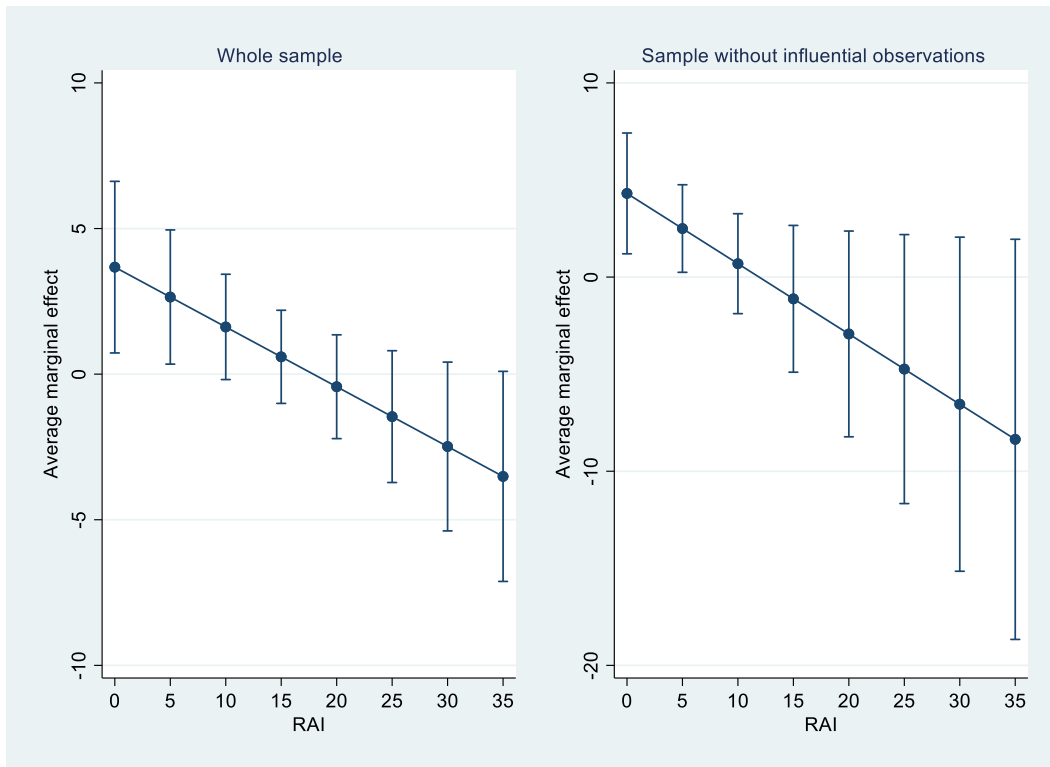
Table 4. The COVID-19 Pandemic and the Rally around the Flag

| VARIABLES | M1 | M2 | M3 | M4 | M5 | M6 |
|--|---------|---------|----------|----------|----------|----------|
| Month deaths per million | 0.017 | | 0.042*** | | 0.0031 | |
| | (0.013) | | (0.013) | | (0.080) | |
| Total deaths per million per day | | 0.54 | | 3.67** | | 4.31*** |
| | | (0.67) | | (1.46) | | (1.54) |
| GDP _{t-1} | 0.68** | 0.59** | 0.82** | 0.56 | 0.68 | 0.64 |
| | (0.26) | (0.25) | (0.41) | (0.35) | (0.49) | (0.38) |
| Presidential election | -8.40** | -8.30** | -8.44 | -7.47 | -10.32 | -6.83 |
| | (3.70) | (3.75) | (4.66) | (4.84) | (5.47) | (4.83) |
| OECD member | 5.94 | 5.41 | 8.83** | 7.13 | 6.56 | 7.45 |
| | (3.39) | (3.54) | (4.54) | (4.92) | (5.18) | (4.88) |
| Number of days | -0.011 | -0.011 | -0.011 | -0.015** | -0.0090 | -0.015** |
| | (0.006) | (0.006) | (0.0079) | (0.0075) | (0.0089) | (0.0075) |
| RAI | | | 0.11 | 0.45 | 0.016 | 0.71 |
| | | | (0.28) | (0.26) | (0.29) | (0.40) |
| Month deaths per million × RAI | | | -0.0014 | | 0.0028 | |
| | | | (0.0008) | | (0.0068) | |
| Total deaths per million per day × RAI | | | | -0.21** | | -0.36** |
| | | | | (0.08) | | (0.17) |
| Constant | 0.52 | 1.12 | -4.61 | -5.68 | -2.82 | -6.92 |
| | (3.85) | (3.78) | (4.25) | (4.52) | (5.29) | (4.77) |
| Observations | 61 | 61 | 47 | 47 | 42 | 46 |
| R-squared | 0.23 | 0.21 | 0.34 | 0.34 | 0.32 | 0.34 |

p < 0.05; *p < 0.01. Estimation is by OLS. Standard errors clustered by country in parentheses.

As interactions are not easy to interpret, Figure 4 shows how the rally effect drops the more decentralized countries are using a 95 percent confidence interval. The left-hand side captures the average marginal effect of the interaction in model 4 and the right-hand side the average marginal effect of the interaction in model 6. In both cases, in those countries scoring 5 or less on the RAI (22 countries, the 51% of the sample), the incumbent did better in the election the more severe the pandemic was. When the RAI scores are above 5, there is no rally. In sum, it is only in centralized countries that incumbent governments perform better under a more severe pandemic.

Figure 4. Simulating the Joint Effect of the Severity of the Pandemic and the Decentralization of Power



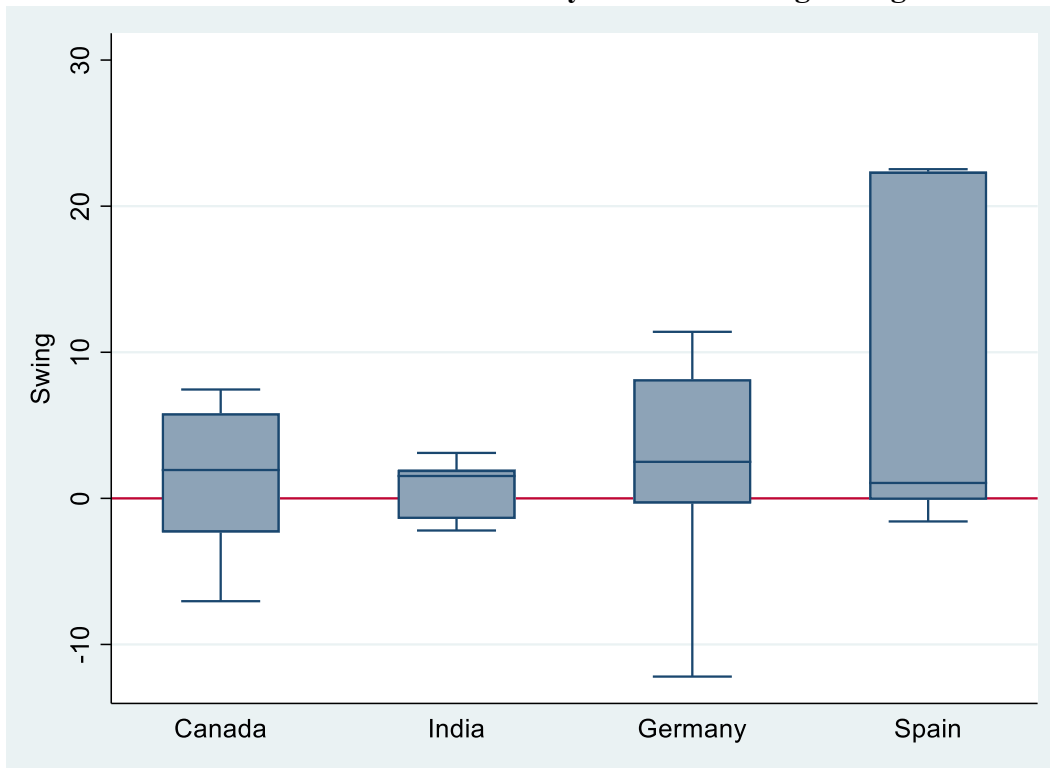
A regional-level analysis

A clear expectation of our cross-national analysis is that the public should rally around the regional incumbent in the case of the COVID-19 pandemic. We examined whether support for regional executives bumps in four highly decentralized countries from three different continents: Canada, Germany, India and Spain. Between March 2020 and June 2022, 31 regional/state elections were held in the four counties, eight elections in Canada, eight elections in Germany, nine elections in India and six elections in Spain.¹⁴

¹⁴ The regions/states included in the sample are the following: in Canada, British Columbia, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Quebec, Saskatchewan and Yukon; in Germany, Baden-Wurtemberg, Berlin, Mecklenberg-Vorpommern, North Rhine-Westphalia, Rhineland-Palatinate, Saarland, Saxony-Anhalt and Schleswig-Holstein; in India, Asaam, Bihar, Goa, Kerala, Manipur, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal; and in Spain, Andalucía, Castilla y León, Cataluña, Galicia, Madrid and País Vasco.

As can be seen in Figure 5, the support for the party of the regional Prime Minister increased by 2.65 points on average: 1.41 in Canada, 0.65 in India, 2.48 in Germany and 7.55 in Spain. In other words, the average or median electoral *swing* between the last regional/state election before the beginning of the pandemic and the first one after March 11, 2020 is positive in the four countries. More specifically, while twenty regional incumbents increased their support (the average was 5.71), eleven lost support (the average was -2.91). When performing a paired t-test, the difference in the support for the party of the regional Prime Minister between the two elections is statistically significant at the 0.05 percent level ($t = 2.12, p = 0.0426$).

Figure 5. The COVID-19 Pandemic and the Rally around the Flag in Regional Elections



V. Conclusion

The conventional expectation is that national incumbent leaders gain support when their country faces a collective threat. However, the ‘rally around the flag’ argument neglects an

important factor affecting the strength of rally effects: who is in charge when dealing with the external shock.

We argue that the inclination to support the national incumbent following a calamity is comparatively lower or entirely undermined in a decentralized setting where the fragmentation of powers between the national and the regional levels of governments diffuses responsibilities for policymaking. Foreign and national security policies are exclusively in the hands of national governments, while health is mostly a regional responsibility or at least it is shared between different levels of government. Therefore, the rally when an international terrorist attack or a flood takes place should be similar in centralized and decentralized countries, but it should only benefit the national incumbent in the former in the case of COVID-19. In other words, the classic rally around the flag argument needs to be revisited in light of scholarship on how decentralization of public authority affects electoral accountability.

We assess the theses with observational data from national legislative and presidential elections after 423 major floods, 226 terrorist attacks and 61 pandemic elections. We find that it is only in centralized countries that incumbent governments perform better under a more severe pandemic. In line with our expectations, in the case of floods there seems to be a rally around the flag, and that rally is independent of the degree of centralization, while there is no evidence of a rally after an international terrorist attack in centralized and decentralized countries.

Our analysis of how decentralization of power affects the rally around the flag when there is a calamity is crying out for additional poll evidence using cross-national reliable time series of executive approval. Whatever the case, our findings remind us that we need to consider which government is likely to be held responsible when an unexpected calamity occurs.

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Appendix 1

Interactive models controlling for the lagged incumbent vote

Table A1a. Floods and the Rally around the Flag

| VARIABLES | M5 | M6 |
|---------------------------------|----------|----------|
| (log of) Displaced people | 0.21 | |
| | (0.24) | |
| (log of) Deaths | | 0.34 |
| | | (0.49) |
| GDP _{t-1} | 0.60*** | 0.63*** |
| | (0.19) | (0.19) |
| Presidential election | -3.67** | -3.47** |
| | (1.48) | (1.50) |
| OECD member | 2.66 | 2.04 |
| | (1.51) | (1.53) |
| Number of days | -0.0008 | -0.0006 |
| | (0.0013) | (0.0013) |
| RAI | -0.015 | 0.069 |
| | (0.11) | (0.094) |
| (log of) Displaced people × RAI | 0.0040 | |
| | (0.006) | |
| (log of) Deaths × RAI | | -0.013 |
| | | (0.020) |
| Lagged incumbent vote | -0.15** | -0.14** |
| | (0.063) | (0.063) |
| Constant | -2.86 | -2.54 |
| | (3.47) | (3.32) |
| Observations | 357 | 357 |
| R-squared | 0.11 | 0.11 |

p < 0.05; *p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

Table A1b. Terrorist Attacks and the Rally around the Flag Effect

| VARIABLES | M5 | M6 |
|---------------------------|--------------------|--------------------|
| (log of) Deaths | 0.46 (1.32) | |
| Dummy (16 deaths or more) | | 5.54 (5.41) |
| GDP _{t-1} | 0.59*** (0.21) | 0.59*** (0.21) |
| Presidential election | -4.74** (1.96) | -4.75** (1.92) |
| OECD member | 1.76 (1.77) | 1.75 (1.77) |
| Number of days | -0.0009 (0.001) | -0.0011 (0.001) |
| RAI | 0.096 (0.071) | 0.094 (0.049) |
| (log of) Deaths × RAI | -0.030 (0.053) | |
| Dummy (16 deaths) × RAI | | -0.25 (0.22) |
| Lagged incumbent vote | -0.12** (0.053) | |
| Constant | -3.07 (2.93) | -2.85*** (2.79) |
| Observations | 210 | 212 |
| F | 0.18 | 0.19 |

p < 0.05; *p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

Table A1c. The COVID-19 Pandemic and the Rally around the Flag

| VARIABLES | M5 | M6 |
|--|---------------------|----------------------|
| Month deaths per million | -0.0063 | |
| | (0.080) | |
| Total deaths per million per day | | 4.21** (1.60) |
| GDP _{t-1} | 0.79 (0.51) | 0.65 (0.39) |
| Presidential election | -10.38 (5.53) | -6.80 (4.92) |
| OECD member | 3.88 (5.82) | 7.09 (5.64) |
| Number of days | -0.0083 (0.0089) | -0.015** (0.0077) |
| RAI | 0.043 (0.29) | 0.70 (0.41) |
| Month deaths per million × RAI | 0.0030 (0.0068) | |
| Total deaths per million per day × RAI | | -0.35** (0.18) |
| Lagged incumbent vote | -0.13 (0.13) | -0.023 (0.14) |
| Constant | -3.45 (8.20) | -5.76 (7.87) |
| Observations | 42 | 46 |
| R-squared | 0.33 | 0.34 |

**p < 0.05. Estimation is by OLS. Standard errors clustered by country in parentheses.

Appendix 2

Robust regressions

Table A2a. Floods and the Rally around the Flag

| VARIABLES | M5 | M6 |
|---------------------------------|----------|----------|
| (log of) Displaced people | 0.084 | |
| | (0.21) | |
| (log of) Deaths | | -0.16 |
| | | (0.42) |
| GDP _{t-1} | 0.58*** | 0.62*** |
| | (0.15) | (0.14) |
| Presidential election | -3.71*** | -3.32*** |
| | (1.24) | (1.23) |
| OECD member | 2.41 | 1.75 |
| | (1.32) | (1.32) |
| Number of days | -0.0008 | -0.0006 |
| | (0.0012) | (0.0012) |
| RAI | -0.015 | 0.046 |
| | (0.11) | (0.10) |
| (log of) Displaced people × RAI | 0.0055 | |
| | (0.012) | |
| (log of) Deaths × RAI | | 0.0009 |
| | | (0.024) |
| Constant | -7.35*** | -6.70*** |
| | (2.15) | (1.94) |
| Observations | 361 | 361 |
| F | 5.05 | 4.90 |

***p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

Table A2b. Terrorist Attacks and the Rally around the Flag Effect

| VARIABLES | M5 | M6 |
|---------------------------|--------------------|--------------------|
| (log of) Deaths | -1.45 (0.89) | |
| Dummy (16 deaths or more) | | -3.85 (3.54) |
| GDP _{t-1} | 0.65*** (0.14) | 0.67*** (0.14) |
| Presidential election | -4.91*** (1.33) | -4.69*** (1.34) |
| OECD member | 2.47 (1.34) | 2.30 (1.34) |
| Number of days | -0.0007 (0.001) | -0.0006 (0.001) |
| RAI | 0.009 (0.066) | 0.059 (0.053) |
| (log of) Deaths × RAI | -0.057 (0.041) | |
| Dummy (16 deaths) × RAI | | 0.13 (0.16) |
| Constant | -6.42*** (1.88) | -7.59*** (1.76) |
| Observations | 219 | 219 |
| F | 8.18 | 8.04 |

***p < 0.01. Estimation is by OLS. Robust standard errors in parentheses.

Table A2c. The COVID-19 Pandemic and the Rally around the Flag

| VARIABLES | M5 | M6 |
|--|---------------------|--------------------|
| Month deaths per million | -0.0022 | |
| | (0.025) | |
| Total deaths per million per day | | 3.42** (1.69) |
| GDP _{t-1} | 0.63 (0.42) | 0.47 (0.38) |
| Presidential election | -8.64 (4.85) | -6.03 (4.52) |
| OECD member | 6.81 (5.65) | 6.99 (5.31) |
| Number of days | -0.0089 (0.0095) | -0.015 (0.0095) |
| RAI | -0.010 (0.32) | 0.44 (0.38) |
| Month deaths per million × RAI | 0.0030 (0.0043) | |
| Total deaths per million per day × RAI | | -0.20 (0.11) |
| Constant | -3.85 (5.31) | -5.16 (5.28) |
| Observations | 46 | 47 |
| F | 1.87 | 2.10 |

**p < 0.05. Estimation is by OLS. Standard errors clustered by country in parentheses.