

Preferences for Centralized Decision-Making in Times of Crisis: The COVID-19 Pandemic in Germany

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Abstract

The health crisis caused by the rapid spread of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) poses enormous challenges to governments around the globe. Far-reaching measures have to be enacted, and even a slight delay can have fatal negative consequences. The necessity for swift and resolute governmental action constitutes a particular predicament for federal democracies like Germany in which the regular decision-making process requires not only time for parliamentary scrutiny but also the coordination of multiple actors and interests at different levels of government. In this context, calls for centralized decision-making and expanded executive discretion are frequent. This study uses daily panel data from the Mannheim Corona Study collected during the first wave of the pandemic to investigate factors that influence respondents' propensity to grant additional discretionary powers to the German federal government. Based on insights from the crisis management literature, we explore the effects of decentralized policy responses, trust in government, satisfaction with the government and parliament, and personal threat perceptions on individual preferences for centralized decision-making. The results show that, while trust in government before the pandemic has a minor impact, state-level policy heterogeneity and individual threat perceptions strongly increase the likelihood to support the centralization of decision-making competencies.

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“Our idea of normality, of public life, social togetherness – all of this is being put to the test as never before.”

– Angela Merkel, German Chancellor, in her TV announcement on March 18, 2020.

1 Introduction

Within only three months after its first occurrence in Wuhan (China) in December 2019, the novel coronavirus SARS-CoV-2 matured into a full-scale global pandemic ([World Health Organization, 2020b](#)).¹ On April 3, 2020, the number of officially confirmed COVID-19 cases worldwide surpassed one million while 53.379 reported deaths were attributed to the novel coronavirus. Another month later, these numbers climbed to almost 3.5 million confirmed cases and 243.872 deaths. It only took until the end of September – approximately nine months after the first reported incidence – before one million people died in connection to COVID-19 ([Hasell et al., 2020](#)).

As these numbers plainly signify, the global COVID-19 pandemic posed a severe challenge for societies and governments. In the absence of an effective treatment or a vaccination, containing the spread of the virus seemed to be the only viable option to conquer the health crisis and to protect lives. However, containment policies constitute a delicate dilemma for liberal democracies as they interfere with fundamental civic liberties in an unprecedented manner (e.g., [Hattke and Martin, 2020](#)). Furthermore, given the pace at which the virus propagated through society, containment measures needed to be implemented immediately since even a slight delay could have fatal negative consequences (e.g., [Breznau, 2020](#)). Yet, this necessity for swift governmental action stands in contrast to the deliberative character of the democratic decision-making process. It also conflicts with the basic principles of federalism that grants discretionary powers to different levels of the government (see also [Rosenthal and Kouzmin, 1997](#)). Consequently, [Corbett](#) pointedly summarizes that “liberal democracy is, in its very conception, opposed to crisis government” ([2009, 20](#)).

In order to enable the government to take prompt and resolute actions in times of crisis,

¹The World Health Organization (WHO) first classified the outbreak as “Public Health Emergency of International Concern” on January 30, 2020 ([World Health Organization, 2020a](#)) and as pandemic on March 11, 2020 ([World Health Organization, 2020b](#)).

centralizing decision-making competencies at the federal level and thereby expanding the executive's discretionary power is a common response in democratic systems (e.g., [Scheuerman, 2012](#); ['t Hart, Tindall and Brown, 2009](#); [Hermann, 1963](#)). Conceptually, centralization occurs along two distinct dimensions. First, power shifts from other federal-level institutions, such as the legislative assembly, to the federal government. Second, the federal executive branch assumes additional decision-making power from state-level governments ([Lijphart, 2012](#)). These tendencies were also visible during the first wave of the COVID-19 pandemic in Germany, when calls for an expansion of executive powers and the centralization of decision-making authority at the federal level were common ([Hegele and Schnabel, 2021](#); [Hattke and Martin, 2020](#)).

While democratic governments have clear incentives to expand their discretionary power in times of crisis (e.g., [Matthews, 2012](#); ['t Hart and Tindall, 2009](#); [Arato, 2002](#); [Ackerman, 2000](#)), we know comparatively little about the public's willingness to equip the executive branch of government with additional decision-making capacity. Given that citizens' policy evaluations as well as their willingness to comply with policy outcomes are partly determined by the decision-making process itself (e.g., [Juhl and Hilpert, 2021](#); [Hibbing and Theiss-Morse, 2001](#)), understanding their preferences for crisis politics is of central importance for the effectiveness of containment policies.

Against this background, the the present study investigates the motivations for people to approve the centralization of decision-making competency at the federal level in times of crisis. By relying on daily data from a probability-based panel survey in Germany collected between March and July 2020, we measure the public support for expanded decision-making discretion at the federal level of government over the course of the first epidemic wave. While controlling for several socio-demographic and economic factors as well as sub-national infection rates, we seek to explore the effects of heterogeneity in state-level policy responses, trust in the federal government, satisfaction with the work of the government and the parliament, as well as individual threat perceptions on the approval of centralized decision-making.

Our analysis shows that especially individual threat perceptions and divergence in containment policies across German states determine the support for centralized decision-making at the federal level. Whereas trust in government has no discernible effect, the analysis reveals that satisfaction with the federal government and parliament prior to the onset of the pandemic

have the expected consequences for public approval of centralization. These results suggest that, irrespective of the spatial dispersion of infection rates, citizens prefer coordinated and homogeneous policy responses in times of crisis.

2 Policy Responses to the COVID-19 Pandemic in Germany

According to data provided by the *Our World in Data* project, the first officially confirmed COVID-19 case in Germany was reported on January 28, 2020 (Hasell et al., 2020). However, it took until the end of February before some local hotspots – especially in Bavaria and North Rhine-Westphalia – emerged that spurred the spread of SARS-CoV-2 and challenged local health authorities which struggled to trace back every chain of infection. Despite these developments and the federal government’s recommendation to cancel public events with more than 1,000 attendees, mass events like carnival and also major sports events with thousands of participants and visitors still took place (Hattke and Martin, 2020; Naumann et al., 2020).

In this initial phase of the pandemic in Germany, the federal government followed a containment strategy that predominantly relied on state governments and the local health authorities to identify clusters and suppress the spread of the virus. The federal government was reluctant to impose measures that drastically interfere with civic liberties and the everyday life of millions of people. Yet, due to a lack of common testing and quarantining standards as well as a shortage of staff, this initial decentralized response turned out to be insufficient in order to prevent the virus from spreading (Hattke and Martin, 2020).

Consequently, in mid-March, the number of confirmed cases started to increase exponentially and the German government quickly changed its strategy towards a more centralized and interventionist approach. This new containment strategy primarily relied on issuing stay-at-home orders, closing national borders, shutting down major parts of the economy, closing public institutions (e.g., universities, libraries, etc.) as well as schools and childcare facilities, prohibiting public events, increasing the testing capacity, coordinating a joint procurement program for personal protective equipment, and harmonizing testing and reporting procedures based on guidelines developed by the federal government’s health agency (Hattke and Martin,

2020). Despite their exceptional scope, other European countries imposed even stricter policies (e.g., Breznau, 2020; Capano et al., 2020; Schulze, 2020).

Owing to Germany’s federal system that requires the coordination of the federal executive and state-level authorities responsible for healthcare and disaster management, these measures were discussed and imposed by the prime ministers (PM) of the sixteen German states and Chancellor Angela Merkel within the realm of the already existing prime ministerial conference (*Ministerpräsidentenkonferenz*) (Hegele and Schnabel, 2021; Hattke and Martin, 2020; Weible et al., 2020). While this body, which complements the German *Bundesrat*, lacks a constitutional foundation and the power to make legally binding decisions, it contributes to an efficient policy-making by improving the exchange of information and policy coordination between the states (Hegele and Behnke, 2017).

During the first wave of the pandemic in Germany, the prime ministerial conference met approximately on a bi-weekly basis and – without a formal mandate – developed into the main body to decide about the adequate policy response to the health crisis. A similar trend occurred in Austria, where Chancellor Sebastian Kurz joined meetings of the *Landeshauptleutekonferenz* (Hegele and Schnabel, 2021). At the same time, Germany’s federal parliament also proved to be able to legislate under these challenging circumstances. The *Bundestag* not only amended its procedural rules in order to maintain its decision-making ability but also swiftly approved economic relief packages and passed the Federal Infection Protection Act (FIPA; “*Gesetz zum Schutz der Bevölkerung bei einer epidemischen Lage von nationaler Tragweite*”) which provides a legal basis for expanded executive discretion during a state of emergency (Klafki, 2020; Schulze, 2020).

Overall, the strategy pursued in Germany was very effective as the number of newly confirmed cases decreased quickly towards the end of April. At the same time, the public support for different containment policies started to decrease as well (Naumann et al., 2020). As a consequence of this development and given the heterogeneous infection rates across the German states, an intense debate about when to lift different restrictions emerged and the states reclaimed discretionary power from the federal government (Hattke and Martin, 2020). Moreover, while there was a general agreement among political parties about the implementation of strict measures at the onset of the COVID-19 outbreak in Germany, the containment strategy

became an issue of political contestation once the infection rate started to decrease. Especially the right-wing party *Alternative für Deutschland* (AfD), but also to a somewhat lesser degree the liberal democrats (FDP) and the Left Party began to oppose containment policies (Louwerse et al., 2021).

3 Federalism, Parliamentary Decision-Making, and Executive Discretion in Times of Crisis

While crises can take various different forms – for example natural disasters, interstate conflicts, terrorist attacks, economic shocks, financial breakdowns, riots, nuclear disasters, or pandemics – they all share three key features: Crises i) pose a severe threat which ii) requires a quick response by decision-makers who iii) have to act under high levels of uncertainty (e.g., Weible et al., 2020; 't Hart, Rosenthal and Kouzmin, 1993; Rosenthal, Charles and 't Hart, 1989). In the face of such an unprecedented, unforeseen, unpredictable, and highly consequential emergency situation, governments need to make numerous far-reaching decisions quickly, yet, they oftentimes lack sufficient information or any legal norm guiding their actions (Capano et al., 2020; 't Hart, Tindall and Brown, 2009; Scheuerman, 2006).

It is easy to verify that the global COVID-19 pandemic exhibits all the key characteristics of an emergency situation. First, it is truly global in scope and already caused more than 1.8 million deaths by the end of 2020. Second, the rapid spread of the disease and the absence of a treatment or vaccination require quick actions in order to prevent the transmission of SARS-CoV-2 while, third, solid scientific knowledge about the effectiveness and long-term consequences of several containment measures was rare – particularly at the onset of the pandemic (e.g., Capano et al., 2020). As Angela Merkel has put it in her TV announcement on March 18: “The situation is serious, and the outcome uncertain.”

In an emergency situation like this, the government is forced to focus on the very core duty of statehood, namely the functioning of society and the protection of lives ('t Hart, Heyse and Boin, 2001, 184). At the same time, the exceptional and unpredictable nature of a crisis oftentimes implies that no precedence or legal norm exist that could provide guidance on the most appropriate policy response (Scheuerman, 2006, 62). Constitutions are written with

respect to “normal” times. They might be less applicable in times of crisis (see also [Hattke and Martin, 2020](#); [Ackerman, 2004, 2000](#)).² Despite this lack of clear legal guidance, research has revealed some structural features of political systems that determine the governments’ responses to a crisis.

One of the most robust finding is that decision-making tends to become centralized during times of crisis which leads to an increase in executive power (e.g., [Hattke and Martin, 2020](#); [Scheuerman, 2012](#); [’t Hart, Tindall and Brown, 2009](#); [Neal, 2012](#); [’t Hart, Rosenthal and Kouzmin, 1993](#); [Hermann, 1963](#)). Since the standard law-making process in democracies is highly differentiated and involve multiple actors at different levels, it is not a viable option in an emergency situation that requires immediate responses and prompt decisions under severe uncertainty. In contrast, the centralization of decision-making capacities at the federal level allows democracies to quickly adapt to crisis situations ([’t Hart, Rosenthal and Kouzmin, 1993](#)). Therefore, in accordance with a well-known German dictum, crises are generally considered to be “the hour of the executive” ([Scheuerman, 2012, 745](#)). Even in federal democratic systems like the United States and Canada, disaster responses are frequently designed and supervised by the executive branch at the national level.

Based on [Lijphart’s \(2012\)](#) conceptualization of democratic systems, centralization implies the concentration of decision-making authority along two distinct dimensions: the executive-parties dimension and the federal-unitary dimension. Whereas centralizing decision-making discretion at the executive-parties dimension concerns the (horizontal) balance of power at the federal level and refers to the transfer of policy-making discretion to the executive branch, it entails the (vertical) empowerment of the federal level at the expense of state-level authorities along the federal-unitary dimension.³ Shifting discretionary powers from both dimensions towards the federal executive at the expense of other federal institutions as well as sub-national

²Modern constitutions, though, usually feature special provisions for emergency situations that permit the transfer of decision-making authority to allow the executive branch to issue decrees, censor information, or (temporarily) restrict fundamental rights and suspend the usual legal process ([Greene, 2011](#); [Ferejohn and Pasquino, 2004](#); [Arato, 2002](#)). Article 15 of the European Convention on Human Rights (ECHR), for example, is a derogation clause that grants states emergency powers in times of crisis (e.g., [Tierney, 2005](#)). Hence, crisis provisions are well within the institutional realm. However, given the uniqueness and unpredictability of an emergency situation, no legal document can provide clear guidance on the appropriate means used by the government to respond to a specific crisis ([Scheuerman, 2006](#)).

³Note that [Hegele and Schnabel \(2021\)](#) differentiate between two very similar dimensions of federal decision-making. The centralized-decentralized dimension captures the strength of the federal government vis-à-vis the sub-national units while the unilateral-coordinated dimension concerns the degree to which a government consults other governments when making policy decisions.

governments enables the national government to take quick and resolute actions in response to an emergency situation. At the same time, increasing executive discretion by centralizing the decision-making process poses a particular challenge for liberal democracies.

The necessity for immediate and resolute governmental action conflicts with the time-consuming deliberative character of democratic law-making as well as the oversight responsibilities of legislative assemblies (e.g., [White, 2015](#); [Neal, 2012](#); [Corbett, 2009](#); ['t Hart, Rosenthal and Kouzmin, 1993](#)). Sidestepping the body of elected representatives – even for a limited period of time – raises important legitimacy concerns. The executive might exploit the additional leeway granted to cope with an acute crisis in an attempt to pursue its own policy agenda without interference and to strengthen its position vis-à-vis other democratic institutions in the decision-making process ([Scheuerman, 2012](#); [Ackerman, 2004](#); [Arato, 2002](#)).

Empowering the executive branch at the national level also interferes with the structure of a decentralized political system. In fact, federalism plays a decisive role in determining the governments' disaster responses (e.g., [Lester and Krejci, 2007](#); [Conlan, 2006](#); [Waugh and Streib, 2006](#); [Rosenthal and Kouzmin, 1997](#)). On the one hand, decentralized decision-making facilitates the collaboration between local authorities and non-governmental actors at the regional level. It also avoids communication problems which eases the identification and implementation of a sound policy response ([Waugh and Streib, 2006](#)). On the other hand, several collective action problems can occur and sub-national crisis responses might differ vastly in the absence of a strong superordinate regulatory power (e.g., [Hattke and Martin, 2020](#); [Waugh, 2006](#)).

With respect to the COVID-19 pandemic, numerous recent studies illuminate the effects of a federal structure of government on the policy responses implemented. However, the conclusions drawn with respect to the contribution of federalism to a successful containment strategy are ambiguous (e.g., [Capano et al., 2020](#)). In countries like Germany and Canada, the federal structure has proven to be effective in responding to the health crisis, although both countries centralized the decision-making process during the first COVID-19 wave to some extent (e.g., [Hegele and Schnabel, 2021](#); [Hattke and Martin, 2020](#); [Migone, 2020](#); [Naumann et al., 2020](#)). In other places, particularly in the United States and Sweden with its decentralized health care system, however, this approach was found to hinder the implementation of an effective policy response as it prevented national coordination, produced a patchwork of different measures,

and reinforced existing ideological and cultural differences (e.g., [Deslatte, Hatch and Stokan, 2020](#); [Haffajee and Mello, 2020](#); [Kettl, 2020](#); [Pierre, 2020](#); [Rocco, Béland and Waddan, 2020](#)). Moreover, even states with a centralized healthcare system like France⁴ were criticized for its crisis management (e.g., [Hassenteufel, 2020](#)).

4 Preferences for Expanded Executive Discretion

While, as the previous section shows, research on crisis government and the centralization of decision-making authority in democratic systems is abundant, we currently lack a sophisticated understanding of the circumstances under which citizens prefer to equip the federal government with additional discretionary authority in an emergency situation. However, since features of the decision-making process itself affect the public approval of policies independent of their content, citizens' views on politics in times of crisis is an important determinant for their support for far-reaching containment measures ([Juhl and Hilpert, 2021](#)). Even more, the the decision-making process itself already affect the citizens' willingness to comply with the policy outcome ([Hibbing and Theiss-Morse, 2001](#)). Understanding individual attitudes towards the process of policy-making therefore is crucial for the overall success of containment strategies.

Different factors might motivate citizens to prefer a centralized approach and demand more discretionary power for the national government.

As discussed above, federalism and decentralized decision-making can cause collective action problems which may lead to delayed and inefficient policy responses. When confronted with an emergency situation, the smooth interplay between national and sub-national authorities is of crucial importance ([Weible et al., 2020](#)). Yet, the complex distribution of decision-making responsibilities in federal systems and varying levels of organizational and resource capacities may render local emergency responses slow and inefficient ([Waugh, 2006](#)). Regarding the COVID-19 pandemic, federalism seems to impair the formulation and implementation of a resolute policy response in some countries. While the federal government of the United States largely failed to quickly take action in the wake of the pandemic (e.g., [Haffajee and Mello, 2020](#); [Kettl, 2020](#); [Rocco, Béland and Waddan, 2020](#)), the Swedish government struggled to

⁴As in many other countries, the implementation of an emergency health law in March further expanded the executive's discretionary power in France ([Hassenteufel, 2020, 5](#))

coordinate the highly decentralized healthcare system (e.g., [Pierre, 2020](#)).⁵

Differences in state-level responses to the pandemic, therefore, might indicate coordination failure. Moreover, since a concise communication strategy are key components of a successful governmental response to a crisis (e.g., [Weible et al., 2020](#); [’t Hart, Tindall and Brown, 2009](#)), inconsistent and sometimes even conflicting messages send by local officials undermines their credibility and damages the public trust ([Christensen and Læg Reid, 2020](#)). Consequently, we expect citizens to demand a more centralized crisis response the more state-level policies differ from one another.

Hypothesis 1: Policy divergence among the state governments increases the public support for centralized decision-making and expanded discretionary power for the federal government.

Besides this, the public’s attitudes towards democratic institutions are also decisive factors in determining the approval of expanded executive discretion. In particular, trust in government and the evaluation of the performance and functioning of different institutions might be associated with the public’s preferences for centralized decision-making.

Research has convincingly established the nexus between public trust and the implementation of, and compliance with, restrictive containment measures in the context of different pandemics, including Ebola (e.g., [Vinck et al., 2019](#)), SARS (e.g., [Tang and Wong, 2003](#)), and H1N1 (e.g., [Prati, Pietrantoni and Zani, 2011](#); [van der Weerd et al., 2011](#)). In the context of the COVID-19 pandemic, several recent studies also point towards the importance of trust for the success of containment policies (e.g., [Devine et al., 2020](#); [Guglielmi et al., 2020](#)). In line with this research, we expect citizens who exhibit higher levels of trust in the federal government before the outbreak of the pandemic to be more likely to grant executive privileges to the executive branch. This expectation leads to our second hypothesis:

Hypothesis 2: Trust in the federal government prior to the pandemic increases the support for decision-making centralization.

⁵It is important to stress that these problems are not an inherent feature of federalism per se but depend on the specific institutional design, the actors’ preferences, as well as the policies implemented during a crisis ([Rocco, Béland and Waddan, 2020](#), 472). In fact, federalism has some important advantages (see, for instance, [Lester and Krejci, 2007](#)) and other federal systems, like Germany ([Naumann et al., 2020](#)), managed to respond to the onset of the health crisis comparatively well.

Closely related to the concept of trust in the government is citizens' satisfaction with the performance of the incumbent government and parliamentary parties prior to the pandemic (e.g., [Bol et al., 2020](#); [Guglielmi et al., 2020](#)). Due to the enormous uncertainties associated with the global health crisis, citizens wish to place the crisis management in the most capable hands. Consequently, citizens who are more satisfied with the performance of the incumbent federal government are expected to be more likely to prefer expanded executive powers as compared to citizens who are dissatisfied with the federal government. Similarly, a high satisfaction with the work of parliament should result in a reluctance to empower the executive branch at the expense of the elected legislative assembly. Following this line of reasoning, our next hypotheses are:

Hypothesis 3a: Satisfaction with the work of the federal government increases the support for more centralized decision-making at the national level.

Hypothesis 3b: Satisfaction with the work of parliament decreases the support for more executive discretion.

Finally, since crises and emergency situations generate collective stress ([Rosenthal, Charles and 't Hart, 1989](#)), the psychological consequences of the ongoing health crisis and the policy measures imposed can affect the citizen's preferences for a centralization of the decision-making process as well. Not only does the disease cause specific psychological reactions. The strict and unprecedented policies imposed in response to the pandemic and the associated economic downturn similarly shape the citizen's perceptions and their well-being (e.g., [Guglielmi et al., 2020](#); [Naumann et al., 2020](#)).

In general, individuals perceive the threat posed by the SARS-CoV-2 virus differently. Citizens who perceive the virus as less threatening should be less inclined to approve strict measures that interfere with their everyday life and harm the economic prospect. They also should be more reluctant to grant the federal government additional discretionary authority at the expense of state executives and the parliament. In contrast, individuals who feel threatened by the virus are expected to demand far-reaching containment policies and a swift and resolute government response. However, the necessity for coordination and collaboration in a decentralized system might slow down the decision-making process. Consequently, we expect citizens who feel threatened by the virus to prefer a centralization of the decision-making process.

Hypothesis 4: Higher levels of perceived threat increase the demand for centralized decision-making and expanded executive discretion.

Taken together, we hypothesize that several factors affect the citizens' preferences for a unilateral and centralized decision-making in response to the COVID-19 pandemic. In the following, we examine the relative contribution of policy heterogeneity at the state level, trust in government, satisfaction with the federal government as well as with the work of the parliament, and individual threat perceptions on the support for expanded executive privileges.

5 Data and Methods

We test the hypotheses using individual-level public opinion panel data during the 2020 spring wave of the Corona pandemic in Germany (20th March 2020 through 10th July 2020). The data was collected by the Mannheim Corona Study (MCS) which is a special series of surveys conducted by the German Internet Panel (GIP). The GIP is an online panel survey with a probability-based offline recruitment procedure, covering the German population aged 16 to 75 (Blom, Gathmann and Krieger, 2015). The MCS study uses a daily rotating panel design. In particular, the GIP sample was randomly divided into eight groups of equal size, seven of which were invited to participate for sixteen consecutive weeks. While several items were included in every week of the survey, others changed weekly. Each group of respondents was invited on the same day every week and was asked to participate within two days. Overall, the MCS data covers 54,696 responses from 4,387 respondents and about 92% of the respondents participated at least twice (Blom et al., 2020). Further, the MCS not only covers several of the items required to test our hypotheses. It can also be augmented with additional GIP data that was collected prior to the onset of the pandemic.

Our dependent variable, citizens' preferences for centralization, is measured using the following MCS survey item that was included in all sixteen MCS questionnaires: "How much do you agree to the following statement? To curtail the Corona pandemic's negative consequences for society, the federal government should pass far-reaching measures even without consent by federal parliament or the states."⁶ The item explicitly refers to power shifts towards the federal

⁶In the original German item, the federal government, parliament, and states are referred to by their German names, i.e., *Bundesregierung*, *Bundestag*, and *Bundesländer*

executive on both dimensions, the executive-parties and the federal-unitary dimension, in order to capture the desire to empower the national government. Respondents use a 7-point scale ranging from 0 (fully opposed) to 6 (fully supportive) to express their opinion. A ‘don’t know’ category was provided as well.

To test Hypothesis 1, we require data on the daily policy divergence between the sixteen German states. To this end, we utilize data provided by [Steinmetz, Batzdorfer and Bosnjak \(2020\)](#) that lists which of 14 different containment measures – e.g., school closures, stay-at-home-orders, or recommendations to wear masks – were in place at each day in each state. Effectively, the different measurements are indicator variables, and we compute the simple matching coefficient (SMC) for each state with every other state on every day to infer the policy heterogeneity between states. This procedure results in a set of 240 SMCs per day, each representing the comparison between state i and some other state j with $i \neq j$ on day t . We then compute the mean of all 240 matching coefficients to measure the average variability in the states’ policy responses on day t .

Testing Hypothesis 2 requires information on respondents’ trust in the federal government prior to the pandemic. To this end, we utilize a survey item included in the GIP from January 2020. Since the first German COVID-19 case was reported towards the end of January, when most respondents already completed the survey, we consider this item to be a valid measure of the pre-pandemic trust in the federal government. The item follows a standard format and asks respondents to rate their trust in the federal government on a 7-point scale, where 0 indicates no trust at all and a value of 6 signifies high trust.

We obtain information on respondents’ satisfaction with both the federal government and the parliament from the November 2019 GIP wave. Respondents directly rate the work of the federal government on a scale ranging from 0 (not satisfied at all) to 10 (very satisfied). While there is no direct question on how satisfied respondents are with parliament’s work, they indicate their satisfaction with each parliamentary party faction’s work, using the same 11-point scale.⁷ There are many ways in which researchers could approximate respondents’ satisfaction with parliament from their satisfaction with each party faction and we opt for a conservative yet intuitive strategy: We define a respondent’s satisfaction with parliament by the maximum rating of any party faction reported by the respondent, assuming that the overall rating of the

⁷The party factions are CDU/CSU, SPD, AfD, Greens, Left, and FDP.

parliament does not exceed the maximum rating of the factions. Overall, the two satisfaction measures allow us to evaluate Hypothesis 3a and 3b.

Finally, we assess the empirical support for Hypothesis 4 by measuring respondents' threat perceptions with respect to COVID-19 using an MCS survey item that asks respondents to indicate their personal threat level on a scale from 0 (no threat to me at all) to 10 (extreme threat to me). Just as our dependent variable, this item is included throughout the entire time span covered by the MCS.

In addition to these key variables, we control for several factors that may affect respondents' opinions about the centralization of decision-making authority. First, we include the respondents' self-placements on a political left-right scale and its squared term which was reported in the GIP wave of September 2019. These variables enable us to detect whether policy preferences in general play a role in determining the support for centralized decision-making. They also control for the influence of policy congruence between respondents and the (federal) government that might affect their process preferences (see also [Hibbing and Theiss-Morse, 2001](#)).

We further include the sum of officially confirmed COVID-19 infections in the past seven days per 100.000 inhabitants in the state a respondent lives. Finally, we add demographic and socio-economic information like gender, education, household income in the previous month, and age to the model specification. The descriptive statistics can be found in [Table A1](#) in the Appendix. Given the panel structure, we estimate linear regression models with random effects for respondents and employ a specific weighting scheme to improve the sample's representativeness (see [Blom et al., 2020](#)).⁸

6 Results

[Table 1](#) summarizes the results of our empirical analysis. Model 1 only includes the variables of interest while Model 2 adds the control variables. In line with our expectation that policy heterogeneity between states increases public support for centralized decision-making (Hypothesis 1), the coefficient associated with the *Policy Heterogeneity* variable is positive and statistically

⁸[Table A2](#) in the Appendix shows that the results are virtually unchanged when we model respondents as nested within states and estimate both sets of random effects.

Table 1: Determinants of Support for Decision-Making Centralization

	Model 1	Model 2
Policy Heterogeneity	3.160*** (0.143)	4.670*** (0.241)
Trust in Government (Pre-Pandemic)	-0.005 (0.027)	0.011 (0.031)
Satisfaction with Federal Government	0.052*** (0.020)	0.050** (0.022)
Satisfaction with Parliament	-0.054*** (0.017)	-0.043** (0.020)
COVID-19 Threat	0.091*** (0.003)	0.078*** (0.004)
COVID-19 Incidence		0.003 (0.009)
Age		-0.011*** (0.002)
Female		0.178** (0.073)
Education: Medium		-0.338*** (0.115)
Education: High		-0.852*** (0.112)
HH Income Previous Month: Medium		0.073* (0.040)
HH Income Previous Month: High		0.063 (0.058)
LR-Placement		0.041 (0.069)
LR-Placement ²		-0.0002 (0.008)
Constant	2.228*** (0.109)	2.839*** (0.257)
Random Effects (Standard Deviations)		
Respondents	1.729	1.699
Observations	41,191	28,745
Log Likelihood	-72,847.150	-51,307.520
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

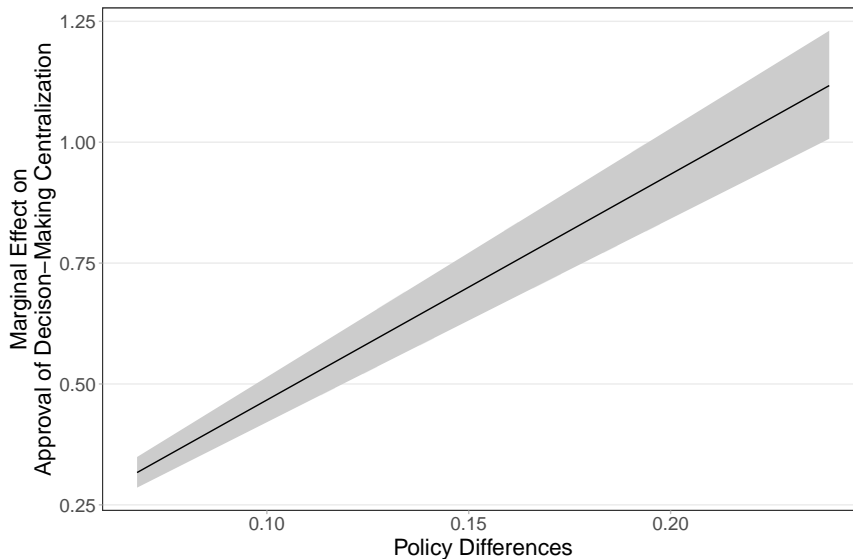


Figure 1: Marginal Effect of Policy Heterogeneity

significant. This result suggests that citizens favor a nation-wide containment strategy and that they are willing to equip the federal executive with additional policy discretion in order to obtain a common national crisis response. Figure 1 facilitates the interpretation of the corresponding substantive effect. It demonstrates that, at high levels of policy divergence among German states, the random effects model predicts respondents to increase their approval of the centralization of decision-making authority by more than one unit on the 7-point scale (the 95% confidence interval covers [1.0, 1.2]).

As outlined above, Hypothesis 2 states that citizens whose trust in the federal government was high prior to the pandemic should be more likely to demand the centralization of decision-making authority. Accordingly, this hypothesis implies that the estimated coefficient for the *Trust in Government* variable should be positive and statistically significant. Yet, Table 1 indicates that it fails to reach conventional levels of statistical significance in both model specifications. Instead, these results suggest that trust in the federal government does not affect the support for the centralization of decision-making competencies at the federal level.⁹

In addition, we test the expectation that satisfaction with both the federal government and the parliament should affect to what extent citizens demand the expansion of the federal government’s discretionary power (Hypotheses 3a and 3b). Table 1 shows that satisfaction with the work of the federal government increases the respondents’ support for the centralization

⁹We note, however, that pre-pandemic trust in the federal government and satisfaction with it are correlated (weighted $\rho = 0.5$) which may affect inferences by inflating the standard errors. However, given the small effect size of pre-pandemic trust, we regard this as unlikely.

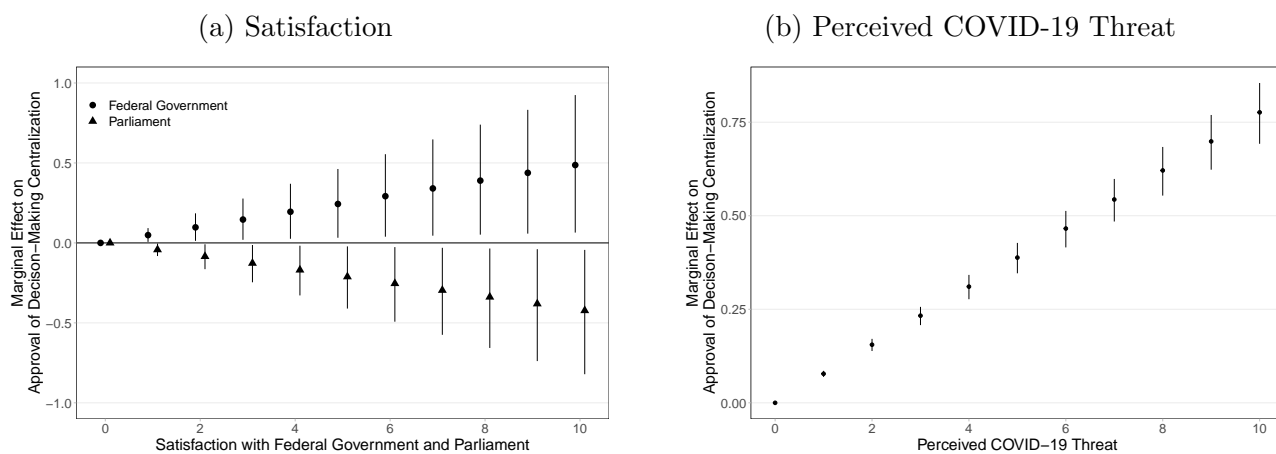


Figure 2: Marginal Effects of (a) Satisfaction with the Federal Government & Parliament and (b) Perceived COVID-19 Threat

of decision-making power while satisfaction with the parliament decreases it. Furthermore, by visualizing the marginal effects, Figure 2a shows that increasing satisfaction with the government or parliament respectively has, on average, effects of up to half a unit on the dependent variable's 7-point scale.

Finally, Hypothesis 4 expects that citizens who feel threatened by the virus demand a more centrally administered policy response to the pandemic. In fact, the random effects models lend empirical support for the hypothesized effect. As Figure 2b illustrates, citizens who feel strongly threatened by the pandemic are predicted to support centralization by 0.8 [0.7, 0.9] units more than citizens who do not feel threatened. We conclude from these results that the notion of threat and the stress it causes are strongly associated with the preferences citizens have regarding the political decision-making procedure. Threat is a powerful predictor for the desire to equip the executive branch with far-reaching discretionary privileges at the expense of the parliament and state-level authorities.

Turning to the control variables, the analysis identifies several other predictors affecting individual preferences for a centralized crisis response. Age, for example, is negatively related to preferences for centralization. Furthermore, while women tend to favor the concentration of discretionary authority at the federal level somewhat more than men, education is negatively related to the support for centralization. Although the positive effect of a respondent's household income in the previous month is only statistically significant at an α -level of 0.1, the number of confirmed COVID-19 cases in the past seven days per 100,000 inhabitants in the state a respondent lives, and her political self-placement do not have statistically significant

effects on her demand for centralized policy responses.

Overall, the results demonstrate that citizens' approval of centralized decision-making at the federal level is associated with psychological and political factors. With respect to psychological aspects, we find that citizens who feel threatened by COVID-19 are more likely to expand the federal government's competencies and approve the centralized administration of policy responses than citizens who do not feel threatened. The political factors we identify as relevant predictors are the heterogeneity in policy responses at the state level, satisfaction with the federal government, and satisfaction with parliament.

7 Policy Heterogeneity and Aggregate Support for Centralization

Having investigated why and how preferences for decision-making centralization are associated with policy diversity at the individual level, we now turn to studying its implications at the aggregate level. In particular, we seek to understand at which levels of policy heterogeneity among German states with respect to COVID-19 containment measures a majority of citizens supports decision-making centralization. To this end, we utilize simulation techniques and calculate counterfactual scenarios that provide insights into the substantive impact of the implementation of more (or less) coherent containment policies across the states on public opinion at the aggregate level. The scenarios are calibrated to cover the empirically observed range of policy heterogeneity reported by [Steinmetz, Batzdorfer and Bosnjak \(2020\)](#) and displayed in [Figure 3](#). As the solid black line shows, the policy differences among the states vary over the course of the MCS as indicated by the gray shaded area. Accordingly, we simulate a total of 50 scenarios with different levels of policy heterogeneity, ranging from a fully identical set of state-level policies (*Policy Heterogeneity* = 0) to the most diverging policy response which was observed only a few days before the MCS was fielded, and before Angela Merkel and the prime ministers met for the first time in an attempt to develop a coordinated containment strategy (*Policy Heterogeneity* = 0.26).

In our simulations, we first use the regression presented in Model 2 in [Table 1](#) to predict each respondent's support for decision-making centralization in each of the 50 counterfactual

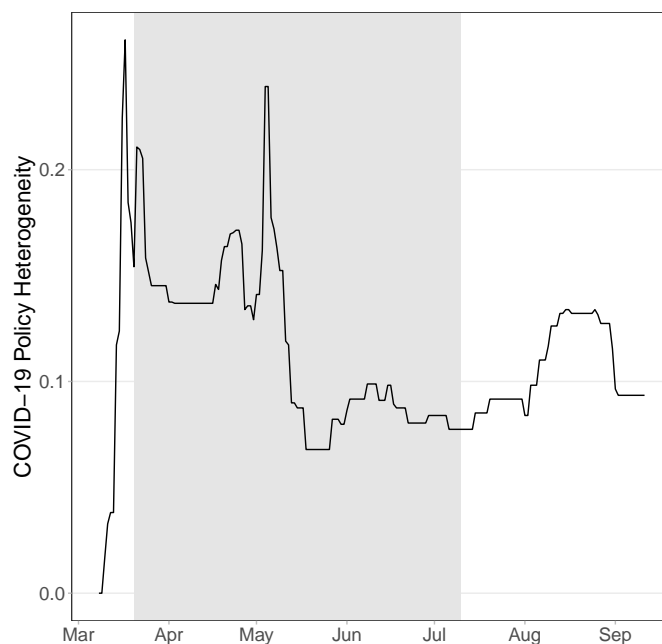


Figure 3: COVID-19 Containment Policy Heterogeneity in Germany Over Time (2020)

scenarios. While the variable *Policy Heterogeneity* varies across these scenarios, the other variables as well as respondent-specific intercepts are held constant at the observed values. Since there are 28,745 interviews in our data, we obtain as many predicted values of decision-making centralization per scenario. To ease interpretation, we distinguish between respondents who are predicted to approve centralization (i.e., whose predicted response is higher than 3 on the 0-6 response scale) and those who do not. In particular, the quantity of interest here is the (weighted) share of respondents who support expanded executive privileges at the federal level. To account for sampling variability, we repeat the above mentioned procedure 1,000 times for each scenario, and report the corresponding simulated confidence intervals. Figure 4 graphically illustrates these aggregate results.

The simulation shows that the aggregate support for decision-making centralization quickly increases as the states' policy responses diverge. Figure 4 suggests that, by increasing the heterogeneity in COVID-19 policies across the states, a majority of citizens supports the centralization of the decision-making process at the expense of state-level executives and the parliament. Based on sixteen weeks of MCS data, we predict that, *ceteris paribus*, 42.77% [40.9%; 44.54%] of the population supports the empowerment of the federal government if there is no policy heterogeneity. Once policy heterogeneity rises to 0.085, which was the case in 86 out of the 125 days covered by the MCS survey, this share increases to 50.18169 [48.56%; 51.81%] and at

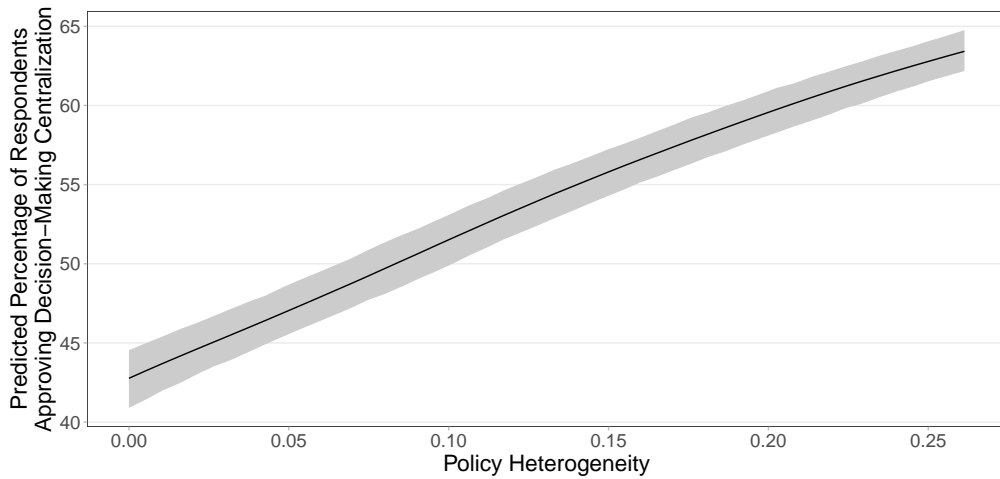


Figure 4: Predicted Aggregate Support for Decision-Making Centralization in Germany

a value of 0.26 – the maximum observed value – we predict that even 63.42% [62.18%; 64.76%] of the German population approves the centralization of decision-making authority at the federal level. Importantly, this pronounced increase in aggregate support is independent of policy preferences and actual sub-national infection rates.

Together, these results illustrate that diverging state-level policy responses profoundly affect the aggregate support for centralized decision-making. While our previous analysis reveals the importance of policy heterogeneity at the individual level, this simulation study illustrates how strongly the German public in general responds to differences in sub-national crisis policies. Irrespective of the geographical distribution of actual infection rates, respondents take a very critical stance towards decentralized containment strategies.

8 Conclusion

Why do individuals living in federal democracies prefer the centralization of decision-making capacity and the empowerment of the federal government in times of crisis? While the crisis management literature provides the rationale as well as robust empirical evidence for the tendency to centralize the decision-making process and empower the federal government in an emergency situation, the circumstances under which citizens prefer to grant the executive branch additional discretionary authority remain opaque. Since the assessment of the decision-making process not only affects the evaluation but also the willingness to comply with policy outcomes (see e.g., [Juhl and Hilpert, 2021](#); [Hibbing and Theiss-Morse, 2001](#)), understanding

these process preferences is of central importance for the success of any implemented containment strategy.

The present study attempts to fill this gap by investigating individual preferences for centralized decision-making over the course of the first wave of the COVID-19 pandemic in Germany. Based on individual-level panel data, the analysis demonstrates that especially heterogeneity in the states' policy responses as well as individual threat perceptions increase the support for centralization. The evidence further suggest that satisfaction with the federal government and the parliament prior to the onset of the pandemic also have the expected effects on the approval of expanded discretionary privileges for the federal executive branch. Whereas satisfaction with the government increases the support for granting expanded discretionary power, individuals who are satisfied with the work of the parliament prefer the inclusion of the legislative branch during policy-making. Therefore, the findings support the notion that citizens dislike diverging crisis responses across states and that feelings of threat increase the demand for centralized decision-making.

These results have a number of important implications for crisis management and democratic decision-making more generally. Although research has shown that federalism alone does not determine the effectiveness of COVID-19 containment strategies (e.g., [Capano et al., 2020](#); [Haffajee and Mello, 2020](#); [Hassenteufel, 2020](#); [Naumann et al., 2020](#)), this study reveals that heterogeneous policy responses trigger public skepticism. Independent of the dispersion of actual infection rates across states, citizens prefer the harmonization of containment policies at the sub-national level. Although decentralized decision-making allows for the implementation of policy responses that are specifically tailored to the local state of the pandemic, we show that the German public opposed this approach during the first wave of the COVID-19 pandemic. In addition, the evidence suggests that individuals who feel threatened are more likely to sacrifice the parliamentary control of governmental policies for the sake of a quick and resolute crisis response by the executive branch.

While this study provides important insights into the citizens' assessment of adequate crisis responses in democracies, further research can build upon these findings in several ways. In particular, the relationship between satisfaction with the federal government and the parliament on the one hand and preferences for centralized decision-making on the other hand merits

further scholarly attention. Since these variables likely interact and mutually reinforce each other, designing a clever identification strategy to disentangle the causal relationship is a necessary next step towards a more thorough understanding of the citizens' process preferences. Moreover, the generalizability of these results to other (emergency) situations requires a further examination. Finally, exploring the dynamics of the individual-level preferences for centralization over the entire course of the pandemic merits scholarly attention as well. Given the current situation more than one year after the first COVID-19 incidences were reported in Germany, the investigation of changes in preferences and its determinants is not only of scientific value. It also provides policy-makers important insights that may help designing an adequate crisis response which is in line with the preferences of the citizens.

References

- Ackerman, Bruce. 2000. "The New Separation of Powers." *Harvard Law Review* 113(3):633–729.
- Ackerman, Bruce. 2004. "The Emergency Constitution." *The Yale Law Journal* 113(5):1029–1091.
- Arato, Andrew. 2002. "The Bush Tribunals and the Specter of Dictatorship." *Constellations* 9(4):457–476.
- Blom, Annelies G., Carina Cornesse, Sabine Friedel, Ulrich Krieger, Marina Fikel, Tobias Rettig, Alexander Wenz, Sebastian Juhl, Roni Lehrer, Katja Möhring, Elias Naumann and Maximiliane Reifenscheid. 2020. "High-Frequency and High-Quality Survey Data Collection: The Mannheim Corona Study." *Survey Research Methods* 14(2):171–178.
URL: <https://ojs.ub.uni-konstanz.de/srm/article/view/7735>
- Blom, Annelies G., Christina Gathmann and Ulrich Krieger. 2015. "Setting Up an Online Panel Representative of the General Population: The German Internet Panel." *Field Methods* 27(4):391–408.
URL: <https://doi.org/10.1177/1525822X15574494>
- Bol, Damien, Marco Giani, André Blais and Peter John Loewen. 2020. "The effect of COVID-19 lockdowns on political support: Some good news for democracy?" *European Journal of Political Research* pp. 1–9.
URL: <https://doi.org/10.1111/1475-6765.12401>
- Breznau, Nate. 2020. "The welfare state and risk perceptions: the Novel Coronavirus Pandemic and public concern in 70 countries." *European Societies* pp. 1–14.
URL: <https://doi.org/10.1080/14616696.2020.1793215>
- Capano, Giliberto, Michael Howlett, Darryl S. L. Jarvis, M. Ramesh and Nihit Goyal. 2020. "Mobilizing Policy (In)Capacity to Fight COVID-19: Understanding Variations in State Responses." *Policy and Society* 39(3):285–308.
- Christensen, Tom and Per Lægreid. 2020. "Balancing Governance Capacity and Legitimacy:

- How the Norwegian Government Handled the COVID-19 Crisis as a High Performer.” *Public Administration Review* 80(5):774–779.
- Conlan, Tim. 2006. “From Cooperative to Opportunistic Federalism: Reflections on the Half-Century Anniversary of the Commission on Intergovernmental Relations.” *Public Administration Review* 66(5):663–676.
- Corbett, Ross J. 2009. “Locke and the Challenges of Crisis Government.” *The Good Society* 18(2):20–25.
- Deslatte, Aaron, Megan E. Hatch and Eric Stokan. 2020. “How Can Local Governments Address Pandemic Inequities?” *Public Administration Review* 80(5):827–831.
- Devine, Daniel, Jennifer Gaskell, Will Jennings and Gerry Stoker. 2020. “Trust and the Coronavirus Pandemic: What are the Consequences of and for Trust? An Early Review of the Literature.” *Political Studies Review* pp. 1–12.
URL: <https://doi.org/10.1177/1478929920948684>
- Ferejohn, John and Pasquale Pasquino. 2004. “The law of the exception: A typology of emergency powers.” *International Journal of Constitutional Law* 2(2):210–239.
- Greene, Alan. 2011. “Separating Normalcy from Emergency: The Jurisprudence of Article 15 of the European Convention on Human Rights.” *German Law Journal* 12(10):1764–1785.
- Guglielmi, Simona, Giulia M. Dotti Sani, Francesco Molteni, Ferruccio Biolcati, Antonio M. Chiesi, Riccardo Ladini, Marco Maraffi, Andrea Pedrazzani and Cristiano Vezzoni. 2020. “Public acceptability of containment measures during the COVID-19 pandemic in Italy: how institutional confidence and specific political support matter.” *International Journal of Sociology and Social Policy* pp. 1–17.
URL: <https://doi.org/10.1108/IJSSP-07-2020-0342>
- Haffajee, Rebecca L. and Michelle M. Mello. 2020. “Thinking Globally, Acting Locally — The U.S. Response to Covid-19.” *New England Journal of Medicine* 382(22):e75(1)–e75(3).
- Hasell, Joe, Edouard Mathieu, Diana Beltekian, Bobbie Macdonald, Charlie Giattino, Esteban

- Ortiz-Ospina, Max Roser and Hannah Ritchie. 2020. “A cross-country database of COVID-19 testing.” *Scientific Data* 7(345):1–7.
- Hassenteufel, Patrick. 2020. “Handling the COVID-19 crisis in France: Paradoxes of a centralized state-led health system.” *European Policy Analysis* 6(2):170–179.
URL: <https://doi.org/10.1002/epa2.1104>
- Hattke, Fabian and Helge Martin. 2020. “Collective action during the Covid-19 pandemic: The case of Germany’s fragmented authority.” *Administrative Theory & Praxis* 0(0):1–19.
- Hegele, Yvonne and Johanna Schnabel. 2021. “Federalism and the management of the COVID-19 crisis: centralisation, decentralisation and (non-)coordination.” *West European Politics* pp. 1–20.
- Hegele, Yvonne and Nathalie Behnke. 2017. “Horizontal coordination in cooperative federalism: The purpose of ministerial conferences in Germany.” *Regional & Federal Studies* 27(5):529–548.
- Hermann, Charles F. 1963. “Some Consequences of Crisis Which Limit the Viability of Organizations.” *Administrative Science Quarterly* 8(1):61–82.
- Hibbing, John R. and Elizabeth Theiss-Morse. 2001. “Process Preferences and American Politics: What the People Want Government to Be.” *American Political Science Review* 95(1):145–153.
- Juhl, Sebastian and David Hilpert. 2021. “Wheeling and dealing behind closed doors: estimating the causal effect of transparency on policy evaluations using a survey experiment.” *Political Science Research and Methods* 9(1):36–52.
- Kettl, Donald F. 2020. “States Divided: The Implications of American Federalism for COVID-19.” *Public Administration Review* 80(4):595–602.
- Klafki, Anika. 2020. “Neue Rechtsgrundlagen im Kampf gegen Covid-19.” *Verfassungsblog: On Matters Constitutional* .
URL: <https://doi.org/10.17176/20200325-123240-0>

- Lester, William and Daniel Krejci. 2007. "Business "Not" as Usual: The National Incident Management System, Federalism, and Leadership." *Public Administration Review* 67(s1):84–93.
- Lijphart, Arend. 2012. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. Second ed. New Haven, London: Yale University Press.
- Louwerse, Tom, Ulrich Sieberer, Or Tuttnauer and Rudy B. Andeweg. 2021. "Opposition in times of crisis: COVID-19 in parliamentary debates." *West European Politics* pp. 1–27.
- Matthews, Felicity. 2012. Governance, Governing and the Capacity of Executives in Times of Crisis. In *Executive Politics in Times of Crisis*, ed. Martin Lodge and Kai Wegrich. London: Palgrave Macmillan UK pp. 217–238.
- Migone, Andrea Riccardo. 2020. "Trust, but customize: federalism's impact on the Canadian COVID-19 response." *Policy and Society* 39(3):382–402.
- Naumann, Elias, Katja Möhring, Maximiliane Reifenscheid, Alexander Wenz, Tobias Rettig, Roni Lehrer, Ulrich Krieger, Sebastian Juhl, Sabine Friedel, Marina Fikel, Carina Cornesse and Annelies G. Blom. 2020. "COVID-19 policies in Germany and their social, political, and psychological consequences." *European Policy Analysis* 6(2):191–202.
URL: <https://doi.org/10.1002/epa2.1091>
- Neal, Andrew W. 2012. "Terrorism, Lawmaking, and Democratic Politics: Legislators as Security Actors." *Terrorism and Political Violence* 24(3):357–374.
- Pierre, Jon. 2020. "Nudges against pandemics: Sweden's COVID-19 containment strategy in perspective." *Policy and Society* 39(3):478–493.
- Prati, Gabriele, Luca Pietrantoni and Bruna Zani. 2011. "Compliance with recommendations for pandemic influenza H1N1 2009: the role of trust and personal beliefs." *Health Education Research* 26(5):761–769.
- Rocco, Philip, Daniel Béland and Alex Waddan. 2020. "Stuck in neutral? Federalism, policy instruments, and counter-cyclical responses to COVID-19 in the United States." *Policy and Society* 39(3):458–477.

- Rosenthal, Uriel and Alexander Kouzmin. 1997. "Crises and Crisis Management: Toward Comprehensive Government Decision Making." *Journal of Public Administration Research and Theory: J-PART* 7(2):277–304.
- Rosenthal, Uriel, Michael T. Charles and Paul 't Hart. 1989. *Coping with Crises: The Management of Disasters, Riots, and Terrorism*. Studies in Austrian Literature Springfield: Charles C. Thomas.
- Scheuerman, William E. 2006. "Survey Article: Emergency Powers and the Rule of Law After 9/11." *Journal of Political Philosophy* 14(1):61–84.
- Scheuerman, William E. 2012. "Emergencies, Executive Power, and the Uncertain Future of US Presidential Democracy." *Law & Social Inquiry* 37(3):743–767.
- Schulze, Max. 2020. "Der Deutsche Bundestag ist noch rechtzeitig aufgewacht." *JuWissBlog* Nr. 39/2020 .
URL: <https://www.juwiss.de/39-2020/>
- Steinmetz, Holger, Veronika Batzdorfer and Michael Bosnjak. 2020. "The ZPID lockdown measures dataset for Germany."
- 't Hart, Paul and Karen Tindall. 2009. Understanding crisis exploitation: leadership, rhetoric and framing contests in response to the economic meltdown. In *Framing the Global Economic Downturn: Crisis rhetoric and the politics of recessions*. ANU Press pp. 21–40.
- 't Hart, Paul, Karen Tindall and Christer Brown. 2009. "Crisis Leadership of the Bush Presidency: Advisory Capacity and Presidential Performance in the Acute Stages of the 9/11 and Katrina Crises." *Presidential Studies Quarterly* 39(3):473–493.
- 't Hart, Paul, Liesbet Heyse and Arjen Boin. 2001. "New Trends in Crisis Management Practice and Crisis Management Research: Setting the Agenda." *Journal of Contingencies and Crisis Management* 9(4):181–188.
- 't Hart, Paul, Uriel Rosenthal and Alexander Kouzmin. 1993. "Crisis Decision Making: The Centralization Thesis Revisited." *Administration & Society* 25(1):12–45.

- Tang, Catherine S. K. and Chi-yang Wong. 2003. “An Outbreak of the Severe Acute Respiratory Syndrome: Predictors of Health Behaviors and Effect of Community Prevention Measures in Hong Kong, China.” *American Journal of Public Health* 93(11):1887–1888.
- Tierney, Stephen. 2005. “Determining the State of Exception: What Role for Parliament and the Courts?” *The Modern Law Review* 68(4):668–673.
- van der Weerd, Willemien, Daniëlle Rm Timmermans, Desirée Jma Beaujean, Jurriaan Oudhoff and Jim E. van Steenberg. 2011. “Monitoring the level of government trust, risk perception and intention of the general public to adopt protective measures during the influenza A (H1N1) pandemic in The Netherlands.” *BMC Public Health* 11:575.
- Vinck, Patrick, Phuong N. Pham, Kenedy K. Bindu, Juliet Bedford and Eric J. Nilles. 2019. “Institutional trust and misinformation in the response to the 2018-2019 Ebola outbreak in North Kivu, DR Congo: a population-based survey.” 19(5):529–536.
- Waugh, William L. 2006. “The Political Costs of Failure in the Katrina and Rita Disasters.” *The ANNALS of the American Academy of Political and Social Science* 604(1):10–25.
- Waugh, William L. and Gregory Streib. 2006. “Collaboration and Leadership for Effective Emergency Management.” *Public Administration Review* 66(s1):131–140.
- Weible, Christopher M., Daniel Nohrstedt, Paul Cairney, David P. Carter, Deserai A. Crow, Anna P. Durnová, Tanya Heikkila, Karin Ingold, Allan McConnell and Diane Stone. 2020. “COVID-19 and the policy sciences: initial reactions and perspectives.” *Policy Sciences* 53(2):225–241.
- White, Jonathan. 2015. “Authority after Emergency Rule.” *The Modern Law Review* 78(4):585–610.
- World Health Organization. 2020a. “Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV).”
- URL:** [https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))

World Health Organization. 2020b. “WHO Director-General’s opening remarks at the media briefing on COVID-19 – 11 March 2020.”.

URL: *<https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—11-march-2020>*

9 Appendix

Summary Statistics

Table A1: (Unweighted) Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Decision-Making Centralization	28,774	2.782	2.105	0	6
Policy Heterogeneity	28,774	0.113	0.036	0.068	0.211
Satisfaction with Federal Government	28,774	3.988	2.022	0	10
Satisfaction with Parliament	28,774	5.933	1.960	0	10
Trust in Government (Pre-Pandemic)	28,774	2.640	1.369	0	6
COVID-19 Threat	28,774	3.824	2.855	0	10
COVID-19 Incidence	28,774	0.039	1.046	-0.850	4.021
Female	28,774	0.428	0.495	0	1
LR-Placement	28,774	4.229	1.977	0	10
LR-Placement ²	28,774	21.793	17.938	0	100
Age	28,774	52.808	15.105	18	84
Education: Medium	28,774	0.315	0.464	0	1
Education: High	28,774	0.553	0.497	0	1
HH Income Previous Month: Medium	28,774	0.634	0.482	0	1
HH Income Previous Month: High	28,774	0.202	0.401	0	1

Alternative Random-Effects Structure

Table A2: Regression Analysis with Alternative Random Effects

Policy Heterogeneity	3.160*** (0.143)	4.650*** (0.241)
Trust in Government (Pre-Pandemic)	-0.005 (0.027)	0.013 (0.031)
Satisfaction with Federal Government	0.052*** (0.020)	0.050** (0.022)
Satisfaction with Parliament	-0.054*** (0.017)	-0.044** (0.020)
COVID-19 Threat	0.091*** (0.003)	0.078*** (0.004)
COVID-19 Incidence		0.004 (0.009)
Age		-0.011*** (0.002)
Female		0.176** (0.073)
Education: Medium		-0.364*** (0.115)
Education: High		-0.874*** (0.112)
HH Income Previous Month: Medium		0.073* (0.040)
HH Income Previous Month: High		0.065 (0.058)
LR-Placement		0.049 (0.069)
LR-Placement ²		-0.001 (0.008)
Constant	2.239*** (0.111)	2.886*** (0.260)
Random Effects (Standard Deviations)		
State	0.073	0.112
Respondents nested in State	1.728	1.696
Observations	41,191	28,745
Log Likelihood	-72,846.870	-51,306.380
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	