

Rallying Around the Leader in Times of Crises: The Opposing Effects of Perceived Threat and Anxiety

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Abstract

In times of crisis, citizens tend to increase their approval of the government and its leader which can shift the balance of power. This ‘rally effect’ is a persistent empirical regularity, however, the literature is still undecided on its underlying causal mechanisms. We argue that crises induce threat and anxiety, and hypothesize that perceived threat increases approval of the incumbent leader, whereas anxiety decreases it. By analyzing German panel data from the COVID-19 pandemic, we causally identify both mechanisms and provide systematic evidence supporting this theory. Moreover, we increase the scope of our theory and show that both mechanisms are also at work when citizens approve cabinet members who manage key portfolios. Our findings have highly important implications for our understanding of the rally effect and crises politics in democracies.

Keywords: Leadership support, Rally round the flag, crisis politics, COVID

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In times of crisis, the public gathers behind the current political leadership. This ‘rally effect’ which entered the political science vocabulary in the early 1970s (Mueller, 1970) is a persistent empirical regularity that is well-documented in numerous studies. Although originally developed with respect to the US presidency, research demonstrates that the effect generalizes beyond the United States (e.g., Dinesen and Jæger, 2013). Moreover, it does not only manifest in the context of intergroup conflicts such as wars or terrorist attacks (e.g., Edwards III and Swenson, 1997) but also in the aftermath of natural disasters (e.g., Boittin, Mo and Utych, 2020) or public health crises such as the COVID-19 pandemic (e.g., Yam et al., 2020). Despite its persistence, generality, and law-like character, we lack fine-grained knowledge on how cognitive and emotional mechanisms interplay to bring about rally effects in times of crisis (see also Hegewald and Schraff, 2022; Hinson and Vaishnav, 2021).

It is crucial to generate insights into the underlying causal mechanisms, as the rally effect can have dramatic repercussions on policy outcomes in democracies. In cases where a crisis occurs during an election campaign, the rally effect can strongly influence election results (Leininger and Schaub, 2020) and with it the central mechanism of granting democratic authority to rule. Almost more importantly, the observation of rally effects is often accompanied by increasing support for policies restricting civil and political liberties like pandemic lockdowns (in the context of the COVID-19 pandemic, see Alsan et al., 2020) or the US Patriot Act (in the context of the 9/11 terrorist attacks, see Huddy, Khatib and Capelos, 2002; Huddy and Feldman, 2011). As citizens are more willing to sacrifice freedom for security in the context of rally effects, it can become easier for governments to implement policies limiting fundamental rights (Page and Shapiro, 1983). This is all the more true because the opposition is typically reluctant to criticize the political leadership in times of crisis (Hetherington and Nelson, 2003). Moreover, after the crisis has been overcome and the rally effect has worn off, there is a risk that rights might not be regranted in full – especially in illiberal democracies.

In contrast to the literature’s previous approaches regarding the underlying causal mechanisms, we are the first to argue that the rally effect is composed of two distinct and counteracting psychological mechanisms: a *perceived threat mechanism* as well as an *anxiety mechanism*. The literature has already shown that perceived threat and anxiety are different concepts (e.g. Huddy et al., 2005; Miller, 2000) that have different effects across many domains (e.g. Brader, Valentino and Suhay, 2008; Miller et al., 2016). Perceived threat is the subjectively estimated risk posed by a crisis and thus a predominantly *cognitive* reaction to an external threat. Anxiety is a negative emotional response to a crisis and therefore a predominantly *affective* reaction to an external threat. We argue that considering the interplay between both effects is imperative to understanding the rally effect as they have very different substantive implications. Perceived threat should boost support for political leaders, in part because it triggers system-justifying reactions. On the contrary, anxiety should undermine support for the political leader by producing an assimilation effect by which the negative affective state of anxiety negatively colors the evaluation of the leader.

It is already known that both perceived threat and anxiety have distinct effects on the support of counter-

terrorism policies in the aftermath of terrorist attacks. Huddy et al. (2005) argue that individuals who perceive high levels of threat should be more supportive of hawkish military action, since perceived threat leads to demand for retaliation and elimination of the aggressor. On the contrary, they claim that individuals who exhibit high levels of anxiety should be less inclined to support aggressive (and potentially risky) military action, as anxiety leads to greater risk aversion (see also Huddy and Feldman, 2011, for a discussion on the effect of perceived threat and anxiety in the context of terrorist attacks). Huddy et al. (2005) provide evidence for these arguments employing a survey fielded in the US after the 9/11 terrorist attacks.

Unlike previous research, we argue that perceived threat and anxiety should affect *support for political leaders*, not only the support for specific policies or trust in the government, and that this should be observed in all types of crisis situations. Additionally, we argue that this effect is of direct nature and not, as, for instance, argued by Huddy et al. (2005), necessarily mediated by government action. While the perceived threat mechanism has recently become well known in the literature on the rally effect (Feinstein, 2018; Kritzinger et al., 2021), the hypothesized anxiety mechanism is so far not established. It is well known that anxiety leads to risk aversion and, thus, support for cautious government action in times of crisis (e.g. Huddy et al., 2005; Lambert, Schott and Scherer, 2011; Erhardt et al., 2021), but the effect of anxiety on political leadership support, however, remains rather unclear. In fact, we are the first to argue that anxiety directly shapes the rally effect via an assimilation effect. This assimilation effect should reduce support for the political leader - regardless of whether the government's response to the crisis is cautious or risky.¹

We provide robust evidence for the hypothesized anxiety and perceived threat mechanisms. First, we rely on panel data based on more than 32,000 interviews from the early COVID-19 pandemic in Germany to trace the causal mechanisms. The findings show that both mechanisms operate as theorized. Second, we demonstrate that the mechanisms are not only at work when citizens evaluate their heads of government, yet, also when they rate ministers who manage key crisis portfolios.

Our findings have important theoretical implications as we challenge the view that crises automatically lead to an increase in approval of the political leader. This way, we inform the debate on the individual-level characteristics that lead citizens to change their evaluation of political leaders in times of crisis. While existing research shows that the rally effect is shaped by the emotion of anger (Small, Lerner and Fischhoff, 2006), pre-crisis support for the leader (Edwards III and Swenson, 1997; Malhotra and Kuo, 2008), political information (Sirin, 2011), or exposure to the crisis (Hintson and Vaishnav, 2021), we suggest a novel duality of psychological mechanisms, and provide robust empirical evidence that they are in fact at play. Consequently, our findings help to understand how the rally effect comes about.

¹A list of articles argues or present empirical evidence that anxiety may boost leadership support (Dietz et al., 2021; Albertson and Gadarian, 2015; Eggers and Harding, 2022; Erhardt et al., 2021; van der Meer, Steenvoorden and Ouattara, 2023; Baekgaard et al., 2020; Vasilopoulos et al., 2023). However, they do not distinguish between perceived threat and anxiety, and hence their empirical analyses lump together two concepts that according to our arguments need to be considered separately. For a study that uses German data on the COVID pandemic (Dietz et al., 2021), we cannot replicate their finding even when we omit perceived threat from our analyses as they do (see below).

Leadership Approval as a Function of Two Distinct Mechanisms

In times of crisis we can observe that citizens tend to increase their approval of the incumbent government and its leader. An extant literature has identified different mechanisms underlying the rally effect. For instance, one argument proposes that rally effects are rooted in increased in-group loyalty (Tajfel and Turner, 2004) following external threats, i.e. emphasized patriotic feelings. Consequently, people support their government to increase their nation's chance of overcoming the crisis (Mueller, 1970; Chowanietz, 2011; Schubert, Stewart and Curran, 2002). Another strand of literature suggests that the government's information-monopoly combined with a lack of criticism by the opposition in times of severe crises renders the government as opinion leader, consequently boosting leadership approval (Lee, 1977; Brody and Shapiro, 1989; Brody, 1991; Chowanietz, 2011; Baker and Oneal, 2001; Groeling and Baum, 2008).

We argue that the rally effect is composed of two distinct mechanisms because such crises induce two responses among citizens: perceived threat – a cognitive response to the crisis – and anxiety – an emotional response. Moreover, we expect that the *perceived threat mechanism* and the *anxiety mechanism* are counteracting with regard to leadership approval. While threatened citizens should tend to approve, anxious citizens should tend to disapprove of their political leaders.

Perceived threat and anxiety are different concepts. The distinction is based on the conceptual separation of cognitive and affective reactions to an external threat (Brader, Valentino and Suhay, 2008; Huddy et al., 2005; Huddy and Feldman, 2011; Miller, 2000; Miller et al., 2016). Perceived threat is defined as a predominantly *cognitive* response: the subjectively calculated risk posed by a crisis. For example, regarding a terrorist threat, the level of perceived threat depends on the estimated risk of becoming a victim of a terrorist attack, whereas concerning a pandemic, it is governed by the estimated risk of becoming infected. Anxiety, however, is defined as a predominantly *affective* response: a negative emotional reaction to a crisis, such as terrorist threats or a pandemic. Although conceptually clearly distinct, perceived threat and anxious arousal naturally correlate (Huddy et al., 2005; Miller, 2000).²

Existing empirical evidence reveals that perceived threat and anxiety have different effects, confirming the distinctness of both responses. Huddy et al. (2005) have shown that perceived threat and anxiety have different repercussions in many domains: First, anxiety promotes risk avoidance (see also Lerner and Keltner, 2001), while on the contrary, perceived threat fosters support for potentially risky and dangerous actions to eliminate the threat. Second, anxiety inhibits performance on cognitively-demanding tasks (see also Maloney, Sattizahn and Beilock, 2014), such as political knowledge, while perceived threat has no such effect. Third, anxiety is associated with symptoms of depression (see also Clark and Watson, 1991), such as sleep disorders, while this is not the case for perceived threat. In addition, there is evidence of differential effects on political attitudes. Information about the costs of immigration shape attitudes toward immigrants – not because of changes in perceived threat, but because

²Below, we present empirical evidence that this correlation does not bias our results.

of changes in anxiety (Brader, Valentino and Suhay, 2008). An imminent policy change in an undesired direction fosters political activism - not because of changes in anxiety, but because of changes in perceived threat (Miller et al., 2016).

Perceived Threat Mechanism

Perceived threat is the perceived risk posed by a crisis (*cognitive*³ response to a crisis), and we argue that it is one driver of the rally effect. A number of theoretical arguments expect an increase in perceived threat to boost support for political leaders in times of crises. The first originates from what is known as the *opinion leadership school* of research on the rally effect (Baekgaard et al., 2020, p. 3). The argument builds on the notion that, when evaluating political leaders, an increase in perceived threat enhances the salience of considerations related to the crisis while it reduces the salience of other relevant issues. As opinion leaders from opposition parties typically refrain from criticizing the leader's crisis management in the wake of a threat, individuals are mostly exposed to public comments supportive of the leader with respect to the salient considerations (Brody and Shapiro, 1989; Hetherington and Nelson, 2003, p. 37-39). Hence, the evaluation of political leaders should improve as perceived threat increases. Somewhat consistent with this argument, Schraff (2021) found in the context of the COVID-19 pandemic that considerations like economic evaluations become less important determinants of political trust as COVID-19 infection numbers increase.

System justification theory provides us with another argument (Jost and Banaji, 1994). This theory states that people show a tendency to defend and justify the political, economic or social system (even if it is contrary to self-interest). Times of crisis should amplify these tendencies since exposure to "threat can increase system-justifying responses in a variety of ways" (Jost, 2019, p. 267) in order to reduce feelings of uncertainty. Empirical evidence shows support for the notion that perceived dependence on a system is positively related to perceived legitimacy of the system's authorities. In fact, experimental evidence indicates that feelings of political powerlessness result in greater legitimization of governmental authorities (van der Toorn et al., 2015, Study 5, p. 104-106).

Moreover, Gelfand et al. (2011) formulated a *cultural evolutionary theory* according to which nations that are exposed to threats need strong social coordination in order to survive. This would lead to strong social norms and a low tolerance of deviant behavior, and could perhaps also lead to greater support for political leaders. Gelfand et al. (2011) show that nations which historically experienced great environmental threats (e.g. natural disasters) and health-related threats (e.g. prevalence of pathogens) have stronger social norms than those nations that encountered these threats to a lesser extent.

There is also empirical evidence supportive of these arguments claiming that perceived threat drives the rally

³While we focus on a conceptualization of this mechanism as *cognitive* response, we also acknowledge that threat perceptions may be tinted or accompanied by affective components. By, for instance, inducing physiological arousal (Catherall, 2003; Sullivan et al., 1999) or motivating behaviors to reduce feelings of uncertainty (Jost, 2019), threat perceptions also extend into the emotional sphere. Nevertheless, we argue that the decisive mechanism of perceived threat affecting leadership approval is located in the cognitive sphere of this concept.

effect. Analyzing the public reaction to COVID-19 pandemic in Austria using a panel data design, Kritzinger et al. (2021) show that perceived threat to public health increased trust in the Austrian government.

Based on this review of the literature, we expect an increase in perceived threat during times of crisis to boost support for the political leader. Note that all of the arguments above expect that an increase in perceived threat boosts support for political leaders – independent of enacted policies and the leader’s crisis management. This is broadly consistent with the findings of Schraff (2021, p. 9) suggesting that the increase in political trust during the COVID-19 pandemic “is driven by the pandemic intensity of the crisis and not [by] the specific government measures” like lockdowns. However, it is conceivable that the leader’s performance and emergency responses affect the perceptions of threat. For instance, the imposition of a pandemic lockdown likely reduces the perceived threat originating from the spread of a virus. This way, government measures could indirectly influence support for the leader.

Anxiety Mechanism

In addition to the perceived threat mechanism that is likely to increase the approval of political leaders, we propose that the rally effect is driven by another mechanisms – the *anxiety mechanism* – that disadvantages political leaders. Anxiety is a negative emotional response to a crisis (*affective* response to a crisis). We argue that if times of crisis induce anxiety among citizens, then they will be less likely to support their political leaders.

Times of crisis typically induce anxious arousal. In the context of terrorist attacks, the physical proximity to the 9/11 attacks fueled anxieties (Huddy et al., 2005). We also know that the COVID-19 pandemic induced higher levels of anxiety, based on cumulating evidence obtained in countries such as the US (Tabri, Hollingshead and Wohl, 2020), Canada (Robillard et al., 2020), Austria (Pieh, Budimir and Probst, 2020), China (Wang et al., 2020), Italy (Mazza et al., 2020) or Spain (Ozamiz-Etxebarria et al., 2020). Research suggests that not only health-related considerations but also economic concerns fueled anxieties during the COVID-19 pandemic (Fetzer et al., 2021).

What are the consequences of increasing levels of anxiety during times of crisis on support for political leaders? A number of psychological theories claim the existence of an *assimilation effect* according to which an adverse affective state, such as anxiety, negatively influences the evaluation of (political) objects, such as political leaders. The *affective contagion* hypothesis originating from a motivated political reasoning argues that the process of making a political evaluation is shaped by the feelings that were evoked at the beginning of this process (Erisen, Lodge and Taber, 2014). These feelings bias the kind of considerations that enter the evaluation process: positive feelings tend to induce positively charged considerations while negative feelings arouse negatively charged considerations. Similarly, according to the *affect infusion* hypothesis, negative affect can serve as a heuristic cue when making a (political) evaluation of an object (Forgas, 1995). This way, the evaluation is negatively colored—even if the origin of the affect is unrelated to the object. Compliant with the *affect-as-information* hypothesis, assimilation effects can occur if individuals are not aware of the source of their affective state (Schwarz and Clore, 1983). In these

cases, feelings may be misattributed to an unrelated object inducing a more negative evaluation of that particular object. In similar fashion, the *affect transfer* hypothesis (Ladd and Lenz, 2008, 2011) expects emotional reactions to political candidates to directly shape the evaluations of those candidates: “[I]f someone makes you feel anxious, you like him or her less; if someone makes you feel enthusiastic, you like him or her more” (Ladd and Lenz, 2008, p. 276).

Based on this line of literature, we hypothesize that the specific phenomenon under consideration, the rally effect, is governed by such an assimilation effect: anxieties induced by situations of crisis should negatively influence support for political leaders. Referring to the *affective contagion* hypothesis above, anxious arousal should emphasise negative thoughts concerning the leader, such as problems related to the management of the crisis. Also the *affect infusion*, *affect-as-information* and *affect transfer* hypothesis suggest anxiety to negatively affect the evaluation of the leader, especially because individuals might not be able to precisely localize the origin of their anxious arousal in turbulent times of crisis.⁴

We also argue that increased information-seeking, as expected by affective intelligence theory (Marcus and MacKuen, 1993; Marcus, 1988; Marcus, Neuman and MacKuen, 2000), can go hand in hand with anxiety’s assimilation effect. A plethora of existing studies on the effects of anxiety indicate that anxious arousal promotes information-seeking (Albertson and Gadarian, 2015; Valentino et al., 2008) and a more thorough information-processing (Albertson and Gadarian, 2015; Mehlhaff et al., 2024). According to affective intelligence theory (Marcus and MacKuen, 1993; Marcus, 1988; Marcus, Neuman and MacKuen, 2000), this is induced by anxious individuals’ aim at reducing uncertainty. Intuitively, this might contradict the mechanism of anxiety and associated emotional arousal driving people to perform below their cognitive abilities (Maloney, Sattizahn and Beilock, 2014). However, we argue that anxious arousal has, in line with the *affective contagion* and *affect infusion* hypotheses, the effect of negatively tinting such gathered information; high quantity and depth of consumed information do not avoid or erase it being negatively tinted by anxious arousal. Thus, it is likely that anxious individuals have more negative stances towards the government and towards political leaders, even if they held more detailed knowledge of the crisis and related government action. Existing studies provide support for this mechanism: Civettini and Redlawsk (2009) find that even under increased information-seeking efforts, high anxiety levels inhibit the learning process associated with gathering information. Huddy et al. (2005) find that after 9/11, individuals who were most anxious about terrorism claimed to be most attentive to politics while at the same time retaining less factual information than their non-anxious counterparts. Similarly, the anxious tend to seek predominantly threatening information (Gadarian and Albertson, 2014) which may reinforce anxious arousal and increase the likelihood of evaluating political leaders through a negative lens. This likely decreases leadership approval especially among the anxious.

⁴Various studies focusing on the effect of anxiety on leadership approval and other forms of political behavior distinguish between the concept of *state* and *trait* anxiety. State anxiety refers to the situational feeling of anxiety. Trait anxiety, in contrast, captures someone’s inherent and stable proneness to anxiety (Spielberger, 1966; Tenenbaum and Furst, 1985). High levels of trait anxiety predispose people to experience higher levels of state anxiety (Baker, 2020). Additionally, research suggests that high levels of trait anxiety also enhance the extent to which state anxiety affects political behavior and, as in our case, leadership approval (Baker, 2020). Our understanding of anxiety in this article refers to state anxiety.

From an empirical point of view, anxiety effects were predominantly assessed employing slightly different items than used in our study. The majority of studies, especially those finding positive effects of anxiety on political support (Dietz et al., 2021; Eggers and Harding, 2022; Erhardt et al., 2021; van der Meer, Steenvoorden and Ouattara, 2023; Baekgaard et al., 2020; Vasilopoulos et al., 2023), subsume anxiety by the two concepts we divide into perceived threat and anxiety⁵. Thus, their isolated positive effects of anxiety on leadership approval may mask the negative effect anxious arousal may impose if disentangled from the cognitive mechanisms of threat perception. Our study therefore provides a more fine-grained assessment of the underlying cognitive and emotional effects of crises on leadership approval.

Note also that the survey fielded by Huddy et al. (2005) in the US in the aftermath of the 9/11 terrorist attacks found anxiety to be negatively related to support for president George W. Bush, which is in line with our expectations. However, Huddy et al. (2005) attributed this finding to anxious individuals' reluctance to support the potentially risky military response to the 9/11 attacks promoted by Bush. The same is true for the study of Erhardt et al. (2021), which attributes an observed effect of anxiety on trust in the Swiss government to the risk aversion of anxious people. We, in turn, expect that the effect of anxiety is more general and should be found also when there is no *risky* government response to a crisis. In fact, the empirical analysis employs a case in which government response was not risky, but greatly cautious (the COVID-19 pandemic), i.e., a case for which our theory has different expectations than the theory of Huddy et al. (2005).

To sum up, our expectation regarding the effects of the *anxiety mechanisms* to bring about the rally effect is, thus, opposite to the expectation regarding the *perceived threat mechanisms* we discussed previously.

Research Design

We test the hypotheses that perceived threat and anxiety have opposed effects on leadership approval in times of crises with data collected during the COVID-19 pandemic, a public health crisis. As Figure 1 indicates, citizens approval of leaders' parties increased substantially when the pandemic first hit their respective countries.⁶ In fact, there is cumulating evidence indicating that the COVID-19 pandemic boosted leadership approval. At the outset of the pandemic, COVID-19 infection numbers were positively associated with approval for the political leader (Yam et al., 2020), trust in the government (Esaiasson et al., 2021), trust in the national parliament (Schraff, 2021; Hegewald and Schraff, 2022), and incumbent's vote shares in elections (Leininger and Schaub, 2020). Other studies revealed that the imposition of pandemic lockdowns boosted trust in the political leader (Baekgaard et al., 2020; Bol

⁵Note also that the state we label as *anxiety* is oftentimes also described as *fear* in existing literature (compare, e.g., Erhardt et al., 2021; van der Meer, Steenvoorden and Ouattara, 2023; Vasilopoulos et al., 2023). While there are conceptual differences between fear and anxiety (the former refers to the response to a concrete and present danger, the latter describes a response to an abstract, rather potential danger (Catherall, 2003; Blanchard and Blanchard, 1990), both are located in the emotional domain. Given our division of perceived threat as a predominantly cognitive and anxiety as a predominantly emotional response, both fear and anxiety are subsumed by the latter mechanism in our study.

⁶For European countries, we rely on polling data provided by POLITICO. Further, we include data by YouGov (Australia), Léger (Canada), Kantar and Migdam (Israel), Reid Research and Roy Morgan Research (New Zealand) as well as Ipsos (United States).

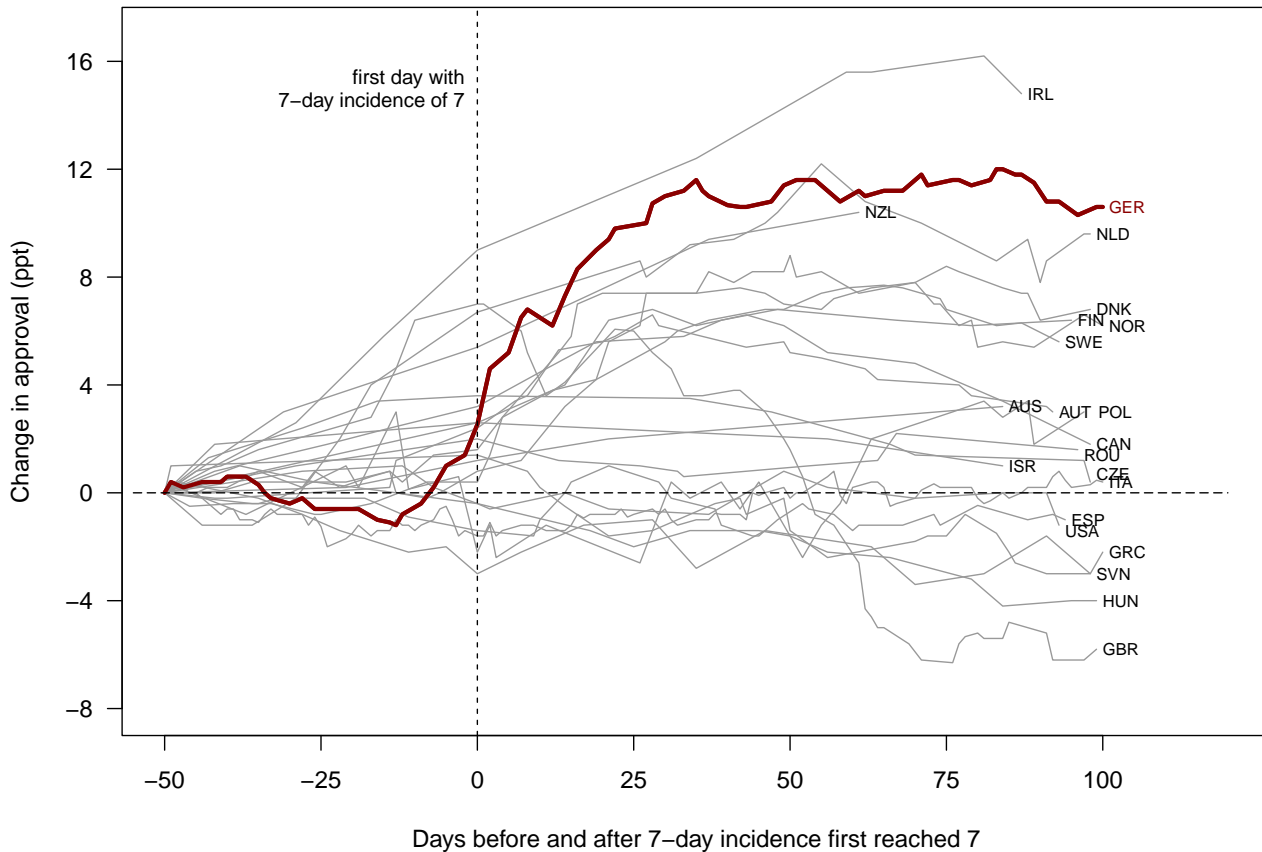


Figure 1: Change in government party approval around the week that first 7 of 100,000 inhabitants tested positive for COVID-19.

et al., 2021), the intention to vote for the political leader’s party (Bol et al., 2021), and attachment to government parties (De Vries et al., 2021). Therefore, we are confident that the COVID-19 pandemic serves as a valid case to study the composition of rally effects.

To isolate the diverging effects of perceived threat and anxiety on leadership approval, we require detailed individual-level data. Such data was collected by the German Internet Panel (GIP). The GIP is a high-quality online panel survey that surveys the same several thousand respondents six times a year. GIP respondents were randomly recruited offline from the German population (16-75 years) and, if needed, the GIP team provide respondents with internet access, hardware, and IT training to facilitate the participation of all sampled citizens in the survey. Thanks to these enormous efforts, the GIP marries the advantages of online surveys (e.g., flexibility and privacy) with the sampling standards researchers appreciate in high-quality offline surveys (Blom, Gathmann and Krieger, 2015, see also <https://www.uni-mannheim.de/en/gip/for-data-users/methodology/#c185696> for more information on the GIP methodology and sample accuracy). A key advantage is relevant to studying the rally effect: The MCS was able to collect data from a high-quality sample online at a time when, to our knowledge, virtually all other high-quality survey projects had halted their data collection because interviewers could not meet respondents in person. Further, since the GIP had been collecting data for several years when the pandemic hit, it includes

multiple measurements of relevant variable prior the pandemic which we can exploit to test our hypotheses.

The data we use for this article were collected in the GIP’s Mannheim Corona Study (MCS). The MCS is a special series of surveys that GIP respondents were invited to on top of their regular GIP participation. The MCS started when Germany was first approaching a COVID lockdown in late March 2020 and lasted a total of 16 weeks until July 2020. Hence, the MCS was in field throughout most of Germany’s first wave of COVID-19 infections, and a substantial period after the wave had ebbed away. At the survey’s start, German schools had been shuttered for a week but more severe lockdown measures were yet to follow. In the period, the MCS applied a daily rotating individual-level panel design of the general adult population in Germany. Effectively, the GIP sample of about 4,400 German residents was split into groups each of which was invited to participate in the MCS on a given weekday (or the following day) in each of the 16 MCS weeks. The last round of recruitment into the sample was conducted about 18 months prior to the MCS. Hence, each MCS respondent was invited to answer at least ten regular GIP surveys (and potentially many more if recruited earlier) before the MCS started. The MCS questionnaire changed each week and includes items on respondents’ attitudes and behavior in the context of the pandemic. The MCS also encompasses several panel items that were asked at different times (Blom et al., 2020).

Our dependent variable is based on a MCS item which asked respondents to what extent they are dissatisfied or satisfied with the work of Chancellor Angela Merkel.⁷ Respondents replied on an eleven-point scale. This survey item reflects our theoretical point of interest well since it taps the theoretical concept of leadership approval. It is also very similar to survey items that researchers use to learn about rally effects in other countries (Seo and Horiuchi, 2022, 278). The survey item was included in eleven of the sixteen MCS weeks.

Our first central independent variable of interests is perceived threat. An item that asks respondents to assess the degree to which they perceive the COVID-19 pandemic as a personal threat was included in all MCS weeks. It serves well to test the perceived threat mechanism because it measures respondents’ perceptions of the pandemic threat directly. We rescale responses from an 11-point scale to the unit interval.

To empirically test the anxiety mechanism, we need to quantify how anxious respondents are. To this end, we use the MCS version of a state anxiety measure which was initially suggested by Englert, Bertrams and Dickhäuser (2011). It is a simple additive index based on two survey items: the first item asks whether respondents feel worried and the second whether they feel nervous. Respondents indicate their feelings using a 4-point scale for each item. After summing up and rescaling, the resulting anxiety index ranges from 0 (no anxiety) to 1 (severe anxiety). It is available for all sixteen MCS weeks.⁸

We exploit the MCS panel design and additional MCS items to control for possible confounders. First, we estimate a linear respondent fixed effects model that removes all time-invariant differences between respondents by

⁷A full description of the survey items can be found in the supporting information SI.1.

⁸The two-way fixed-effect estimator that we employ (see below) further ensures that the anxiety measure captures state anxiety rather than trait anxiety: The individual-level fixed-effects remove a respondent’s mean anxiety from the data, and reduce them to within-respondent changes over time. Hence, it does not matter whether a respondent has high or low average anxiety – only her changes in anxiety matter. This notion of anxiety corresponds to state anxiety, yet not to trait anxiety.

demeaning. To control for time-variant factors such as the state of the pandemic, we include the contemporary COVID-19 incidence rate,⁹ and per capita household income in the previous month. Finally, we add a dummy variable that indicates whether the respondent agrees with the federal government’s policy to (not) close national borders on the day of the interview. Overall, we obtain a sample of 32,187 interviews by 3680 respondents. Each interview includes all the information we require, and each respondent participated in the MCS at least twice as required for the estimation of fixed effects models. To address potential issues of serial correlation and heteroscedastic errors, we compute clustered panel standard errors. We present summary statistics in the supporting information SI.2.

As an empirical test of the proposed individual-level mechanisms, we regress the approval of Chancellor Angela Merkel on perceived threat, the anxiety index, and the mentioned controls. We apply weights as provided by the MCS team which make the MCS data correspond to German census data with respect to several socio-economic dimensions (Blom et al., 2020). We expect perceived threat to increase approval of Chancellor Merkel, and anxiety to depress it. Table 1 reports the results of our fixed effects panel regression.

Please note that data collection for the MCS began only after the Corona pandemic had reached Germany (see below) and approval of Chancellor Angela Merkel in Germany had already risen sharply. Thus, the beginning of the Corona pandemic, when the rally effect had its strongest impact, eludes our analysis. Therefore, we expect the effect sizes to be smaller than in other cases.

Results: Threat and Anxiety Affect Leadership Approval

Table 1: The Effect of Perceived Threat and Anxiety on Merkel Approval

	(1)	(2)	(3)	(4)	(5)	(6)
Perceived Threat	0.37*** (0.11)	0.41*** (0.12)			0.48*** (0.12)	0.50*** (0.12)
Anxiety			-0.21 (0.14)	-0.26* (0.14)	-0.44*** (0.14)	-0.43*** (0.14)
COVID-19 Incidence		-0.002 (0.001)		0.0005 (0.001)		-0.001 (0.001)
HH Income Previous Month		0.08 (0.08)		0.08 (0.08)		0.09 (0.08)
Policy Congruence: Border Closures		0.09** (0.04)		0.10*** (0.04)		0.09** (0.04)
Individual Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of Respondents	3680	3680	3680	3680	3680	3680
Observations	32,187	32,187	32,187	32,187	32,187	32,187

Note:

*p<0.1; ** p<0.05; ***p<0.01

The findings lend strong support to both theorized mechanisms. Respondents rally around Chancellor Merkel as

⁹These are all confirmed infections per 100,000 inhabitants in Germany in the past seven days (Robert Koch Institut, 2020).

the head of the German federal government when feeling exposed to an external threat. The more pronounced threat perceptions are, the stronger the rally effect becomes which is in line with our perceived threat mechanism. When respondents feel anxious about the pandemic, however, we observe the opposite effect on Merkel approval. In accordance with our anxiety mechanism, the data show that anxiety undermines the support for the head of government.¹⁰ Models 1-4 in Table 1 indicate that these mechanisms operate independent of one another.

Both effects become particularly pronounced when tested simultaneously (Model 5 and 6): When perceived threat increases from 0 to 1, Germans' approval of Angela Merkel increases on average by about .5 units on an eleven-point scale. As anxiety increases from 0 to 1, a respondent's approval of Chancellor Merkel decreases by about .4 units.¹¹

Turning to the control variables, we observe that neither an increasing COVID-19 incidence nor more household income has an effect on leadership approval once perceived threat and anxiety are accounted for. By contrast, approval of the government's containment strategy increases approval of Angela Merkel. Most importantly, the effects of perceived threat and anxiety remain substantially unaffected by the inclusion of the control variables. All else equal, the empirical evidence provided here suggests that the rally effect is related to an increase in individuals' threat perceptions. At the same time, the positive effect of perceived threat on the approval ratings of political leaders vanishes and, in fact, gets reversed once perceived threat is overshadowed by anxiety. In this situation, negative feelings dominate the assessment of political leaders during an emergency situation such as the global COVID-19 pandemic.

Two distinct mechanisms or multicollinearity?

From a theoretical point of view, perceived threat is a *cognitive* response to crises, whereas anxiety is an *affective* response (Brader, Valentino and Suhay, 2008; Huddy et al., 2005; Huddy and Feldman, 2011; Miller, 2000; Miller et al., 2016). Despite their theoretical distinctiveness, they are likely to correlate empirically when crises hit (Huddy et al., 2005; Miller, 2000). This raises the concern that the results we present could be artefacts of the (potentially wrong) assumption that perceived threat and anxiety are independent from one another when they are not. Put more technically, we may deal with variables that are multicollinear, i.e., perceived threat and anxiety may be highly, yet not perfectly correlated (Wooldridge, 2009, 96). In the following, we search for patterns that one would expect to find if multicollinearity biased our conclusions about the perceived threat and anxiety mechanisms. We show that none of these patterns can be observed. This is strong evidence that the effects of perceived threat and anxiety are due to two distinct causal mechanisms rather than due to multicollinearity.

First, we turn to the pairwise correlation between respondents' perceived threat and anxiety. If perceived threat

¹⁰This result contradicts recent findings by Dietz et al. (2021) who argue that anxiety boosted leadership approval in Germany during the COVID pandemic.

¹¹In supporting information SI.5, we also present results with standardized independent variables. They are substantially identical to the results presented here. In supporting information SI.6, we further show that results do not hinge on the type of survey dropouts. Finally, in SI.7 we demonstrate that the results are not biased by autocorrelation.

and anxiety were strongly correlated, the correlation coefficient should be statistically significant and of substantial size. As we seek to rule out that multicollinearity distorts the results of fixed effects regressions, we need to compute the correlation of the (two-way) demeaned perceived threat and anxiety variables within respondents. The corresponding weighted correlation coefficient is $r = .31, p < .001$. As expected, (demeaned) perceived threat and anxiety are positively correlated. However, the correlation is rather weak.

Second, we compute the variance inflation factors (VIFs) for Model 6 in Table 1 (full model). It provides direct indication to what a extent a regression model may (not) suffer from multicollinearity. We find that $VIF_{\text{Perceived Threat}} = 1.27$ and $VIF_{\text{Anxiety}} = 1.17$ which are both far below conventional thresholds for problematic levels of multicollinearity.

Third, the patterns of the standard errors speak against multicollinearity. Consider a regression model with a single independent variable, X_1 , which finds that X_1 exerts a statistically significant effect on Y . Next, suppose that a second independent variable X_2 is added to the regression model. Importantly, X_1 and X_2 suffer from multicollinearity. Econometric theory teaches us that the standard errors of X_1 should increase when X_2 is added to the model (Wooldridge, 2009, 96-99). As Table 1 shows, this is neither the case when anxiety is added to a model that previously only included perceived threat (Model 1 to Model 5), nor when perceived threat is added to a model of anxiety (Model 3 to Model 5). Standard errors remain also unchanged when controlling for potential confounders (Model 2 to Model 6 and Model 4 to Model 6, respectively).

Overall, the results presented here suggest that perceived threat and anxiety are somewhat correlated. However, there is no evidence that this rather weak correlation drives the results we obtain. They rather support our theoretical claim that the two mechanisms operate independently from one another.

Reverse Causality: Does Merkel Propagate Threat and Anxiety?

Since our estimators are correlational in nature, their results reveal that Merkel approval on the one hand and perceived threat and anxiety on the other are associated. Since correlations are symmetric, the results do not immediately reveal whether changes in perceived threat and anxiety cause changes in Merkel approval or the other way around (reverse causality). In the following, we test additional empirical expectations that should be true if the manuscripts main hypotheses were in fact reversed. We find no evidence for these expectations and conclude that our results do not mistake causes (perceived threat and anxiety) for effects of leadership approval.

If our hypotheses were in fact reversed, then leadership approval should lead to more perceived threat during the pandemic, and at the same time to less anxiety. Playing devil's advocate to our own hypotheses, we note potential arguments why this may be the case: Suppose individuals who approve of Angela Merkel are more likely to believe her statements that the pandemic is a serious threat than individuals who oppose her. Then, Merkel supporters should feel more threatened by the pandemic than Merkel opposers.

With respect to Merkel approval's effect on anxiety a similar argument can be made: Suppose that citizens who

oppose Angela Merkel believe that she is an incompetent Chancellor who cannot be trusted to deal with crises. The fact that she has to oversee the response to arguably the most severe crisis Germany faced in decades is likely to make these citizen anxious.

Even though we believe that these theoretical stories are implausible, they are valid theories with clear observable implications which we can test empirically. In fact, since the GIP collected data on the respondents already several months before the pandemic hit, we can exploit pre-pandemic leadership approval data to support or refute the claims the reversed arguments make. In particular we test two hypotheses: First, the more satisfied a respondent was with Merkel before the pandemic, the more she feels threatened during the pandemic (because she is more likely to believe Merkel’s warning that the pandemic is a serious threat). Second, the more a respondent was unsatisfied with Angela Merkel’s performance prior to the pandemic, the more anxious she is during the pandemic (because she is more likely to fear Angela Merkel managing the crisis). In the following, we demonstrate that these “reverse” hypotheses receive no empirical support.

We test for these patterns by estimating a set of hierarchical regressions on two different dependent variables: respondents’ perceived threat and their anxiety during the pandemic. We acknowledge the fact that respondents provide multiple threat and anxiety ratings during the pandemic, and add random intercepts at both the respondent and the MCS week level. As key independent variable we use a (pre-pandemic) evaluation of Angela Merkel from July 2018. Since many MCS respondents were recruited to the GIP only later that year, roughly 50 % of respondents drop out from this analysis. We, thus, also present evidence based on respondents’ evaluations of the federal government in November 2019. While replacing evaluations of Angela Merkel by government evaluations does not immediately measure our theoretical point of interest, it allows us to use a more contemporary measurement and draw on the full sample of MCS respondents. Both measurements were collected on an eleven-point scale which we recode to the unit interval. To corroborate the claim that Angela Merkel increased threat perceptions during the pandemic, either of these measurements (or both) should be positively correlated with perceived COVID-19 threat. To support the hypothesis that Angela Merkel triggers anxiety in citizens, they should be negatively correlated with anxiety.¹²

To control for the most basic reasons why someone might feel threatened by or anxious because of COVID-19, we include a set of dummy variables each of which indicates that a respondent has a characteristic which is directly linked to a more severe course of COVID-19. These include an indicator variable for each men, respondents with at least one of a list of specific medical preconditions,¹³ and respondents who are more than 60 years of age (Yang et al., 2020).

As models 1 and 2 in Table 2 show, the effects of neither pre-pandemic Merkel approval, nor pre-pandemic

¹²One may argue that the fixed effects in our main models already control for any pre-pandemic differences between respondents, and that hence a better test of reverse causality would rely only on data that was collected during the pandemic. We present corresponding analyses in SI.3. The substantial findings are identical.

¹³These are obesity, diabetes, high blood pressure, issues with the heart, breathing, the lungs, or the liver as well as cancer or a weak immune system.

satisfaction with the federal government are significantly associated with the threat levels respondent report. Models 3 and 4 indicate that these factors are also not significantly associated with anxiety. Unsurprisingly, we find consistent effects that a medical precondition and gender are related to higher threat and anxiety levels. Further, high age increases perceived threat, yet, results for anxiety levels are mixed. Overall, this analysis strongly suggests that Merkel supporters did neither heighten their perceived threat levels more than the average population, nor were they more anxious during the early pandemic. These findings clearly refute the alternative mechanisms and substantially increase our confidence that anxiety and perceived threat drive approval of Angela Merkel, and not the other way around.¹⁴

Table 2: Does Merkel cause Threat or Anxiety?

	Perceived Threat		Anxiety	
	(1)	(2)	(3)	(4)
Merkel Approval (July 2018)	-0.008 (0.025)		-0.021 (0.020)	
Government Approval (November 2019)		0.016 (0.021)		-0.005 (0.017)
Medical Precondition	0.105*** (0.014)	0.129*** (0.009)	0.039*** (0.011)	0.058*** (0.007)
60+ Years	0.066*** (0.014)	0.060*** (0.009)	0.023** (0.011)	0.009 (0.007)
Male	-0.047*** (0.014)	-0.035*** (0.008)	-0.057*** (0.011)	-0.056*** (0.007)
Intercept	0.338*** (0.025)	0.307*** (0.022)	0.269*** (0.017)	0.259*** (0.014)
Respondent Random Effect: Std. Dev.	0.224	0.223	0.177	0.177
MCS Week Random Effect: Std. Dev.	0.076	0.074	0.042	0.04
Number of Respondents	1134	2977	1134	2979
Observations	16,301	43,252	16,531	43,892
Log Likelihood	4,142.889	10,815.900	8,360.099	20,908.930

Note: *p<0.1; **p<0.05; ***p<0.01

Ruling out parallel time-trends

One may argue that our analyses pick up a set of parallel time-trends rather than a causal pattern. Specifically, anxiety may have exceeded perceived threat at the onset of the pandemic. As Germans understood that the pandemic was something they could cope with, perceived threat may have become more dominant than anxiety. At the same time, yet for unrelated reasons, Angela Merkel’s approval rating may have gone up over time. In the following, we refute this argument.

Since we utilize a fixed-effect framework, it would be misleading to evaluate the above claim by assessing absolute levels in perceived threat and anxiety.¹⁵ Instead, we need to check whether deviations from respondent-

¹⁴These conclusions are also supported by results from a cross-lagged panel design (see SI.8).

¹⁵Nevertheless, we present corresponding evidence in Supporting Information SI.4. In line with general expectations, both average

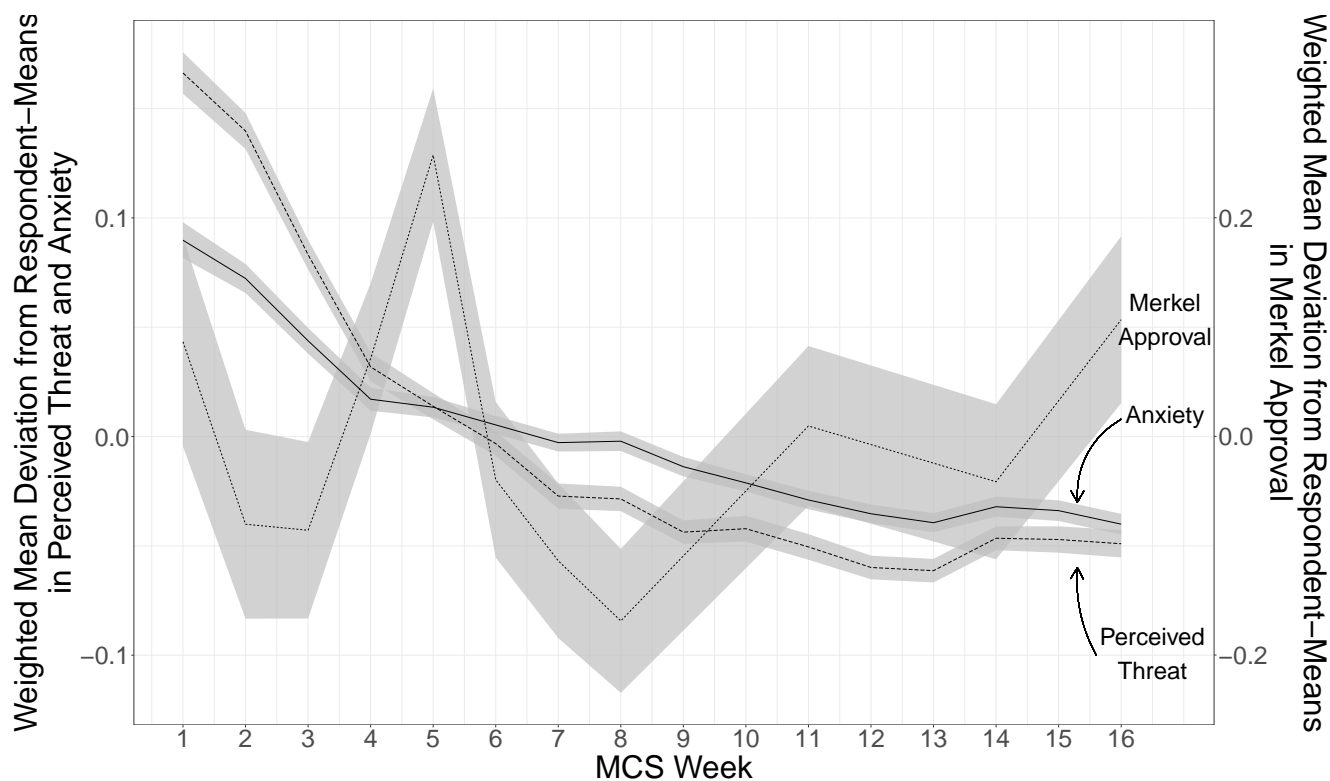


Figure 2: Weighted mean deviations from respondent-means in perceived threat, anxiety and Merkel approval throughout the MCS. Shaded areas depict corresponding 95% confidence intervals.

means display the suspected patterns. Therefore, Figure 2 displays the mean deviations from respondent-means in perceived threat, anxiety and Merkel approval in course of the MCS. All values are weighted according to the above mentioned survey weights. In the first weeks, the weighted mean deviations from anxiety respondent-means are smaller than the corresponding deviations with respect to perceived threat. Only later on, this pattern is reversed, while Merkel approval is more variable than expected and includes upward and downward spikes. These observations provide strong evidence that our estimates do not simply pick up a specific time-trend.

Increasing the Scope: Approval of Key Ministers

Prior research suggests that the rally effect is not limited to the head of government but that it also affects government ministers (Gaines, 2002). In the following, we demonstrate that minister approval during times of crisis depends on the perceived threat mechanism and the anxiety mechanism. We focus on the German Minister of Health, Jens Spahn, and the Minister for Economic Affairs, Peter Altmaier. Both of them are members of Angela Merkel’s Christian Democrats (CDU).¹⁶ We replicate the above analyses on Angela Merkel’s approval, yet, replace her approval ratings with respondents’ evaluation of the corresponding ministers. The results appear in Table 3.

As expected, while the effects of some control variables differ slightly, we find similar effects for our main

perceived threat and average anxiety decline throughout the pandemic. Further, mean Merkel approval somewhat zigzags.

¹⁶Unfortunately, the MCS did not survey respondents about additional politicians. Hence, we cannot extend the analysis to other government parties or ministers whose portfolios are less directly affected by the pandemic.

Table 3: The Effect of Perceived Threat and Anxiety on Minister Approval

	Economics Affairs	Health
	(1)	(2)
Perceived Threat	0.480*** (0.102)	0.625*** (0.106)
Anxiety	-0.289** (0.145)	-0.400*** (0.137)
COVID-19 Incidence	0.012*** (0.001)	0.011*** (0.001)
HH Income Previous Month	0.046 (0.076)	0.029 (0.077)
Policy Congruence: Border Closures	0.060* (0.033)	0.084** (0.035)
Individual Fixed effects	Yes	Yes
Number of Respondents	3419	3617
Observations	28,603	31,182

Note: *p<0.1; **p<0.05; ***p<0.01

explanatory variables on satisfaction with Minister of Health Spahn and Minister for Economic Affairs Altmaier. Even the magnitude of the effects are comparable in size to the ones reported with respect to Angela Merkel’s approval ratings. While an increase in threat perceptions boosts approval, anxiety decreases it. As a result, these analyses confirm that the anxiety mechanism and the perceived threat mechanism are not restricted to the head of government. Instead, we provide evidence that key ministers, that are also immediately involved with crisis responses, are also subject to them.

Conclusion and Discussion

We present theoretical reasoning and robust empirical evidence that perceived threat and anxiety have distinct effects on leadership approval in times of crises. Using German individual-level panel data from the early COVID-19 pandemic, we causally identify that perceived threat increases citizens’ support of their leader, and anxiety decreases it. Moreover, we show that perceived threat and anxiety also have the expected effect on the approval of ministers who manage key crisis portfolios. Our findings yield highly important implications for our understanding of how the so-called rally effect evolves, and how it shapes the politics of crises in democracies.

Our finding that perceived threat and anxiety have distinct and opposed effects on leadership support has striking implications for democratic crises politics. It suggests that politicians and political parties face strategic incentives to exploit crises to their advantage. Based on our two counteracting mechanisms we would expect that politicians affiliated with the government or the opposition strategically frame crises as threatening or frightening to advance their political goals and to exploit how times of crises play out in public opinion. Previous research suggests that government and opposition develop different crisis exploitation strategies, and that contextual features

condition whether a government is likely to gain additional support from crisis exploitation or not (Boin, 't Hart and McConnell, 2009). Future research should, thus, scrutinize how government and opposition crisis rhetoric aim at threat perceptions and anxiety, under what circumstances their crisis rhetoric affects individual levels of perceived threat and anxiety, and when and why corresponding effects are strong and durable enough to influence election results, government stability, and crises policy-making.

Similarly, our theory provides a route for understanding leadership approval in the context of crises at the macro level: At the individual level, we find that perceived threat increases leadership approval, while anxiety depresses it. A logical implication is that if the perceived threat-to-anxiety ratio increases, leadership approval should increase while it should decrease if the ration decreases. It is beyond this article to investigate these and additional macro-level implications. Nevertheless, future research should evaluate these hypotheses.

In substantive terms, this also implies that the type of crisis (e.g., natural disasters vs. wars), the nature of responses both with regards to policy-action (e.g., risk-taking or risk-averse government action) as well as framing (e.g., by the government or the opposition), and various individual-level and contextual factors (e.g. an individual's geographical proximity to the center of crisis, individuals' perceived problem-solving competence of political leaders) influence the extent to which crises shift political support on individual and – by the mechanism described above – mass-level. For instance, it stands to reason that a crisis framed as threatening paired with an effective crisis management by the government lends greater levels of political support than a similar crisis that is framed as less severe and ineffectively tackled. Investigating individual-level and mass-level shifts of political support under changing compositions of these factors opens various paths for future research. Moreover, similar effects on other critical aspects including trust into the political system or politicians in general should be studied.

Our study also makes significant contributions to our understanding of the rally effect's scope. We delivered evidence indicating that the effects of perceived threat and anxiety are not limited to the political leader, but also pertain to other members of the government. In fact, also in the aftermath of the 9/11 terrorist attacks, not only President George W. Bush received a boost in support but also Secretary of Defense Donald Rumsfeld and Secretary of State Colin Powell (Gaines, 2002). Unfortunately, our study has to stop short of studying the rally effect's partisan scope. For multi-party systems with coalition governments, it would be interesting to study whether the perceived threat effect also translates to ministers of the junior coalition partners. There is some evidence from the Netherlands indicating that this is not the case (Beijen, Otjes and Kanne, 2022). It is conceivable that the perceived threat mechanism first and foremost boosts support for the head of government as the most prominent figure of the nation's political leadership. Then, there might be spillover of this effect to ministers of the same party of the government's head but not or to a lesser extent to ministers of other parties. Similarly, with regard to vote choice, the perceived threat mechanism can be expected to increase electoral support for the party of the head of government while junior coalition parties, which have a less apparent association with the political leadership and also less media attention than the senior party (Klüver and Spoon, 2020), might profit to a lesser degree.

Finally, our results also yield implications for crises' ability to harm democratic principles. The findings that anxiety and perceived threat have opposing effects on leadership approval add a new layer to other crisis related research. Prior scholarship reports a tendency for more anxious citizens to value stability and maintain their prior behavior, whereas citizens who feel more threatened demand action and are willing to change. For instance, anxiety is related to opposing a foreign intervention after 9/11 (Huddy et al., 2005), a smaller probability to use a mobile phone application that traces contacts during the COVID pandemic (Witteveen, de Pedraza et al., 2021), and a preference for less disrupting electoral candidates (Bisbee and Honig, 2022). Citizens who felt more threatened, by contrast, were more likely to support a foreign intervention following 9/11 (Huddy et al., 2005), more likely to allow their smartphone to trace their contacts (Wnuk, Oleksy and Maison, 2020), and more likely to vote for robust responses to terror (Getmansky and Zeitzoff, 2014). Adding leadership support to the list of perceived threat's consequences, thus, raises concerns with respect to democratic theory: The fact that the rather change-driven share of the population is also likely to lend additional support to the government may open a window of opportunity for the government to alter systems of checks and balances. When crisis support for the government wanes, these changes are often locked in so that they will not be fully reversed. The Patriot Act passed by the US Congress in the aftermath of 9/11 serves as a prime example.

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SI Supporting Information

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SI.1 Question Text Wording

Merkel Approval; MCS: SCPX001

- *English translation:* How dissatisfied or satisfied are you with the work of Chancellor Angela Merkel?
 - completely dissatisfied (1) - fully satisfied (11)
 - don't know
- *Original (German):* Wie unzufrieden oder zufrieden sind Sie mit der Arbeit von Bundeskanzlerin Angela Merkel?
 - völlig unzufrieden (1) - völlig zufrieden (11)
 - weiß nicht

Perceived Threat; MCS: SCBX003

- *English translation:* To what extent do you see the coronavirus pandemic as a threat to yourself?
 - no threat to me at all (0) - extreme threat to me (10)
 - don't know
- *Original (German):* Inwiefern empfinden Sie die Corona-Virus-Pandemie als Bedrohung für sich selbst?
 - überhaupt keine Bedrohung für mich (0) - extreme Bedrohung für mich (10)
 - weiß nicht

Anxiety (Worry and Nervousness)

- *English translation:* Below are a number of statements people use to describe themselves. Please indicate how much each statement indicates how you feel at this moment. There are no right or wrong answers. Please do not think twice and remember to choose the answer that best describes your current emotional state.
 - I am concerned that something could go wrong (MCS: SCBX009).
 - I am nervous (MCS: SCBX011).
 - * not at all (1)
 - * a little (2)
 - * quite (3)
 - * very (4)

- *Original (German):* Im Folgenden finden Sie eine Reihe von Aussagen, mit denen Menschen sich selbst beschreiben. Bitte geben Sie an, wie sehr die jeweilige Aussage angibt, wie Sie sich jetzt in diesem Moment fühlen. Es gibt keine richtigen oder falschen Antworten. Überlegen Sie bitte nicht lange und denken Sie daran, diejenige Antwort auszuwählen, die Ihren augenblicklichen Gefühlszustand am besten beschreibt.

– Ich bin besorgt, dass etwas schiefgehen könnte (**MCS: SCBX009**).

– Ich bin nervös (**MCS: SCBX011**).

* überhaupt nicht (1)

* ein wenig (2)

* ziemlich (3)

* sehr (4)

HH Income Previous Month

- *English translation:* How much money did your household have in February [March / April / May / June] 2020? (**MCS: SCDX005/ SCDX007/ SCDX008/ SCDX009**)

– less than 150 euros (1)

– 150 to under 400 euros (2)

– 400 to under 1000 euros (3)

– 1000 to under 1500 euros (4)

– 1500 to under 2000 euros (5)

– 2000 to under 2500 euros (6)

– 2500 to under 3000 euros (7)

– 3000 to under 3500 euros (8)

– 3500 to under 4000 euros (9)

– 4000 to under 4500 euros (10)

– 4500 to under 5000 euros (11)

– 5000 to under 5500 euros (12)

– 5500 to under 6000 euros (13)

– 6000 to under 7500 euros (14)

– 7500 euros and more (15)

– don't know

- not specified
- *Original (German):* Wie viel Geld stand Ihrem Haushalt im Februar [März/ April/ Mai/ Juni] 2020 in etwa zur Verfügung? (MCS: SCDX005/ SCDX007/ SCDX008/ SCDX009)
 - unter 150 Euro (1)
 - 150 bis unter 400 Euro (2)
 - 400 bis unter 1000 Euro (3)
 - 1000 bis unter 1500 Euro (4)
 - 1500 bis unter 2000 Euro (5)
 - 2000 bis unter 2500 Euro (6)
 - 2500 bis unter 3000 Euro (7)
 - 3000 bis unter 3500 Euro (8)
 - 3500 bis unter 4000 Euro (9)
 - 4000 bis unter 4500 Euro (10)
 - 4500 bis unter 5000 Euro (11)
 - 5000 bis unter 5500 Euro (12)
 - 5500 bis unter 6000 Euro (13)
 - 6000 bis unter 7500 Euro (14)
 - 7500 Euro und mehr (15)
 - weiß nicht
 - keine Angabe

Policy Congruence: Border Closures

- *English translation:* In Germany, various measures are and have been discussed and taken to contain the corona pandemic. We would now like to know from you what you think of the measures that have already been decided and what you think of possible future measures. Which of the following measures do you consider appropriate in the current situation?
 - Closure of national borders to travelers (MCS: SCPX006_b)
- *Original (German):* In Deutschland werden und wurden zur Eindämmung der Corona-Pandemie verschiedene Maßnahmen diskutiert und ergriffen. Wir möchten nun von Ihnen wissen, was Sie von bereits beschlossenen Maßnahmen als auch von möglichen zukünftigen Maßnahmen halten. Welche der folgenden Maßnahmen halten Sie in der heutigen Situation für angemessen?

- Schließung der Landesgrenzen für Reisende (MCS: SCPX006_b)

Health Secretary Approval; MCS: SCPX002

- *English translation:* How dissatisfied or satisfied are you with the work of Federal Health Secretary Jens Spahn?
 - completely dissatisfied (1) - fully satisfied (11)
 - don't know
- *Original (German):* Wie unzufrieden oder zufrieden sind Sie mit der Arbeit von Bundesgesundheitsminister Jens Spahn?
 - völlig unzufrieden (1) - völlig zufrieden (11)
 - weiß nicht

Business Secretary Approval; MCS: SCPX003

- *English translation:* How dissatisfied or satisfied are you with the work of Federal Business Secretary Peter Altmaier?
 - completely dissatisfied (1) - fully satisfied (11)
 - don't know
- *Original (German):* Wie unzufrieden oder zufrieden sind Sie mit der Arbeit von Bundeswirtschaftsminister Peter Altmaier?
 - völlig unzufrieden (1) - völlig zufrieden (11)
 - weiß nicht

SI.2 Summary Statistics

Table SI1: Summary Statistics: German Panel Data

Statistic	N	Mean	St. Dev.	Min	Max
Merkel Approval	32,187	6.285	2.897	0	10
Perceived Threat	32,187	0.398	0.288	0.000	1.000
Anxiety	32,187	0.267	0.220	0.000	1.000
COVID-19 Incidence	32,187	19.240	14.375	2.952	44.544
HH Income Previous Month	32,187	1.654	0.921	0.050	7.500
Policy Congruence: Border Closures	32,187	0.737	0.440	0	1

Table SI2: First Difference Evidence: Perceived Threat and Anxiety

	Perceived threat		Anxiety	
	(1)	(2)	(3)	(4)
Change Merkel Approval (Lagged)	0.002 (0.002)	0.001 (0.002)	-0.002 (0.002)	-0.002 (0.002)
Change COVID-19 Incidence (Lagged)		0.01*** (0.0002)		0.003*** (0.0002)
Change HH Income Previous Month (Lagged)		-0.01 (0.01)		-0.01 (0.02)
Change Policy Congruence: Border Closures (Lagged)		0.08*** (0.01)		0.04*** (0.01)
Number of Respondents	3258	3258	3293	3293
Observations	22,328	22,328	22,682	22,682

Note: *p<0.1; **p<0.05; ***p<0.01

SI.3 Ruling out reverse causality: Pandemic Evidence Only

In this section, we use a different approach to obtain evidence that perceived threat and anxiety cause Merkel approval rather than the other way around. While the corresponding analyses in the main text exploit pre-pandemic survey information to learn if longstanding Merkel supporters formed different attitudes during the pandemic, we now rely on within-respondent variation during the pandemic only. We test whether changes in Merkel approval precede (or “granger-cause”) changes in perceived threat and anxiety. However, we find no evidence that changes in Merkel approval trace changes in either perceived threat nor anxiety.

Recall that respondents were invited to participate in the MCS in 16 consecutive weeks. Label a respondent’s week of first participation t_0 , and let t_n with $n \in [1, 15]$ be any of the following weeks she participated in. We then compute how much perceived threat and anxiety changed between t_0 and t_n for all available weeks, and whether these changes are systematically predicted by the change in Merkel approval between t_0 and t_{n-1} . Put differently, we estimate in an OLS regression whether the change in Merkel approval between a respondent’s first MCS participation and last week predicts how much her perceived threat and anxiety levels changed between her first participation and this week, respectively. We further add corresponding (lagged) changes in the control variables that we also use in the main models. To account for the fact that respondents appear multiple times in the dataset, we use respondent-clustered standard errors.

If changes in Merkel approval granger-caused changes in perceived threat and anxiety, respectively, the regression coefficients on the changes in Merkel approval (lagged) variable should be positive and statistically significant. As Table SI2 displays, however, the effects are very small and far from statistical significance. We, therefore, conclude that this additional analysis provides further evidence that Merkel approval does not drive either perceived threat levels nor anxiety levels.

We also exploit this logic to test whether perceived threat and anxiety “granger-cause” Merkel approval. For

these analyses, Merkel approval becomes the dependent variable and lagged changes in perceived threat and anxiety become independent variables. Otherwise, everything remains as before. Table SI3 displays the results. We observe that increases in perceived threat boost Merkel approval in the following week, while rises in anxiety depress it. Overall, the findings in this section are strong evidence that perceived threat and anxiety precede Merkel approval rather than the other way around.

Table SI3: First Difference Models

	Merkel approval	
	(1)	(2)
Change Perceived Threat (Lagged)	0.43** (0.19)	0.34* (0.20)
Change Anxiety (Lagged)	-0.56* (0.29)	-0.60** (0.29)
Change COVID-19 Incidence (Lagged)		0.002 (0.002)
Change HH Income Previous Month (Lagged)		0.14 (0.11)
Change Policy Congruence: Border Closures (Lagged)		0.11 (0.08)
Number of Respondents	3271	3271
Observations	22,094	22,094
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

SI.4 Weighted Means of Perceived Threat, Anxiety and Merkel Approval over time

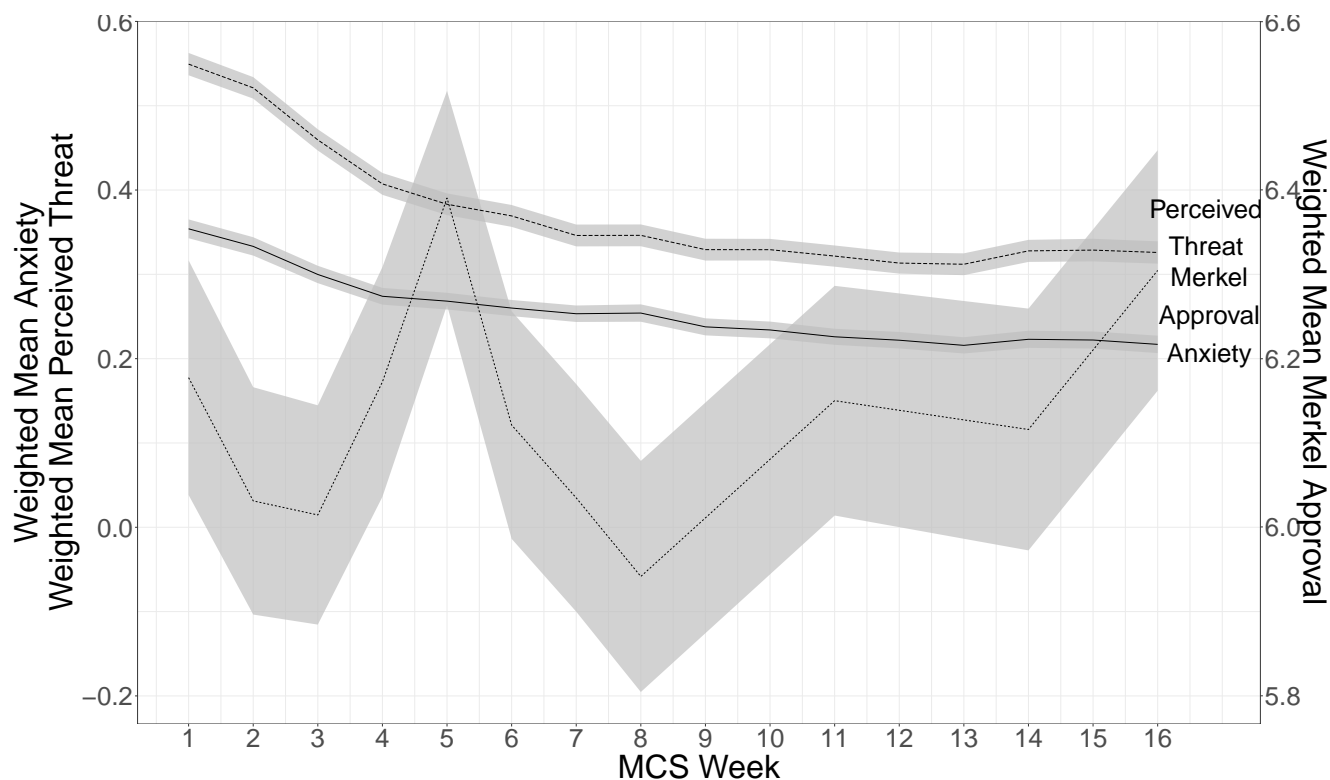


Figure SI1: Weighted Means of Perceived Threat, Anxiety and Merkel Approval over time

In the main text, we present evidence from two-way demeaned time trends, and argue that these contradict the objection that our results are driven by a common time trends. Here, we repeat this analysis with weekly averages that are not two-way demeaned.

For our sample, Figure SI1 shows that the weighted mean of perceived threat was higher than the weighted mean of anxiety throughout the entire field time. Further, while perceived threat and anxiety decline in course of the pandemic, Merkel approval is more variable including upward and downward spikes. This is evidence that we do not simply pick up a common time trend.

SI.5 Standardized independent variables

In the main text, the perceived threat and anxiety variables both range from 0 to 1. Here, fully standardize all variables, i.e., we recode them to the unit interval and divide them by their respective standard deviations. By design, the results we obtain from these variables allow for a interpretation in terms of standard deviations, yet, they should not alter any substantive conclusions.

As expected, the results in Table SI4 are identical to the findings in Table 1 the main text with respect to effect directions and statistical significance. Further, Table SI4 indicates that a standard deviation increase in Perceived Threat is associated with a .05 standard deviations higher approval of Angela Merkel. Similarly, a standard deviation

increase in Anxiety depresses Merkel support by about .03 standard deviations. Finally, a standard deviation increase in Policy Congruence increases Merkel approval by .01 standard deviations. The COVID incidence and household income exert no statistically significant effect on Merkel approval.

Please recall that the MCS data were collected only after COVID had started to be the major issue in German politics. Hence, they do not capture the onset of the rally effect for which very strong effects are expected. By contrast, our results are based on the much smaller changes in public attitudes *during* the pandemic, and hence much smaller effect sized are to be expected.

Table SI4: The Effect of Perceived Threat and Anxiety on Merkel Approval (Standardized Variables)

	(1)	(2)
Perceived Threat	0.05*** (0.01)	0.05*** (0.01)
Anxiety	-0.03*** (0.01)	-0.03*** (0.01)
COVID-19 Incidence		-0.01 (0.01)
HH Income Previous Month		0.03 (0.02)
Policy Congruence: Border Closures		0.01** (0.01)
Individual Fixed effects	Yes	Yes
Number of Respondents	3680	3680
Observations	32,187	32,187
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

SI.6 Response Rates over Time

A potential issue with panel surveys is panel attrition, i.e. that less and less of initial respondents participate the longer a panel survey lasts. This is problematic when selection into the panel skews survey items of interest, and eventually makes researchers draw wrong conclusions (Lynn, 2018).

Figure SI2 shows the rate at which initial respondents participate in the MCS per MCS week (solid line). The dashed line indicates the corresponding Average Absolute Relative Bias (AARB) which measures to what extent a given week's sample deviates from official German population statistics with respect to age, gender, education, household size, marital status, region, and citizenship (Blom et al., 2020).¹⁷

A first glance at the solid line in Figure SI2 reveals that MCS participation was always well above 50%, and usually about 60%. While there is some attrition, however, it is rather small in size: The difference between the waves with the most and least respondents is a mere eight percentage points.

More importantly, the dashed line in Figure SI2 indicates that the MCS's Average Absolute Relative Bias

¹⁷More detailed response rates and AARBs can be found at <https://www.uni-mannheim.de/en/gip/corona-study/methodology/> and in Blom et al. (2020).

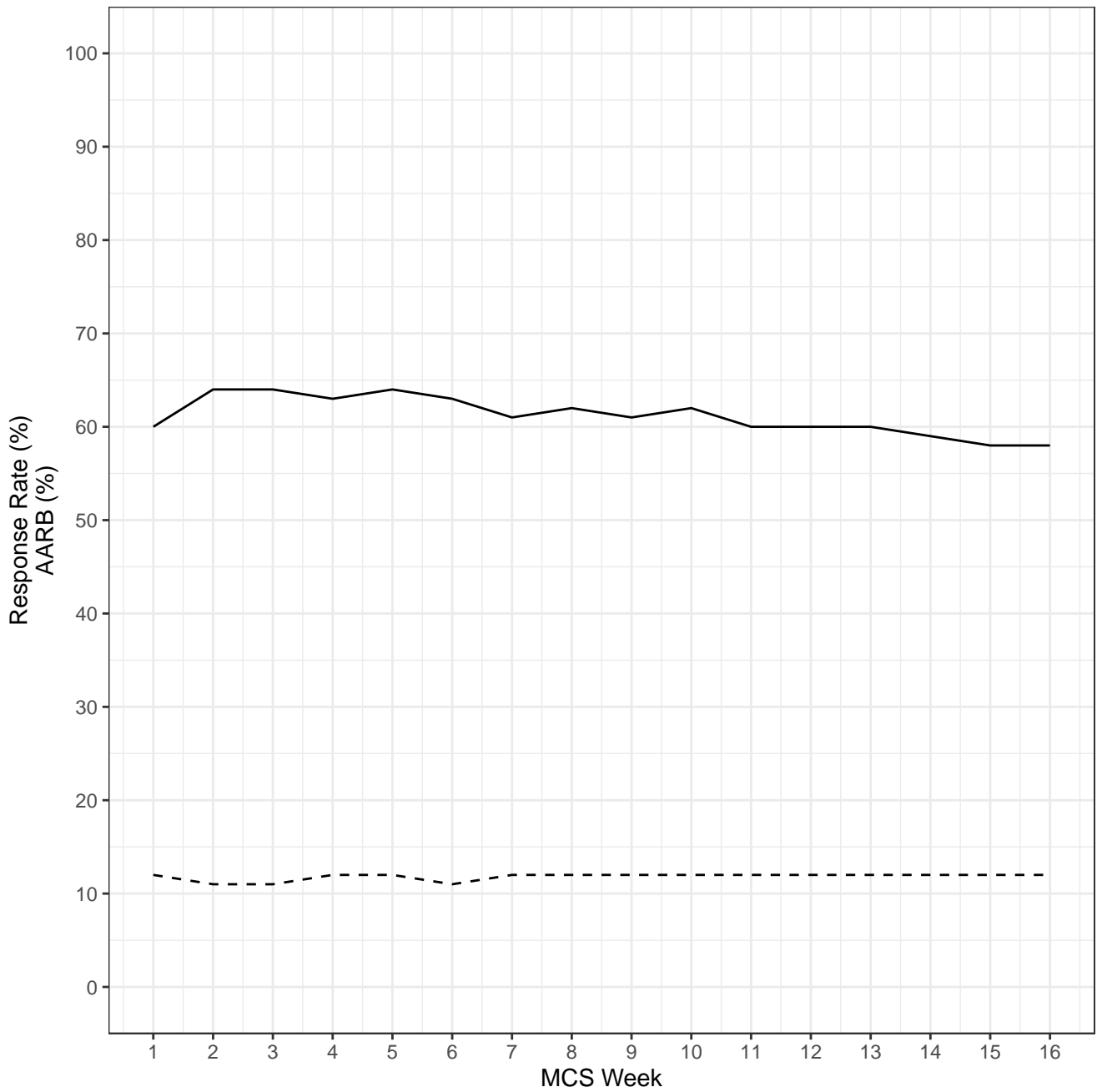


Figure SI2: MCS response rates (solid line) and AARBs (dashed line) over time

(AARB) does not change much as the participation decreases. Overall, this is evidence that some panel attrition occurs (as expected in panel surveys). However, we find no evidence that panel attrition biases the conclusions we draw.

SI.7 Lagged Dependent Variable Models

A potential concern in panel analyses is auto-correlation. In this section, we seek to model it by including a lagged dependent variable (LDV) in our models.¹⁸ Table SI5 indicates that the substantive conclusion drawn in the main text are robust to the addition of the LDV. While the effect of Perceived Threat increases somewhat in comparison to the baseline specification, the effect of Anxiety decreases a little bit.

Table SI5: The Effect of Perceived Threat and Anxiety on Merkel Approval (Lagged Dependent Variable Model)

	(1)	(2)
Lagged Merkel Approval	0.03* (0.02)	0.03* (0.02)
Perceived Threat	0.57*** (0.15)	0.60*** (0.16)
Anxiety	-0.35** (0.18)	-0.35** (0.18)
COVID-19 Incidence		-0.002 (0.002)
HH Income Previous Month		0.13 (0.14)
Policy Congruence: Border Closures		0.21*** (0.08)
Individual Fixed effects	Yes	Yes
Number of Respondents	3208	3208
Observations	18,943	18,943
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

¹⁸To ease the interpretation of results, we exclude observations from this analysis if their last MCS participation did not occur in the previous MCS week. If a respondent skipped the MCS questionnaire in a single week, she hence contributes two observations less to the analysis.

SI.8 Cross lagged panel model

Another way to test for a causal relationship with panel-data are cross lagged panel models (Kenny, 2005). Applied to our context, this research design would provide further evidence in favor of the Perceived Threat and Anxiety hypotheses if its results meet four conditions:

Condition 1: Perceived Threat at t_{-1} is positively associated with Merkel support at t_0 .

Condition 2: Anxiety at t_{-1} is negatively associated with Merkel support at t_0 .

Condition 3: Merkel support at t_{-1} is not associated with Perceived Threat at t_0 .

Condition 4: Merkel support at t_{-1} is not associated with Anxiety at t_0 .

Table SI6 presents the results of a structural equation model that tests all of these conditions at the same time.¹⁹ Its first highlighted row indicates that Condition 1 is met: There exists a substantially relevant and statistically significant association between Perceived Threat at t_{-1} and Merkel Approval at t_0 . The second highlighted row confirms that Condition 2 holds, i.e., it points to a statistically significant and substantially relevant association between Anxiety at t_{-1} and Merkel Approval at t_0 . The coefficient in the third highlighted row finds a statistically significant association between Merkel Approval at t_{-1} and Perceived Threat at t_0 . However, the coefficient is estimated to be 0.00 which implies that there is no substantial effect of past Merkel Approval on current levels of Perceived Threat. Hence, Condition 3 is met. Finally, the coefficient in the last highlighted row is far from statistically significant ($p=.89$) which implies that Condition 4 is met as well. Overall, the cross-lagged panel design provides further evidence that the perceived threat and anxiety drive leadership approval as theorized in the main paper.

¹⁹As in SI.7, we exclude observations from this analysis if their last MCS participation did not occur in the previous MCS week in order to ease the interpretation of results. If a respondent skipped the MCS questionnaire in a single week, she hence contributes two observations less to the analysis.

Table SI6: Cross-lagged panel model

		Model			
		Estimate	Std. Err.	z	p
		<u>Regression Slopes</u>			
<u>Merkel Approval</u>					
	Merkel Approval (Lagged)	0.67	0.01	126.78	0.000
	Perceived Threat (Lagged)	0.48	0.06	7.48	0.000
	Anxiety (Lagged)	-0.26	0.08	-3.09	0.002
<u>Perceived Threat</u>					
	Perceived Threat (Lagged)	0.70	0.01	137.28	0.000
	Merkel Approval (Lagged)	0.00	0.00	4.82	0.000
	Anxiety (Lagged)	0.20	0.01	29.76	0.000
<u>Anxiety</u>					
	Anxiety (Lagged)	0.72	0.01	139.91	0.000
	Merkel Approval (Lagged)	0.00	0.00	0.14	0.890
	Perceived Threat (Lagged)	0.09	0.00	22.43	0.000
		<u>Residual Variances</u>			
	Merkel Approval	4.45	0.05	97.11	0.000
	Perceived Threat	0.03	0.00	97.11	0.000
	Anxiety	0.02	0.00	97.11	0.000
	Merkel Approval (Lagged)	8.42 ⁺			
	Perceived Threat (Lagged)	0.08 ⁺			
	Anxiety (Lagged)	0.05 ⁺			
		<u>Residual Covariances</u>			
	Merkel Approval w/Perceived Threat	0.02	0.00	7.05	0.000
	Merkel Approval w/Anxiety	0.00	0.00	-0.34	0.734
	Perceived Threat w/Anxiety	0.01	0.00	31.09	0.000
	Merkel Approval (Lagged) w/Perceived Threat (Lagged)	0.08 ⁺			
	Merkel Approval (Lagged) w/Anxiety (Lagged)	0.01 ⁺			
	Perceived Threat (Lagged) w/Anxiety (Lagged)	0.04 ⁺			
		<u>Fit Indices</u>			
	$\chi^2(df)$	0.00(0)			
	CFI	1.00			
	TLI	1.00			
	RMSEA	0.00			

⁺Fixed parameter