Varieties of Anxieties: Disaggregating Emotion and Voting Behavior in the COVID-19 Era

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Ranjit Lall[*] David Vilalta[†]

Abstract

How does anxiety influence voting behavior? Whereas anxiety is usually treated as a unidimensional emotion, we highlight the multiplicity of socially contingent forms it can assume in response to societal threats. Different anxieties, we posit, can create distinct axes of political competition along which anxious voters exhibit widely varying preferences. We illustrate our argument with unique observational and experimental survey data from Spain's COVID-19 crisis, showing that individuals anxious about the pandemic's health consequences favored parties advocating stringent lockdown restrictions, whereas individuals anxious about its economic disruption preferred parties opposing such measures. Analyzing municipality-level results from Madrid's 2021 regional election, we additionally provide evidence that COVID-19 boosted support for pro-lockdown parties in areas more exposed to its health effects and support for anti-lockdown parties in areas more exposed to its economic impact. Our findings point to the importance of disaggregating complex emotional states for understanding the determinants of voting behavior.

Keywords: voting behavior; anxiety; emotions; elections; COVID-19; lockdown; political behavior; political psychology

[*]Department of Politics and International Relations, University of Oxford, Oxford, United Kingdom. Email: ranjit.lall@sjc.ox.ac.uk.

[†]Department of Political Science, Columbia University, New York, United States of America. Email: david.vilalta@columbia.edu.

Introduction

The distressing medical, social, and economic consequences of the coronavirus (COVID-19) pandemic, accompanied by a string of surprising election results in Europe and beyond, have triggered fresh scholarly interest in the impact of anxiety on voting behavior. Understanding this relationship is important from a theoretical as well as a practical perspective: the notion that emotional states independently influence voting behavior is a core tenet of the burgeoning field of political psychology, and anxiety is among the most common and most researched mental health conditions (Wagner and Morisi 2019).

Prior to COVID-19, research generally concluded that anxiety encourages information-seeking and enhances the appeal of protective policies that mitigate perceived threats — policies often espoused by conservative politicians — by increasing risk aversion (Druckman and McDermott 2008; Huddy et al. 2005), susceptibility to elite persuasion (Brader et al. 2008; Albertson and Gadarian 2015; Marcus et al. 2000), and antipathy toward outgroups (Arceneaux 2017; Bove et al. 2022). Developments during the pandemic, however, have led some scholars to question this conventional wisdom, particularly when anxiety stems from society-wide threats that transcend ideological divisions within the electorate.[1] Examining COVID-19's impact on the 2020 Democratic primary election in the United States, Bisbee and Honig (2022) present evidence that anxiety induces a "flight to safety" that favors status-quo candidates regardless of their specific policy platform, a proposition for which Depetris-Chauvin and González (2023) find some support in the 2021 Chilean elections. Lehrer et al. (2021) and Erhardt et al. (2021), in contrast, present survey results from Germany and Switzerland, respectively, suggesting that anxiety reduces support for incumbents.

Drawing on insights from psychology and public health, we seek to contribute to this

[1] Such threats are described by Albertson and Gadarian (2015) as "unframed," since their broadly agreed-upon causes of harm render them more difficult to politicize than "framed" threats with more debatable logics.

important debate by arguing for an alternative approach that elucidates and gives centrality to the multidimensional, socially contingent nature of complex emotional states such as anxiety. Our *varieties of anxieties* (VoA) perspective is motivated by a simple observation: a given societal threat can elicit multiple forms of anxiety centered on distinct potential harms — exposure to which varies across socio-demographic groups — with heterogeneous consequences for electoral preferences.[2] Different types of anxiety, we posit, can give rise to different axes of political competition around threat mitigation and resolution that overlap with, yet are not fully subsumed by, traditional cleavages. As policies designed to address one kind of anxiety may have little bearing on — or even exacerbate — another kind, voters concerned about the same threat may favor candidates with widely varying platforms. Understanding the electoral implications of anxiety therefore requires asking not only: "How anxious are voters?" We must also know: "What types of anxiety are voters experiencing?"

During the COVID-19 pandemic, two kinds of anxiety became particularly prevalent in the general population: anxiety about the disease's adverse effects on physical health; and anxiety about its disruptive economic impact. We argue that these distinct emotions have conflicting implications for perhaps the defining public policy issue of the pandemic, namely, the stringency of lockdown measures aimed at containing COVID-19 transmission. While assuaging health anxiety by reducing local infection rates, strict lockdowns are likely to deepen economic anxiety by curtailing perceived opportunities for commercial and business activity. Holding constant the role of partisan-motivated reasoning and elite cues, and other political factors shaping policy preferences during the pandemic (Gadarian et al. 2022; Mehlhaff et al. 2024), we expect voters with high levels of health anxiety to favor political platforms that endorse stringent lockdown restrictions, and voters with high levels of economic anxiety to prefer platforms that oppose such constraints. Heeding findings from the public health literature,

[2] We build on previous studies linking individual-level characteristics to discrete anxieties (e.g., Huddy et al. 2005; Albertson and Gadarian 2015), developing a general framework for analyzing these connections and their consequences for voting behavior.

however, we emphasize that these emotions are not randomly distributed across the population but rooted in socio-demographic characteristics affecting personal exposure to threats. Health anxiety, though common during the pandemic, should be more acute among groups at greater risk of developing severe COVID-19 symptoms, such as the elderly and people with underlying medical conditions. Analogously, economic anxiety should be higher among groups that stand to lose more from pandemic-induced business disruption, such as workers in close-contact occupations and individuals at the extreme ends of the wealth distribution.

To test these propositions, we investigate the impact of COVID-related health and economic anxieties on voting behavior during Spain's pandemic, leveraging a variety of data sources and empirical strategies. To our knowledge, Spain is the only country where a nationally representative sample of citizens was regularly surveyed by a well-established research institution — El Centro de Investigaciones Sociológicas (CIS) — on both their voting intentions and their levels of different COVID-related anxieties in the intense early months of the pandemic. Pooling monthly waves of this survey, we begin by establishing two theory-affirming patterns. First, controlling for partisan attachments as well as socio-demographic and geographical determinants of COVID-19 exposure — key components of "rational" self-interest — individuals primarily concerned about the disease's health effects were more likely to vote for parties that backed the Spanish government's stringent lockdown measures, whereas individuals primarily concerned about its economic ramifications tended to favor parties that rejected these restrictions. Second, COVID-related health anxiety was an increasing function of age, a key predictor of vulnerability to serious illness from the disease, while economic anxiety was most severe at very low and very high levels of income and education, predictors of exposure to the pandemic's "pocketbook" consequences.

To substantiate a causal interpretation of these findings, we then present a preregistered survey experiment on Spanish voters in which we randomize the assignment of prompts emphasizing COVID-19's adverse impact on either public health or the economy. In line with

VoA expectations, respondents receiving the health-focused frame — who report higher levels of anxiety about the pandemic's medical consequences — strongly prefer a hypothetical political candidate who advocates stringent lockdown restrictions to a similar candidate who opposes such measures. Respondents receiving the economy-focused frame — who report greater anxiety about the pandemic's material implications — express the reverse preference. In addition, we find that the former treatment effect increases with respondent age and possession of an underlying medical condition, while the latter treatment effect is larger for respondents in the lowest and highest categories of education and income.

Finally, we assess our argument with real voting data from the 2021 Madrid regional election, a major subnational contest in which the stringency of lockdown measures was the pivotal political issue. Analyzing changes in municipality-level vote shares since the previous election, we find that COVID-19 incidence is more strongly associated with (1) support for pro-lockdown parties in areas with a higher proportion of elderly people and individuals with respiratory conditions; and (2) support for anti-lockdown parties in areas with larger hospitality industries and extreme (top or bottom 5%) mean incomes. To address possible concerns about endogeneity in the location of COVID-19 cases, we show that these results are robust to instrumenting infection rates with pre-election weather patterns, which we argue to be plausibly exogenous to other municipality-level factors affecting disease transmission and vote choice.

Our findings point to the value of a more nuanced understanding of how — and with what political consequences — voters develop feelings of anxiety in response to major societal threats. Disaggregating anxiety helps us to make sense of voting patterns that are difficult to rationalize if we treat this emotion as uniform or homogeneous, such as the sharp division in support for pro-lockdown parties among Spanish voters concerned about COVID-19. By opening up this emotional "black box," the VoA approach enables us to more clearly delineate the scope conditions for existing theories of anxiety and voting behavior. For example, our

result that many COVID-anxious voters opposed pro-lockdown parties may initially seem to defy the predictions of the self-protection and flight-to-safety perspectives mentioned earlier. Once we distinguish voters whose worries centered on health issues from voters whose concerns focused on economic matters, however, it becomes clear that these theories can shed light on political preferences *within* each group, whose members can be seen as favoring what they consider protective policies or safe candidates. As discussed in the concluding section, we believe that the VoA perspective has broad applicability across policy areas and, with appropriate contextualization, can improve our grasp of how other complex emotional states shape political behavior.

Disaggregating Anxiety: Theory and Application

Anxiety is an unpleasant and aversive mental state characterized by feelings of tension, apprehension, or stress arising from uncertainty about a perceived threat (Baumeister and Tice 1990; Eysenck 2013). By raising the psychological costs associated with undesired potential outcomes, such feelings can encourage tendencies such as risk aversion, pessimism, and uncertainty avoidance — tendencies that may undermine but also promote the rational pursuit of self-interest (Wagner and Morisi 2019). Following Spielberger et al. (1983), psychologists distinguish between "trait anxiety," which derives from stable features of an individual's personality, and "state anxiety," a more transient response to a specific threat.[3] State anxiety, the more common focus of social science research, can take numerous forms; indeed, one literature review identifies more than 30 distinct state anxieties that have been operationalized and measured by researchers, including dental anxiety, cancer anxiety, cardiac anxiety, and pregnancy anxiety in the public health field and flight anxiety, mathematics anxiety, test anxiety, and social anxiety in other disciplines (Rose and Devine 2014). Notably, these emotional

[3]This is similar to the distinction sometimes drawn between generalized and situational anxiety.

states often derive from the *same* perceived threat. For instance, standardized assessments have been shown to arouse not only test anxiety but also mathematics anxiety and social anxiety in students (Dowker et al. 2016).

Individuals are not equally susceptible to state anxieties. A central finding of the public health literature is that the onset and intensity of such worries are predicted by an array of socioeconomic and demographic attributes associated with heightened exposure to potential harms. Cancer anxiety, for example, tends to be higher among individuals with a family history of the disease, poor general health, weak social support systems, and low levels of education, all of which are well-established risk factors (Hidalgo et al. 2015). In addition, state anxieties comprise a more subjective component reflecting individual characteristics such as personality, upbringing, and values as well as "environmental" influences from local and wider societal contexts, including social networks, public information, elite frames, and partisan cues. These various factors interact with and may be shaped by socio-demographic forces.

In the political domain, these findings suggest, some societal threats may carry the potential to elicit multiple forms of anxiety, the severity of which varies across socio-demographic groups. This heterogeneity could open up salient dimensions along which politicians compete for votes by proposing policies to avert or relieve threat-related harms. Ideally, such interventions would simultaneously alleviate all forms of anxiety provoked by a given threat; in practice, they may ease some types while making little difference to — or intensifying — other types. For example, counterterrorism laws introduced in the wake of a suicide bombing help to ease security anxiety among the general public but may induce social anxiety in voters with perceived affinities to the terrorist group (such as Muslims in the case of an Islamic organization) (Bove et al. 2022). It is entirely possible that these conflicting effects counterbalance one another — within individual voters or the electorate as a whole — nullifying the overall impact of anxiety on vote choice.

More formally, this intuition can be expressed through a spatial model of voting in which

vote choice is a function of the distance between a voter's ideal policy and each candidate's platform plus a valence component capturing non-policy candidate attributes (such as leadership and charisma) (Adams et al. 2005). In the conventional setup described by Bisbee and Honig (2022), voter i's utility from candidate j's policy response to an anxiety-inducing societal threat is given by:

$$u_{ij} = -(1 - \omega_i)(x_j - x_i)^{\alpha} + \omega_i V_j \tag{1}$$

where x_i denotes i's preferred policy, x_j denotes j's proposed policy, α is the shape of the distance between these positions, V_j is j's valence, and ω_i is the weight i attaches to this component.[4] Most existing theoretical approaches imply that anxiety affects vote choice through either the gap between x_i and x_j (e.g., the self-protection perspective) or V_j (e.g., the flight-to-safety perspective).

The VoA approach, too, focuses on the voter-candidate policy distance but analyzes it as a complex function of multiple (K) dimensions implicated by the societal threat:

$$u_{ij} = -(1 - \omega_i) \sum_{k}^{K} \lambda_{ik}(x_{jk} - x_{ik})^{\alpha_k} + \omega_i V_j \tag{2}$$

where λ_{ik} is the weight voter i places on dimension k relative to other dimensions. Voter i's position on k — and the relative intensity of this preference — depend on a vector of socio-demographic characteristics shaping i's exposure to k-specific harms ($\mathbf{D}_i$). They additionally reflect a subjective component (s_i) involving a mental model of the causal relationship between the societal threat, the proposed policy intervention, and desired outcomes, which is a function of $\mathbf{D}_i$ as well as the more idiosyncratic personal and environmental influences mentioned earlier

[4] For a related (informal) framework that analyzes the relative impact of multiple emotions on support for far-right politics, see Vasilopoulos et al. (2019). As discussed in the concluding section, anxiety could be substituted by other emotions in our model.

(which could themselves be endogenous to $\mathbf{D}_i$):

$$\begin{cases} x_{ik} \\ \\ \lambda_{ik} \end{cases} = f(\mathbf{D}_i, s_i). \tag{3}$$

As x_i and λ_i vary with k (and V_j is uniform across voters), anxiety about one policy dimension may not be accompanied by anxiety about another. Anxious voters may therefore make different tradeoffs between policy objectives based on their exposure to threat-related harms; that is, they may derive varying utility from candidate j, with some potentially enjoying the same level as a non-anxious voter. The upshot is that we may not be able to predict vote choice solely from a voter's *overall* degree of anxiety about a given societal threat; we must additionally account for the relative intensity of different kinds of anxiety and the extent to which each one is alleviated by policies designed to address this threat.

Varieties of Anxieties in the COVID-19 Era

The COVID-19 pandemic represents a fruitful setting in which to apply and empirically evaluate the VoA framework. First, it is one of the clearest examples of a salient societal threat in recent decades, tangibly impacting the welfare of virtually every segment of the electorate in most democratic countries (Lall et al. 2023). Second, a growing body of research indicates that the pandemic gave rise to multiple types of anxiety, among which COVID-related health and economic anxieties were especially pervasive (Maaravi and Heller 2020; Bareket-Bojmel et al. 2021). Third, as an unanticipated shock originating outside the democratic world, COVID-19 was not initially "framed" by political elites, helping us to mitigate the potentially confounding impact of partisanship on anxiety and electoral preferences (Albertson and Gadarian 2015). Nevertheless, as partisan divisions over the pandemic emerged relatively swiftly in many countries (Gadarian et al. 2022) — and voters could plausibly express anxiety as a means of signaling

group affiliation in response to elite cues — our empirical analyses seek to more directly address this issue by controlling for political attachments.

A striking feature of COVID-related health and economic anxieties is that they imply opposing attitudes toward lockdown measures, the principal non-pharmaceutical policy intervention against the disease. Lockdowns involve the implementation of restrictions — including on movement, access to public spaces, and social contact — intended to reduce the frequency of interactions between infected and non-infected individuals. Insofar as they suppress COVID-19's reproduction rate and hence the risk of personal infection, stringent lockdowns should alleviate anxiety about its health consequences. Such relief should be felt more keenly by individuals liable to suffer severe respiratory, muscular, or neurological COVID-19 symptoms, such as elderly people and bearers of underlying health conditions. Indeed, a consistent finding of the growing literature on attitudes toward COVID-19 policy is that these two groups expressed strong support for containment policies (Faia et al. 2021; Settele and Shupe 2022).

At the same time, policy experts and media outlets warned that lockdown restrictions limited opportunities for commercial and business activity, creating a "lives or livelihoods" tradeoff (Settele and Shupe 2022). Lockdown measures can intensify anxiety about COVID-19's economic consequences by adversely impacting both income and wealth. Negative income effects arise from the loss of regular earnings, usually due to a reduction in (aggregate or sector-specific) demand for goods and services in and around locations under lockdown. Negative wealth effects occur when declining demand and output growth put downward pressure on asset prices. Collectively, these effects should elicit more intense anxiety in individuals at the lowest and highest ends of the economic distribution: the poorest have the fewest resources with which to survive negative income shocks, while the richest tend to be disproportionately affected by negative wealth shocks. Another clear finding of scholarship on attitudes toward COVID-19 policy is that support for lockdown measures was weaker not only among the poorer and less educated but also among owners of property, stocks, and other forms of wealth

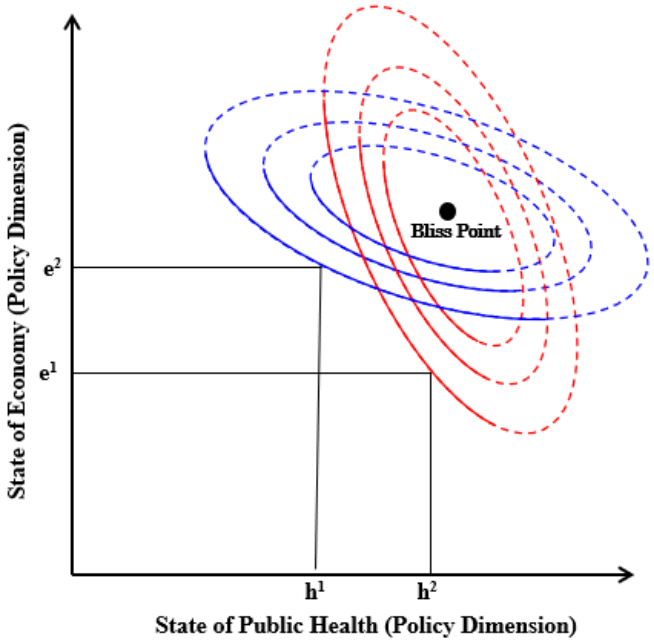
(Faia et al. 2021; Peretti-Watel et al. 2020; Settele and Shupe 2022). In addition, we might expect individuals whose occupation requires close contact with customers or colleagues and thus cannot easily be conducted from home, such as most hospitality, construction, and arts and entertainment workers, to experience more severe economic anxiety in the face of the COVID-19 threat.

What are the implications for voting behavior? Returning to the framework set out in the previous section, assume that COVID-19 is the emergent societal threat and that the state of public health and the economy are the two policy dimensions at stake in addressing this threat (also see Becher, Longuet-Marx, Pons, Brouard, Foucault, Galasso, Kerrouche, León Alfonso and Stegmueller 2024). While voters would ideally maximize both dimensions (subject to a tax-based budget constraint), the policy instrument available for tackling the disease — lockdown restrictions — forces them to make a tradeoff that reflects their particular balance of COVID-related health and economic anxieties. Voter i's utility from supporting candidate j's proposed level of lockdown stringency can be expressed as:

$$u_{ij} = -(1-\omega_i)[(h_j - h_i)^{\alpha_h} - \lambda_i(e_j - e_i)^{\alpha_e}] + \omega_i V_j \tag{4}$$

where h and e denote positions on public health and the economy, respectively. As represented by the vertically oriented indifference curves in Figure 1, voters who have greater exposure to — and hence anxiety about — COVID-19's health consequences will be more willing to trade off disruption to the economy (e^1) to safeguard public health (h^2). Accordingly, they will derive higher utility from a candidate who endorses strict lockdown measures. The horizontally oriented indifference curves, on the other hand, characterize voters whose vulnerabilities and worries center on the pandemic's economic effects, who will be willing to tolerate a worse public health situation (h^1) to maintain a well-functioning economy (e^2). These individuals will derive greater utility from a candidate who favors weak restrictions.

FIGURE 1. Indifference Curves for Individuals with Varying COVID-Related Anxieties



Notes: Horizontally oriented ovals represent individuals who are more exposed to and anxious about COVID-19's health consequences than its economic effects; vertically oriented ovals represent individuals in the reverse situation.

Other things equal — including the partisan influences highlighted by some analyses of political behavior during the pandemic (Gadarian et al. 2022; Mehlhaff et al. 2024) — we hypothesize that *COVID-related health anxiety is positively associated with support for pro-lockdown political platforms, whereas COVID-related economic anxiety is positively associated with support for anti-lockdown platforms.* The distribution of these two emotions in the population of interest, in turn, determines the relationship between overall COVID-19 anxiety and support for each type of platform. If COVID-related health and economic anxieties are roughly balanced, their opposing impacts on lockdown preferences could offset one other, resulting in a weak or non-existent association.

With respect to the sources of COVID-related anxieties, the preceding discussion suggests two propositions. First, *COVID-related health anxiety is positively associated with socio-*

demographic characteristics that increase exposure to severe COVID-19 symptoms, such as advanced age and the presence of an underlying medical condition. Second, *COVID-related economic anxiety is positively associated with socio-demographic characteristics that increase exposure to significant financial loss due to the pandemic*, such as an extremely low or high income and an occupation requiring human-to-human contact (e.g., hospitality worker).

Observational Survey Evidence: *La Pandemia de España*

Owing to the availability of nationally representative, high-frequency survey data on political preferences and key varieties of COVID-related anxiety, we test our hypotheses in the context of the Spanish pandemic. In Spain's multiparty parliamentary system, five parties have dominated national politics in recent years: (1) Partido Popular (PP), a Christian democratic party that held power until shortly before the pandemic; (2) Partido Socialista Obrero Español (PSOE), a social democratic party that has frequently been in government; (3) Podemos, a left-wing populist party; (4) Ciudadanos, a center-right liberal party; and (5) Vox, a right-wing populist party.

In January 2020, a few weeks before the Spain's first recorded COVID-19 case, PSOE joined forces with Podemos and several small left-wing and independent parties to form the first national coalition government of the modern era. After initially underestimating the seriousness of COVID-19, the coalition drastically shifted policy in mid-March, declaring a nationwide state of alarm under which citizens were required to remain in their normal residence except to purchase food and medicines, attend work, and address emergencies. With the backing of parliament, the government extended the initial state of alarm six times between March and June 2020, after which it relaxed restrictions and granted more policy discretion to regional governments. An unexpected surge in cases over the summer triggered a new state of alarm including a mandatory curfew, which parliament extended for six months in late

October.[5]

Among the five major parties, there were sharp differences in support for lockdown measures. As indicated by government policy, PSOE and Podemos favored the robust restrictions recommended by most Spanish and international public health experts (Lall 2023). Opposition parties were more divided. Ciudadanos was moderately supportive of the government's position, voting for proposed extensions of the state of alarm while continually emphasizing that "we cannot prolong confinement excessively" and that "economic activity should resume as quickly as possible."[6] PP initially backed lockdown restrictions but refused to support the state of alarm from May 2020 onward, arguing that sustained closure jeopardized livelihoods, rights, and freedoms. Finally, Vox presented the stiffest and most consistent opposition to lockdown, only voting for the initial state of alarm and repeatedly criticizing the government's position as inimical to economic liberties and business interests. Table A1 in Online Appendix A records each party's votes on the seven state-of-alarm extensions; Table A2 presents a selection of policy statements illustrating their general stance on COVID-19 containment measures.

Party positions on lockdown stringency therefore varied *within* the right side of the ideological spectrum, again helping us to tease apart the effects of anxiety and partisanship on voting behavior. Our argument implies that, holding constant partisan attachments, anxiety about COVID-19's health consequences was positively associated with support for PSOE and Podemos (strong pro-lockdown stance); ambiguously associated with support for Ciudadanos (lukewarm pro-lockdown stance); and negatively associated with support for PP and Vox (strong anti-lockdown stance). Anxiety about COVID-19's economic implications should be characterized by the opposite relationships.

[5] For a visual representation of these trends, see Figure A1 in Online Appendix B.

[6] https://thespainjournal.com/arrimadas-the-state-of-alarm-cannot-be-eternal-we-negotiated-to-untie-the-aid-and-create-an-exit-plan/.

COVID-19 Anxieties and Voting Intentions

In the first part of our empirical investigation, we examine the relationship between COVID-related anxieties and voting intentions using detailed individual-level data collected by CIS.[7] In every month except August, CIS conducts a public opinion survey containing questions on electoral preferences, socio-demographic characteristics, and, since April 2020, attitudes toward the pandemic and the policy response to it. The survey is administered to approximately 2,500 adults selected via a stratified random sampling procedure based on regional population, with quotas ensuring appropriate gender and age group representation.

Usefully for our purposes, the CIS survey includes a question not only on respondents' overall level of anxiety about COVID-19 (April 2020 onward) but also on whether they are more concerned about its economic consequences or its health consequences (three waves between May and July 2020).[8] Pooling available survey waves over the severe phase of the pandemic stretching from April 2020 to July 2021, we regress the intention to vote for a given party on responses to these two questions using the following logistic model:

$$\begin{aligned} logit(P(\text{Vote Choice}_{itp}=1)) = \beta_0 + \beta_1 \begin{cases} \text{COVID Anxiety}_{it} \\ \text{Health-Weighted Anxiety}_{it} \end{cases} + \beta_2 \text{Log COVID} \\ \text{CPC}_{j(i)t} + \beta_3 \text{Previous Vote}_{itp} + \gamma_j + \phi_t + \theta \mathbf{X}'_{it} + \epsilon_{ijtp} \end{aligned} \tag{5}$$

Vote Choice$_{ijtp}$, the dependent variable, is a dummy for whether respondent i in NUTS-3 region j in survey wave t would vote for party p if general elections were held tomorrow. *COVID Anxiety*$_{it}$, the first explanatory variable, is based on the question: "Thinking about all of the effects of this pandemic, would you say that COVID-19 worries you a lot, quite a bit, a little,

[7] All surveys are available at: https://www.cis.es/cis/opencm/ES/11_barometros/index.jsp.

[8] Table A3 in Online Appendix B provides the full text, response options, and coding rules for all survey items used in our analysis.

or not at all?"[9] The variable has an ordinal scale ranging from 1 for the response "not at all" to 5 for "a lot."[10] The second explanatory variable, *Health-Weighted Anxiety*$_{it}$, is a categorical variable derived from the question: "At this time, what are you more concerned about: the effects of the [COVID-19] crisis on health, or the effects of the crisis on the economy and employment?" It takes three values: 1 for the response "health effects," 0.5 for "both equally," and 0 for "economic effects." The mean value of *Health-Weighted Anxiety*$_{it}$ is 0.59, indicating a rough balance between COVID-related health and economic anxieties among CIS respondents.

We control for several determinants of exposure to COVID-19's health and economic consequences. *Log COVID CPC*$_{j(i)t}$ is the logarithm of cumulative COVID-19 cases per capita in respondent i's NUTS-3 region (j) in survey wave t, data on which come from Spain's National Epidemiological Center (El Centro Nacional de Epidemiología 2022). *Previous Vote*$_{itp}$ is a dummy for whether respondent i voted for party p in the November 2019 Spanish general election, a proxy for partisanship.[11] $\mathbf{X}'_{it}$ is a vector of six sets of socio-demographic dummies, which are transformed from their original categorical form: age (six categories), gender (two categories), social class (five categories), education level (four categories), labor situation (four categories), and job type (10 categories). A key identifying assumption is that, conditional on these covariates, there is minimal variation in voting preferences due to unobservable differences in rational self-interest (yet some variation due to differences in COVID-related anxieties).[12]

Finally, γ_i and ϕ_t denote NUTS-3 and survey wave fixed effects, respectively, which control for time-invariant geographical and location-invariant temporal characteristics.[13] In both variants of Equation 5, heteroskedasticity-robust standard errors are clustered at the NUTS-3

[9] All questions and response options are translated from Spanish.

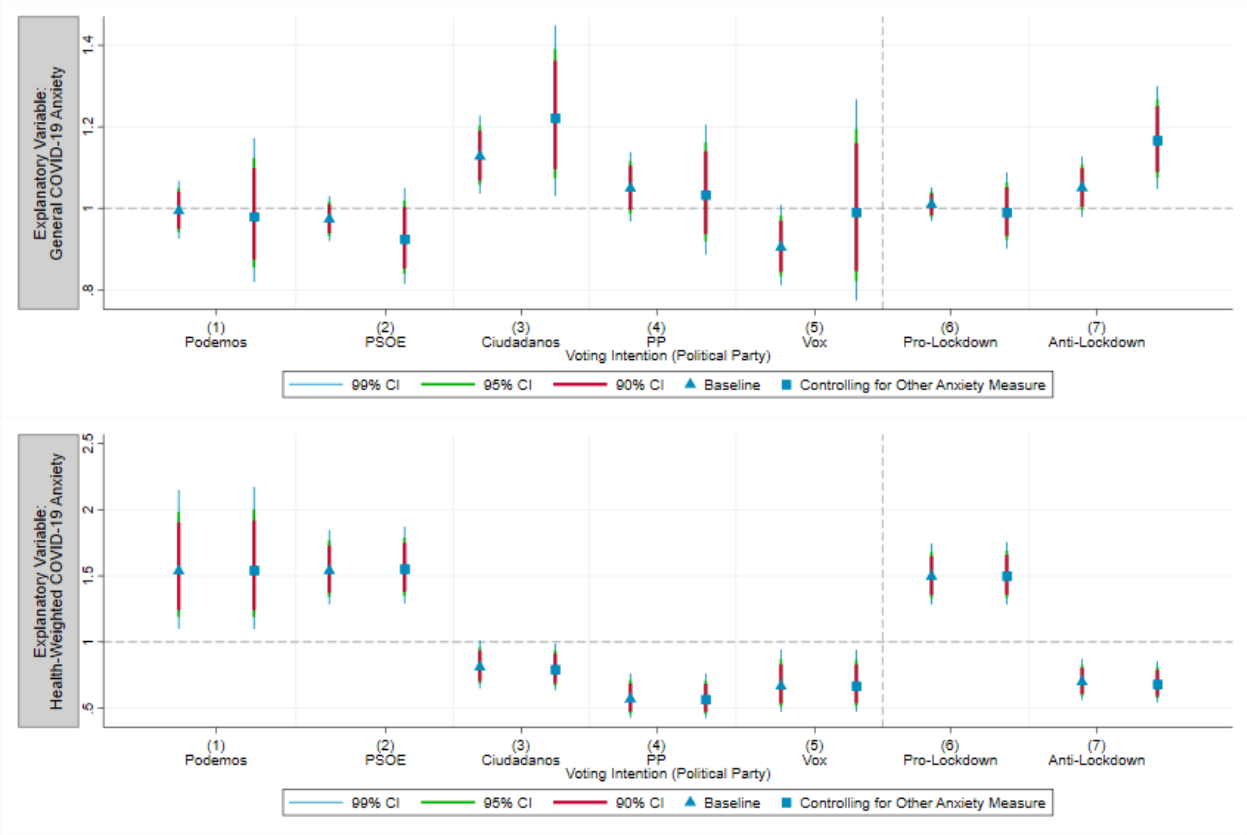
[10] As illustrated in Figure A2, Online Appendix B, almost 95% of values are either 4 or 5, indicating widespread general anxiety about the pandemic.

[11] Recall bias and changes in the party system are potential limitations of this proxy, though the recency of the previous general election is likely to mitigate such problems. We later employ alternative measures of partisanship.

[12] We provide evidence for this assumption below.

[13] Summary statistics for the dataset are provided in Table A4 of Online Appendix B.

FIGURE 2. Relationship between COVID-Related Anxieties and Voting Intentions



Notes: Odds ratios with confidence intervals of varying levels based on robust standard errors clustered by NUTS-3 region. All models include NUTS-3 and survey wave fixed effects and control for gender, age, education level, social class, labor situation, job type, previous vote choice, and NUTS-3-level COVID-19 incidence.

level.

Results

The top row of Figure 2 plots odds ratios for the estimated coefficients on *COVID Anxiety*$_{it}$ with 90%, 95%, and 99% confidence intervals, first excluding (left estimate within each column) and then including (right estimate within each column) *Health-Weighted Anxiety*$_{it}$ in the model.[14] Interestingly, regardless of specification, no clear relationship emerges between overall COVID-19 anxiety and support for parties that favor stringent lockdown measures.

[14]Equivalent OLS results are displayed in Figure A3, Online Appendix B. For the original estimates restricted to survey waves when *Health-Weighted Anxiety*$_{it}$ is measured, see Figure A4.

COVID-anxious individuals were more likely to vote for Ciudadanos (column 3), which modestly backed restrictions, yet no more likely to vote for Podemos (column 1) or PSOE (column 2), which ardently endorsed them. Among anti-lockdown parties, *COVID Anxiety*$_{it}$ is associated with a lower likelihood of voting for Vox (column 5) but with no difference in the likelihood of voting for PP (column 4). When we aggregate preferences for pro-lockdown (column 6) and anti-lockdown (column 7) parties, the odds ratios cannot be statistically distinguished from 0 in three of the four models.

The bottom row displays the equivalent odds ratios for *Health-Weighted Anxiety*$_{it}$ from the second variant of Equation 5. Our expectations find consistent support: whether or not we control for overall COVID-19 anxiety, health-weighted anxiety is positively related to voting for Podemos and PSOE, unrelated to voting for Ciudadanos, and negatively related to voting for PP and Vox. Accordingly, the odds ratio is positive and highly significant for pro-lockdown parties as a whole but negative and highly significant for anti-lockdown parties. This discrepancy is substantively large: respondents with health-weighted anxiety are around 50% more likely to vote for a pro-lockdown party and 30% less likely to vote for an anti-lockdown party. These estimates suggest that the weak relationship between overall COVID-19 anxiety and support for pro- and anti-lockdown parties may be masking important *heterogeneity* in how distinct forms of this emotion shape voting preferences.

In Online Appendix B, we show that the second-variant results are robust to different combinations of the control variables as well as to two alternative measures of partisanship: party sympathy and left-right ideology (Table A5). In addition, using Oster's (2019) test of unobservable selection, we provide evidence that these estimates are unlikely to be strongly confounded by omitted proxies for rational self-interest: under conservative upper bounds for the hypothetical R^2 that would be explained by both observed and unobserved measures of self-interest, the degree of selection on unobservables would have to be significantly larger

than the degree of selection on observables to eliminate the results (Table A6).[15]

Sources of Health-Weighted COVID-19 Anxiety

Turning to our second set of hypotheses, we next regress *Health-Weighted Anxiety*$_{it}$ on the dummies for age, education level, social class, labor situation, and job type in Equation 5:

$$\begin{aligned}\text{Health-Weighted Anxiety}_{it} = \beta_0 + \beta_1 \text{Socio-Demographic Dummy}_{it} + \beta_2 \text{Log} \\ \text{COVID CPC}_{jt} + \gamma_j + \phi_t + \theta \mathbf{X}'_{it} + \epsilon_{it}\end{aligned} \tag{6}$$

where $\mathbf{X}'_{it}$ now comprises all remaining controls from Equation 5. To facilitate interpretation, each measure of *Socio-Demographic Dummy*$_{it}$ is entered in a separate regression. As *Health-Weighted Anxiety*$_{it}$ is an ordinal variable with three levels, we switch to an OLS estimator.

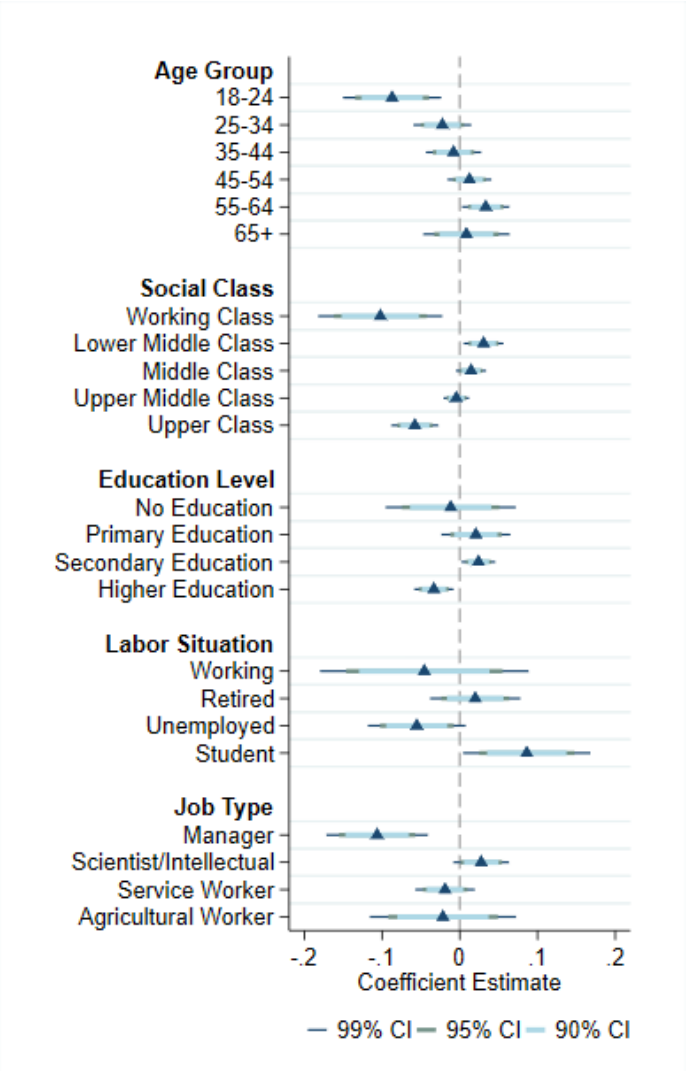
Figure 3 displays the estimated coefficients on *Socio-Demographic Dummy*$_{it}$ with the same confidence bands as in Figure 2. There is broad support for our conjectures about the sources of COVID-related health and economic anxieties. Older individuals tend to experience stronger health-weighted anxiety, though the second oldest category (55-64 years old) is slightly more skewed in this direction than the oldest category (65+ years old).[16] As a result, the largest gap occurs between individuals aged 18-24 years, who are 8 percentage points less likely than other age groups to report health-weighted anxiety, and individuals aged 55-64 years, who are 3 percentage points more likely.

In contrast, health-weighted anxiety declines — and thus economy-weighted anxiety increases — at *both* extremes of social class, education level, and employment status, where we

[15]This remains true with hypothetical R^2 values up to almost 0.7. For context, analyses of Spanish voting behavior typically yield R^2 values of less than 0.4 (e.g., Pallarés et al. 2007; Fraile and Lewis-Beck 2014; Ortiz Barquero et al. 2022). As a more informal test, we exclude *Health-Weighted Anxiety*$_{it}$ from Equation 5 and compare R^2 values including versus excluding pre-pandemic survey waves. The two sets of values decline by essentially the same proportion, suggesting that unobservable differences in self-interest varied little over the period of interest.

[16]This may be because members of the latter group are typically retired and therefore in a more precarious economic situation.

FIGURE 3. Sources of Health-Weighted COVID-19 Anxiety



Notes: OLS coefficients on *Socio-Demographic Dummy*$_{it}$ in Equation 6 (each measure is entered in a separate regression) with confidence intervals of varying levels based on robust standard errors clustered by NUTS-3 region. All models include NUTS-3 and survey wave fixed effects and control for gender and the four remaining sets of socio-demographic dummies in the figure. A small number of job type categories are omitted to save space.

expect exposure to COVID-induced economic disruption to be highest. Working class and upper class respondents report lower levels of health-weighted anxiety than lower middle class, middle class, and upper middle class respondents. The same is true of the employed and the unemployed relative to students and retirees, and of individuals with no education and with tertiary education relative to individuals with primary or secondary education only. Statistically, these relationships are significant at the 1% level for working class individuals, who are

10 percentage points less likely to experience health-weighted anxiety than other respondents; for upper class individuals, who are 6 percentage points less likely; and for the unemployed, who are 5 percentage points less likely.

Our expectations also receive some support in the employment category estimates. The strongest finding here is that managers and directors, the most senior and well-remunerated category, have a far lower probability — 11 percentage points, on average — of experiencing health-weighted anxiety. While the results for the remaining categories are more mixed, it is noteworthy that service and agricultural workers, whose remuneration lies at the other end of the spectrum and whose duties frequently require interpersonal contact, are also more concerned about COVID-19's economic impact than its health effects. Conversely, scientists, intellectuals, and mid-level professionals, who are relatively well compensated and typically work in small groups or alone, exhibit the opposite pattern.

Survey Experimental Evidence

Despite their battery of control variables and fixed effects, the previous analyses do not conclusively rule out sources of unobserved heterogeneity. It is possible, for instance, that their results were confounded by political attitudes and values not captured by our proxies for partisanship — which could affect exposure to anxiety-inducing information or elite cues (Becher, Brouard and Stegmueller 2024) — or by emotions related to anxiety, such as anger and sadness (Vasilopoulos et al. 2019).

In the second stage of our investigation, therefore, we conduct a survey experiment modeled on that of Bisbee and Honig (2022), which tested the flight-to-safety hypothesis by randomly assigning respondents an anxiety-inducing or anxiety-relieving vignette about COVID-19, before asking them to evaluate hypothetical establishment and antiestablishment candidates for executive office. We instead randomize exposure to three conditions — a prompt intended

to elicit COVID-related health anxiety, a prompt intended to elicit COVID-related economic anxiety, and no prompt (the control condition) — and distinguish the candidates by whether they advocate or oppose stringent lockdown measures. Using a combination of the Amazon Mechanical Turk crowdsourcing platform and advertising on social media, we administered the survey to almost 750 adults in Spain amid an upsurge of — and thus spike in public concern about — COVID-19 in mid-2023. As discussed in Online Appendix C, the sample is approximately representative of Spain's overall population in terms of age, gender, ethnicity, and education level.

Our two prompts were based on recent media reporting and expert assessments of the pandemic's impact in Spain. The first highlights COVID-19's negative public health consequences:

> *The COVID-19 pandemic has been one of the deadliest plagues in history. In Spain alone, there have been 13.8 million confirmed cases and at least 120,000 deaths. Even among those who have survived, more than 40% have suffered long-lasting symptoms, including organ damage affecting the heart, kidneys, skin, and brain. Some experts believe that another pandemic could occur in the near future and have even more damaging health consequences.*[17]

The second vignette focuses on the economic damage wrought by the pandemic:

> *The disruption caused by the COVID-19 pandemic sent shock waves through the world economy and triggered the largest global economic crisis for more than a century. Spain's economy contracted by more than 10% in 2020 and remains smaller than before the pandemic, with high inflation and low growth expected to persist for several years. Some experts believe that another pandemic could occur in the near future and have even more damaging economic consequences.*

After reading one — or neither — of these prompts, respondents were asked to report their level of COVID-related health and economic anxiety on a scale of 1-10. They were then invited to choose between (1) a pro-lockdown candidate who, in the event of a major resurgence of

[17] As the survey was conducted in Spanish, this and the next quotation are translations.

COVID-19 or a similar pandemic in the future, "favors a prudent and vigilant response that protects all members of society"; and (2) an anti-lockdown candidate who "is keen to protect people's livelihoods by minimizing any economic disturbance or damage that may arise."

We model candidate choice as a logistic function of treatment assignment plus a host of socio-demographic, political, and COVID-related controls:

$$logit(P(\begin{cases}\text{Pro-Lockdown Candidate}\\ \text{Anti-Lockdown Candidate}\end{cases}=1)) = \beta_0 + \beta_1 \begin{cases}\text{Health Prime}\\ \text{Economy Prime}\end{cases} + \beta_2 \text{Previous} \tag{7}$$
$$\text{Infection} + \vartheta \text{Party ID}_p + \theta \mathbf{X}' + \epsilon$$

where *Pro-Lockdown Candidate* and *Anti-Lockdown Candidate* are dummies for whether a respondent prefers the pro-lockdown candidate and the anti-lockdown candidate, respectively; *Health Prime* and *Economy Prime* are dummies for whether a respondent received the health-focused prompt and the economy-focused prompt, respectively; *Previous Infection* is a dummy for whether a respondent has been infected with COVID-19; *Party ID*$_p$ is a dummy for whether a respondent identifies with major political party p; and $\mathbf{X}'$, the vector of socio-demographic controls, comprises age (continuous scale), gender (dummy for female), ethnicity (dummy for white), and education level (dummies for seven categories ranging from no school to graduate school).[18] Similarly to before, these controls help us to account for the potentially confounding influence of rational self-interest.[19] To ensure that treatment effects are estimated against the appropriate baseline — members of the control group — both variants of the specification exclude respondents under the alternative treatment condition.

Odds ratios from Equation 7 are reported in panels A and B of Table 1, beginning with a

[18] Summary statistics for the survey experimental dataset are supplied in Table A7, Online Appendix C.

[19] Moreover, since respondents have an interest in avoiding *all* adverse consequences of the pandemic, it is not obvious either that the rational response to receiving the health-focused prompt is to favor the pro-lockdown candidate, or that the rational response to receiving the economy-focused prompt is to prefer the anti-lockdown candidate.

bivariate correlation between the treatment and outcome (column 1), before adding the socio-demographic (column 2), political (column 3), and previous infection (column 4) controls. In accordance with our argument, all estimations reveal a positive and highly significant ($p < 0.01$) relationship between (1) assignment to the health-focused prompt and a preference for the pro-lockdown candidate and (2) assignment to the economy-focused prompt and a preference for the anti-lockdown candidate. The treatment effects are sizable: individuals receiving the health-focused prompt are 3.5-3.7 times more likely to favor the pro-lockdown candidate than members of the control group (panel A), while individuals receiving the economy-focused prompt are 3-3.3 times more likely to favor the anti-lockdown candidate (panel B). In column 5, we show that these estimates almost double when the sample is expanded to individuals assigned the alternative treatment.[20]

To confirm that these results reflect our posited emotional mechanism, we next replace the dependent variables in Equation 7 with the scales of COVID-related health anxiety (first variant) and economic anxiety (second variant) mentioned above, employing an OLS estimator on account of their continuous 1-10 scale. The treatment coefficients remain positive and significant at the 1% level across both sets of models (panels C and D).[21]

In addition to testing our main hypotheses, we take advantage of exogenous treatment assignment to probe two more subtle implications of VoA logic. First, the health-focused treatment will have a larger effect on support for the pro-lockdown candidate among individuals more exposed to COVID-19's health consequences. Second, the economy-focused treatment will have a larger effect on support for the anti-lockdown candidate among individuals more

[20] In Online Appendix C, we document similar results using OLS rather than logistic regression (Table A8) and restricting the sample to "attentive" respondents who spent at least three minutes completing the survey (Table A9).

[21] Assignment to the health-focused prompt has a modest negative effect on COVID-related economic anxiety, while exposure to the economy-focused prompt has no effect on COVID-related health anxiety (see Table A11, Online Appendix C). This asymmetry, which suggests some "crowding out" of economic worries by health concerns, is consistent with the slightly higher prevalence of COVID-related health anxiety among CIS respondents.

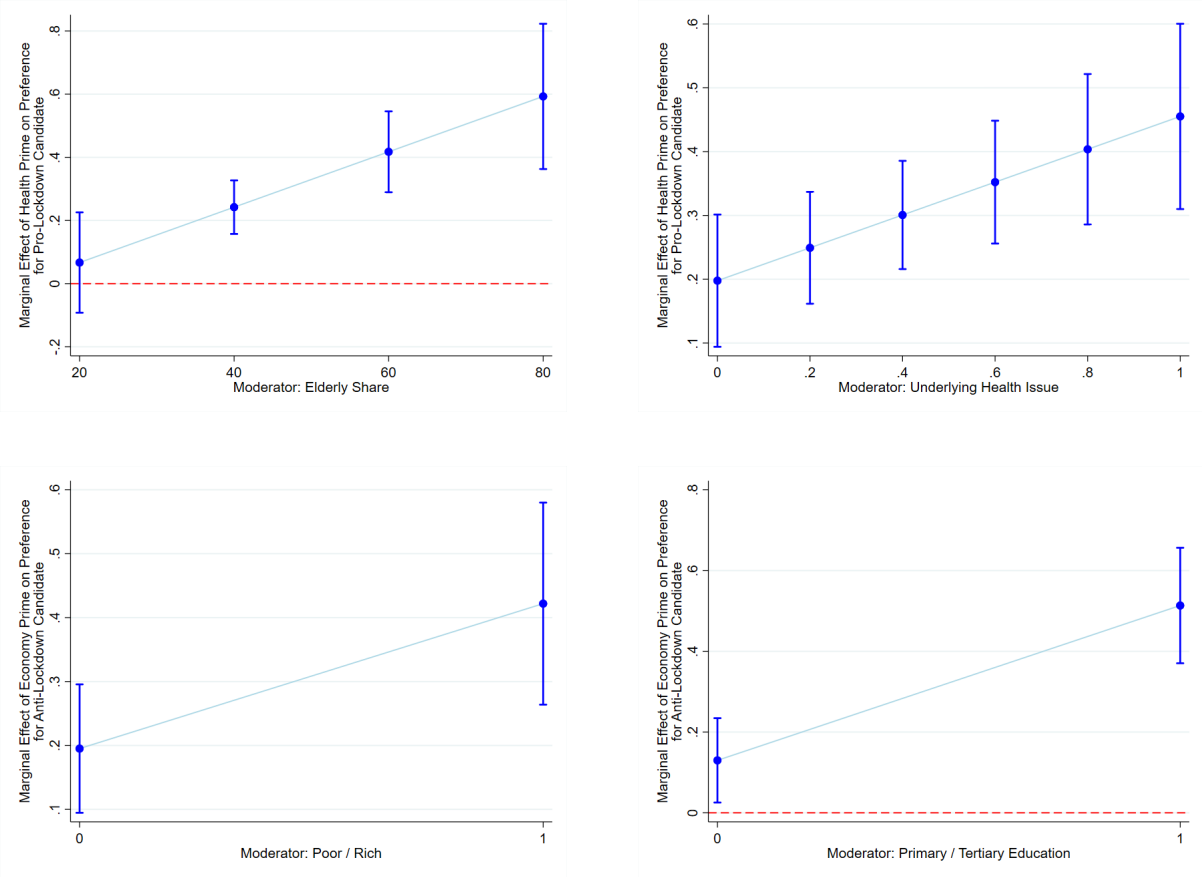
TABLE 1. Survey Experiment Results

	(1)	(2)	(3)	(4)	(5)
Panel A: Odds Ratios, Outcome = Preference for Pro-Lockdown Candidate (0/1)					
Health Prime	3.467***	3.664***	3.683***	3.737***	6.391***
	(0.713)	(0.788)	(0.797)	(0.813)	(1.189)
Panel B: Odds Ratios, Outcome = Preference for Anti-Lockdown Candidate (0/1)					
Economy Prime	2.998***	3.391***	3.389***	3.335***	5.840***
	(0.593)	(0.713)	(0.723)	(0.713)	(1.046)
Panel C: OLS Estimates, Outcome = COVID-Related Health Anxiety (1-10)					
Health Prime	3.629***	3.620***	3.602***	3.603***	3.688***
	(0.210)	(0.215)	(0.216)	(0.217)	(0.180)
Panel D: OLS Estimates, Outcome = COVID-Related Economic Anxiety (1-10)					
Economic Prime	2.234***	2.266***	2.275***	2.252***	3.191***
	(0.213)	(0.218)	(0.220)	(0.220)	(0.185)
N	470	470	470	470	734
Socio-Demographic Controls	✗	✓	✓	✓	✓
Political Controls	✗	✗	✓	✓	✓
Previous COVID Infection Control	✗	✗	✗	✓	✓
Full Sample (Both Treatment Groups)	✗	✗	✗	✗	✓

Notes: Odds ratios from logistic regressions in panels A and B; OLS estimates in panels C and D. Robust standard errors in parentheses. Socio-demographic controls: age, gender, ethnicity, education level. Political controls: identification with PP, PSOE, Podemos, and Vox. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

exposed to the pandemic's economic disruption. We test the former proposition by interacting *Health Prime* with (1) age and (2) a dummy for the possession of an underlying medical condition; and the latter proposition by interacting *Economy Prime* with (1) a dummy for whether a respondent's annual income is either less than €10,000 (the lowest category) or more than €60,000 (the highest category) and (2) a dummy for whether a respondent's education level is either elementary school and below (the lowest two categories) or graduate school (the highest category). As shown in Figure 4, both implications find robust support: the marginal effects of *Health Prime* and *Economy Prime* on *Pro-Lockdown Candidate* and *Anti-Lockdown Candidate*, respectively, rise sharply with each moderator (while maintaining significance at the 5% level at essentially all levels).

FIGURE 4. Marginal Effects in Survey Experiment



Notes: Marginal effect estimates based on logistic regressions with 95% confidence intervals. Controls: age, gender, ethnicity, education level, identification with PP, PSOE, Podemos, and Vox. For underlying regression results, see Table A10 in Online Appendix C.

Electoral Evidence: The 2021 Madrid Regional Election

Does evidence for the VoA approach extend to real voting decisions? In this section, we turn our attention to electoral outcomes during Spain's COVID-19 pandemic. While no general election took place in the peak years of the pandemic, regional elections were held in Galicia (July 2020), the Basque Country (July 2020), Catalonia (February 2021), and Madrid (May 2021). We focus on the Madrid election for two reasons. First, the other three regions have

powerful and long-standing nationalist movements, introducing a cross-cutting policy dimension that could obscure or confound the relationship between COVID-related anxieties and vote choice. Second, and relatedly, whereas the severity of lockdown measures was one of several issues on which Galician, Basque, and Catalonian parties campaigned, it was the defining axis of political contention in the Madrid election, rendering this an ideal context in which to assess our argument.

Background and Expectations

Since the mid-1990s, PP has been the dominant force in Madrilenian politics, leading all 10 regional governments. In the years leading up to the pandemic, however, support for the party was steadily dwindling. In 2019, PP failed to win a regional election for the first time since 1989, placing second behind PSOE. Nevertheless, the latter party was unable to find enough partners to form a government, allowing PP to return to power in coalition with Ciudadanos and Vox. When the pandemic struck, Madrid's president, Isabel Díaz Ayuso, sought to revive PP's fortunes by opposing national lockdown restrictions on economic and rights-based grounds. PP was joined in this stance by only one of its two coalition partners — Vox — creating tensions that triggered a snap election in May 2021. Ayuso framed the vote as a choice between "*comunismo o libertad*" (communism or freedom), campaigning for the "rights of the family, the self-employed, the business person to remain in control of their lives" (Dombey 2021). Podemos, PSOE, and Ciudadanos ran on a platform of responsible pandemic management and political moderation, with the first adopting the counter-slogan "*democracia o fascismo*" (democracy or fascism).[22] Stringent lockdown policies were also endorsed by Más Madrid, a regional party founded in 2019 by former Podemos politicians.

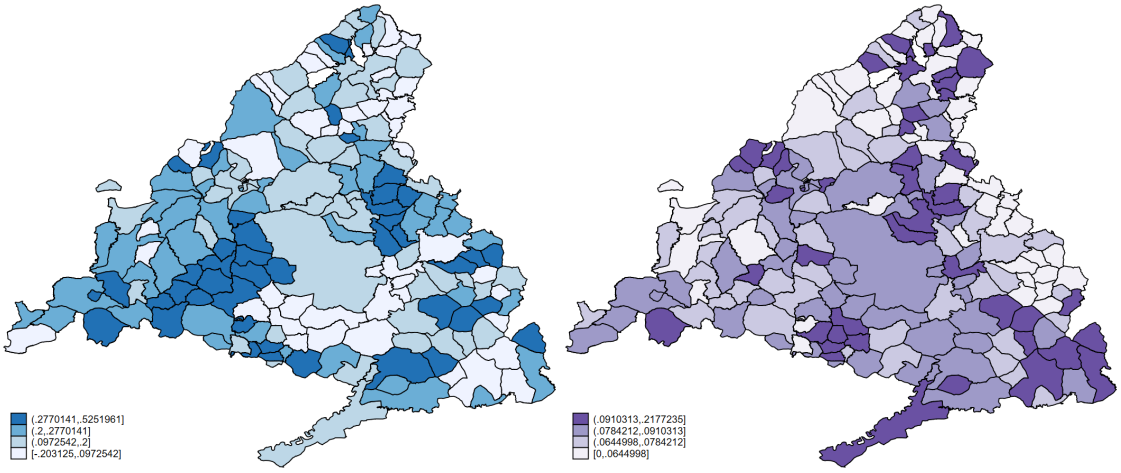
PP's strategy largely bore fruit: the party received 45% of votes cast in the election, more

[22]Figure A7 in Online Appendix E displays PP and Podemos' opposing slogans in their original Twitter form.

FIGURE 5. COVID-19 Incidence and Voting Patterns in Madrid, May 2021

(A) Difference in Vote Share between Pro- and Anti-Lockdown Parties

(B) Log Cumulative COVID-19 Cases per Capita



Notes: Municipalities are shaded by the excess vote share of pro-lockdown parties over anti-lockdown parties in the 2021 Madrid regional election in panel A; and by the logarithm of cumulative COVID-19 cases per capita on the date of this election (May 4) in panel B.

than doubling its previous share.[23] As illustrated in panel A of Figure 5, which maps the vote share of pro-lockdown parties minus that of anti-lockdown parties in Madrid's 179 municipalities, PP made inroads not only in traditionally conservative central and northern neighborhoods but also in the left-leaning industrial "red belt" spanning the southern periphery. Even so, the party failed to secure enough votes to rule alone, ultimately forming an anti-lockdown coalition government with Vox. Ciudadanos lost all of its parliamentary seats as its vote share plummeted from 19.5% to 3.6%, while PSOE suffered a smaller drop (from 24% to 17%). Podemos and Más Madrid saw small increases in support.

In panel B of Figure 5, Madrid's municipalities are shaded by the logarithm of cumulative COVID-19 cases per capita as of the election. Comparing panels A and B suggests only a modest association between COVID-19 incidence and the excess vote share of pro-lockdown parties. Indeed, the correlation between the two shading variables is just $r = 0.07$.

[23] Figure A8 in Online Appendix E compares each party's vote share in the 2021 and 2019 Madrid regional elections.

If the VoA approach is correct, however, this pattern may be concealing important heterogeneity in the relationship between distinct COVID-19 anxieties and support for pro- versus anti-lockdown parties. To generate testable implications from the framework, we follow Bisbee and Honig (2022) and Depetris-Chauvin and González (2023) in assuming that concern about COVID-19 increases with local infection rates. As shown in Table A12 of Online Appendix D, the CIS survey data offer support for this assumption: conditional on the controls and fixed effects in Equation 5, *Log COVID CPC*$_{j(i)t}$ is a strong positive predictor of *COVID Anxiety*$_{it}$. In addition, aggregate trends in new COVID-19 cases and *COVID Anxiety*$_{it}$ broadly tracked one another throughout the CIS sample (Figure A6).

Taking local COVID-19 incidence as a proxy for general anxiety about the disease enables us to derive two hypotheses about voting patterns in the Madrid election. First, in municipalities where voters are more vulnerable to COVID-19's health consequences, such as those with a higher proportion of elderly citizens or people with underlying medical conditions, COVID-19 incidence will have a stronger positive association with support for pro-lockdown parties (i.e., PSOE, Podemos, Ciudadanos, Más Madrid) and negative association with support for anti-lockdown parties (i.e., PP and Vox). Second, in municipalities where voters are more exposed to COVID-19's economic costs, such as those at the extremities of the income distribution and with sizable hospitality or construction sectors, COVID-19 incidence will have a stronger negative relationship with support for pro-lockdown parties and positive relationship with support for anti-lockdown parties.[24]

[24]Note, therefore, that the VoA approach does not simply predict a backlash against (national) incumbents in difficult times: we expect higher COVID-19 incidence to benefit PSOE and Podemos in areas whose sociodemographic makeup is conducive to health-weighted anxiety about the pandemic, and this boost to extend to non-incumbents that endorsed stringent lockdown measures.

Data and Specification

We test our conjectures at the municipality level, regressing changes in the vote share of pro- and anti-lockdown parties since Madrid's previous (May 2019) election on interactions between COVID-19 incidence and socio-demographic proxies for exposure to COVID-19's health and economic consequences:

$$\begin{aligned}\Delta\text{Vote Share}_{mp} = \beta_0 + \beta_1\text{Log COVID CPC}_m + \beta_2\text{Exposure}_m + \beta_3\text{Log COVID CPC}_m \\ \times \text{Exposure}_m + \theta\Delta\mathbf{X}'_m + \lambda_j + \epsilon_m\end{aligned} \tag{8}$$

where Δ*Vote Share*$_{mp}$ is the difference in party group p's vote share in municipality m between the 2019 and 2021 elections; *Log COVID CPC*$_m$ is the logarithm of cumulative COVID-19 cases per capita in m by the 2021 election; $\mathbf{X}'_m$ is a vector of demographic (population, male-female ratio, age distribution), economic (employment rate, GDP per capita), and COVID-related (nursing places per capita, altitude, share of agricultural land, voter turnout) controls, most of which are first-differenced between 2018 and 2020;[25] and λ_j denotes fixed effects for NUTS-4 regions, a territorial unit designated by Madrid authorities that is similar to a district.

We employ four measures of *Exposure*$_m$, the first two focusing on health effects and the last two on economic effects:

1. *Elderly Share*$_m$: the share of m's population aged above 65 years in 2020.

2. *Log Respiratory DPC*$_m$: the logarithm of respiratory deaths per capita in m in 2020.

3. *Top/Bottom Income*$_m$: a dummy for whether m's per capita income is in the top or bottom 5% of Madrid municipalities in 2020.

[25] The remaining controls are measured in 2020, either because they do not change between the two periods (altitude, agricultural land share) or because data for 2018 are not available (GDP per capita, nursing places per capita).

4. *Hospitality Share*$_m$: the share of the hospitality and distribution sector in m's GDP in 2020.

Electoral results come from the Madrid regional government (Comunidad de Madrid 2022), nursing home statistics from Spain's Ministry of Economy and Competitiveness (Envejecimiento en Red 2022), and data on the exposure proxies and remaining controls from Madrid's statistics office (Instituto de Estadística de la Comunidad de Madrida 2022). Robust standard errors are clustered by NUTS-4 region.[26]

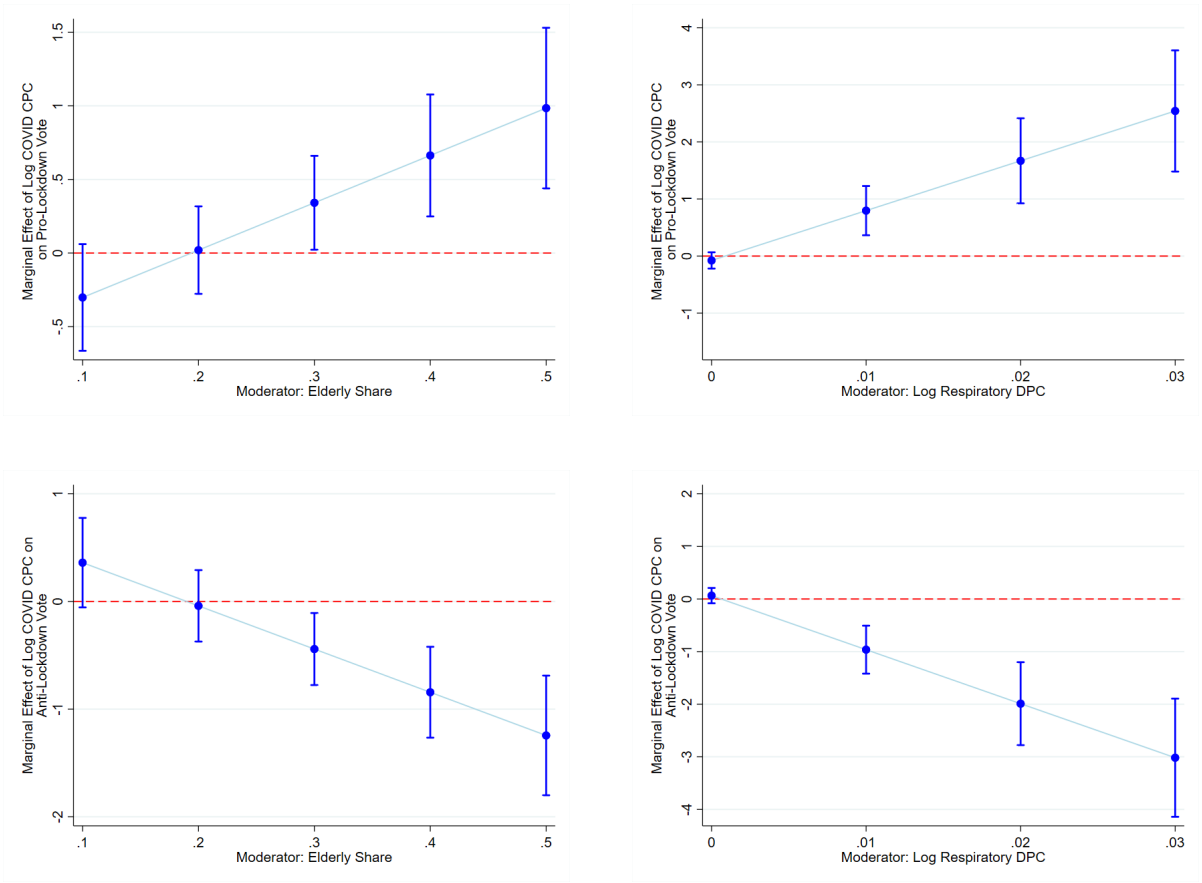
As there were no COVID-19 cases in 2019, Equation 8 is effectively a first-difference estimator. In our two-period setting, it is thus similar to a standard difference-in-differences estimator with unit and time fixed effects. While we favor the first-difference approach due to its parsimony and statistical power — with two periods and many units, a difference-in-differences strategy entails a high ratio of variables to observations — the latter yields comparable results (see Table A16, Online Appendix E). In both designs, the key identifying assumption is that the pretreatment trend in the dependent variable does not differ between treated and control units. Figure A9 in Online Appendix E provides graphical evidence for this assumption: between the 2007 and 2019 Madrid elections, the mean vote share of pro- and anti-lockdown parties evolved in an essentially identical fashion in municipalities (1) in each quartile of *Log COVID CPC*$_m$ and (2) above and below the median of *Log COVID CPC*$_m$.

Results

Based on the results of Equation 8, Figure 6 plots the estimated marginal effect of *Log COVID CPC*$_m$ on Δ*Vote Share*$_m$ for pro-lockdown parties (top row) and anti-lockdown parties (bottom row) across the two proxies for exposure to COVID-19's health consequences. At low values of *Elderly Share*$_m$ and *Log Respiratory DPC*$_m$, this effect is statistically indistinguishable from

[26]Descriptive statistics for the dataset are presented in Table A13, Online Appendix E.

FIGURE 6. Marginal Effect of COVID-19 Incidence on Support for Pro- and Anti-Lockdown Parties in Madrid Across Proxies for Health Exposure

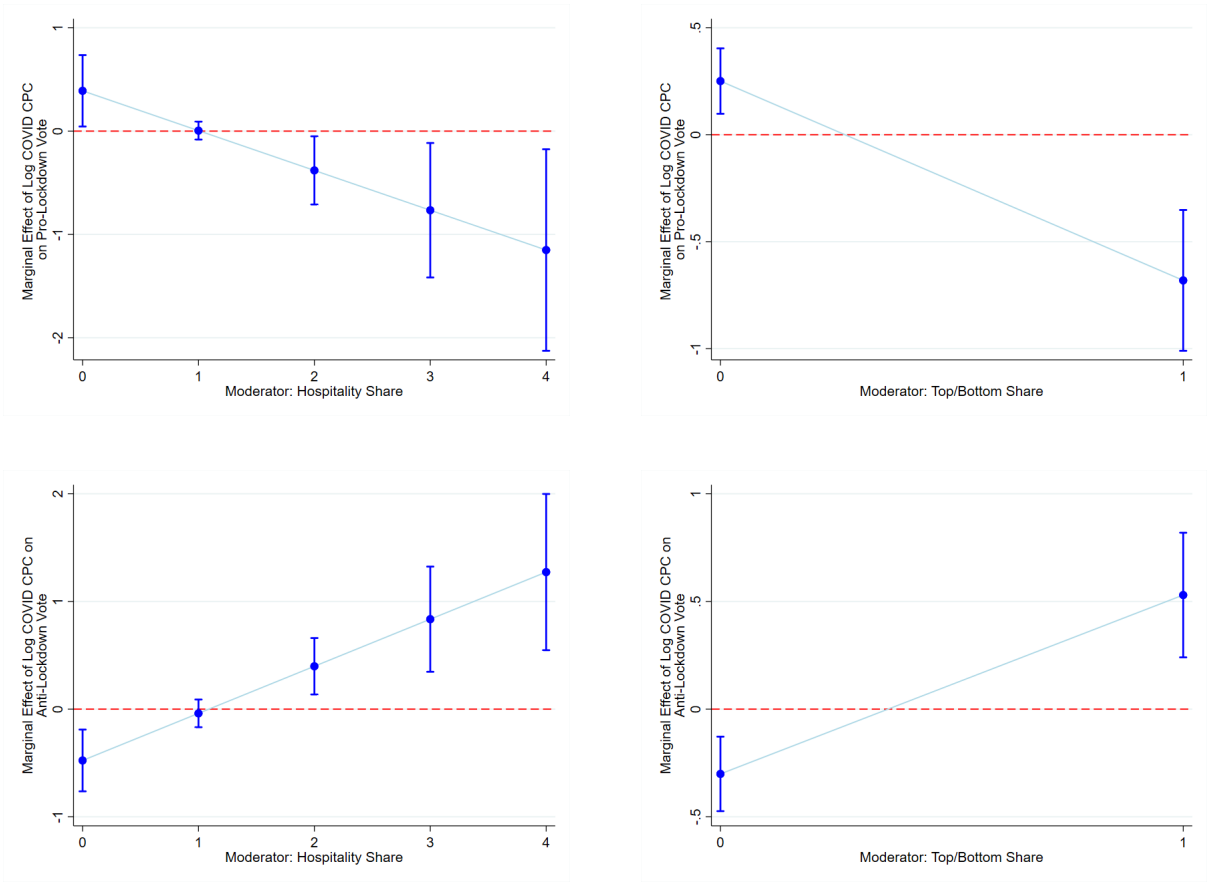


Notes: Marginal effect estimates derived from the results of Equation 8 (reported in panel A of Table A14, Online Appendix E) with 95% confidence intervals based on robust standard errors clustered by NUTS-4 region.

0 at a 5% significance level. At high values, in line with expectations, it becomes positive and significant when the outcome is the pro-lockdown Δ*Vote Share*$_m$, rising by an average of 1.95 percentage points; and negative and significant when the outcome is the anti-lockdown Δ*Vote Share*$_m$, declining by an average of 2.34 percentage points.

When we substitute in the proxies for economic exposure in Figure 7, the results are reversed. *Log COVID CPC*$_m$'s marginal effect on the pro-lockdown ΔVote Share$_m$ is negatively associated with *Top/Bottom Income*$_m$ and *Hospitality Share*$_m$ (top row), falling by an average

FIGURE 7. Marginal Effect of COVID-19 Incidence on Support for Pro- and Anti-Lockdown Parties in Madrid Across Proxies for Economic Exposure



Notes: Marginal effect estimates derived from the results of Equation 8 (reported in panel B of Table A14, Online Appendix E) with 95% confidence intervals based on robust standard errors clustered by NUTS-4 region.

of 1.24 percentage points as we move from their lowest to their highest values. In contrast, its marginal effect on the anti-lockdown ΔVote Share$_m$ is positively associated with the two moderators (bottom row), growing by an average of 1.29 percentage points between their extremities.[27]

[27] In Table A15, Online Appendix E, we show that these results are robust to including proxies for both types of exposure in the same specification.

Instrumental Variables Strategy

COVID-19 cases were not randomly distributed across Madrid's municipalities in May 2021, and it is conceivable that their frequency reflected unobserved municipality- and time-varying factors that also impacted voting decisions. To address this possibility, we build on Qiu et al.'s (2020) analysis of COVID-19 transmission by pursuing an instrumental variables strategy that exploits local weather patterns in the run-up to the election. Using a two-stage least squares (2SLS) estimator, we instrument *Log COVID CPC*$_m$ with four month-level weather variables averaged over the half-year preceding the 2021 election: (1) municipality m's rainfall in millimeters; (2) m's mean daily temperature in degrees Celsius; (3) m's maximum wind speed in kilometers/hour; and (4) m's temperature $\times$ wind speed.[28] As these variables are known to suppress COVID-19 transmission, their pre-election trends should strongly predict *Log COVID CPC*$_m$. Conditional on covariates, however, they are unlikely to influence attitudes toward pro- and anti-lockdown parties (as distinct blocs) via an alternative channel. While election-day weather patterns have been found to directly influence party vote shares through channels such as turnout and voter mood (Mellon 2023), we measure our instrument *before* the Madrid election, rendering the exclusion restriction considerably more plausible.

The 2SLS results are presented in Table A17 of Online Appendix E. High first-stage F-statistics indicate that weather patterns are a strong predictor of COVID-19 incidence at the municipality level, allaying any potential concerns about weak instrument bias. The second-stage estimates are consistent with those in Table A14, suggesting that the OLS estimates were not merely an artifact of endogeneity in the geographical distribution of the pandemic.

[28] The first stage thus takes the form:

$$\text{Log COVID CPC}_m = \beta_0 + \sum_{\eta=1}^{4} \beta_\eta \text{Instrument}_{m\eta} + \beta_5 \text{Exposure}_m + \sum_{\eta=1}^{4} \beta_{\eta+5} \text{Instrument}_{m\eta} \times \text{Exposure}_m + \theta \mathbf{X}'_m + \lambda_j + \epsilon_m. \quad (9)$$

We acquired data on the instruments through a purchase agreement with Spain's State Meteorological Agency, which takes measurements from 40 weather stations across the region (see Figure A10, Online Appendix E).

Discussion

While increasingly sensitive to the wide array of subjective mental states that make up the human experience, scholarship on the determinants of voting behavior has often treated anxiety in an undifferentiated fashion, placing voters on a continuous one-dimensional spectrum ranging from "anxious" to "not anxious." This study has made the case for a disaggregated approach that acknowledges and places emphasis on the multiplicity of anxieties that can arise from individual societal threats, their uneven distribution across socio-demographic groups, and their distinctive implications for political strategy and preference formation. Since one type of anxiety may be alleviated by a different or conflicting policy to another type, our VoA perspective contends, these emotions can give rise to new bases of electoral competition, with the potential upshot that — rather than behaving as a homogeneous bloc — anxious voters exhibit disparate behavior at the ballot box.

As a mass societal threat that has spawned multiple forms of anxiety, the COVID-19 pandemic presents a useful opportunity to illustrate and assess the VoA framework. Our empirical examination focused on key phases of Spain's pandemic, drawing on a combination of nationally representative survey data, an original survey experiment, and municipality-level electoral results. We adduced consistent evidence for two key implications of the framework. First, anxiety about COVID-19's health consequences is positively associated with support for parties that champion stringent lockdown restrictions, while anxiety about its economic implications is positively associated with support for parties that back more permissive measures. Second, COVID-related health anxiety is an increasing function of socio-demographic characteristics that render individuals more vulnerable to severe COVID-19 symptoms; COVID-related economic anxiety increases with characteristics that expose individuals to serious financial harm as a result of the pandemic.

These findings showcase a central payoff of the VoA approach, namely, its ability to account

for heterogeneity in electoral preferences *among* worried individuals that we would not expect if anxiety were a unidimensional emotion. In shedding such light, it complements and helps to clarify the scope of existing theories of how anxiety influences voting behavior. Through a VoA lens, for instance, the common view that anxiety disposes voters toward protective policies requires a crucial caveat: what voters perceive as protective is contingent upon the particular type of anxiety they experience. The VoA approach hence adds nuance to standard applications of the spatial model of voting, drawing attention to the emotional complexity of voter utility functions as well as to the essentially subjective nature of the valence component, which can create sharp cleavages among voters who value the same candidate qualities.

Our perspective is less compatible with the stronger claim that anxiety benefits conservative parties or hurts incumbents. When societal threats emerge as axes of political contention, it can be challenging for any party to relieve *all* forms of anxiety afflicting the electorate. During the pandemic, as we have seen, parties across the ideological spectrum sought to balance the protection of public health against the minimization of economic disruption. How parties resolve such dilemmas, the VoA perspective suggests, is likely to reflect the distribution of different threat-induced anxieties across key socio-demographic constituencies.[29] The broader takeaway is that identifying anxiety's electoral winners and losers requires a careful understanding of the varied forms it may assume in response to societal threats, the socio-demographic contexts in which such perils arise, and the strategies political elites pursue to address them.

Implicit in this discussion is an important set of scope conditions for the VoA approach itself: societal threats carry heterogeneous welfare implications for major socio-demographic groups and are sufficiently salient to create tradeoffs between competing public policy objectives. When tackling a given threat is welfare-enhancing for all or an extremely high proportion of voters, as we might expect in the case of a nuclear war or humanitarian catastrophe, the

[29] This may explain why, for instance, most parties favored relatively lenient lockdown restrictions in countries where economic costs figured prominently in the public discourse around COVID-19, such as the United Kingdom and the Netherlands.

approach's additional explanatory power will probably be limited. Even setting aside COVID-19, however, salient threats that entail challenging tradeoffs for policymakers are not difficult to find, from transnational terrorism and climate change to immigration shocks and financial crises. We are thus confident that our framework can be applied to diverse issues of interest to social scientists, while acknowledging that there are circumstances in which alternative perspectives may be more useful.

In addition, we believe that the principles of the VoA approach can be fruitfully extended to the analysis of other complex emotions that play a role in political life, such as anger, fear, disgust, sadness, hope, and enthusiasm (e.g., Aytaç et al. 2020; Kupatadze and Zeitzoff 2021; Shandler et al. 2022). While social scientists have made substantial progress in conceptualizing and delineating emotions with similar characteristics, such as anger and fear, less attention has been paid to the diversity of forms each one can take — and still less to the causes and consequences of such variation. Anger, for instance, can be triggered by any number of social, cultural, and economic phenomena, potentially generating distinct emotional states associated with varying — potentially conflicting — political attitudes and preferences (e.g., anger about immigration versus anger about racial injustice). A systematic exploration of the rich variety inherent in individual emotions can, in our view, yield significant dividends for the study of political behavior.

Supplementary material. Supplementary material for this article can be found at [Production team to insert link].

Data availability statement. Replication data for this paper can be found at https://doi.org/10.7910/DVN/VD6ZBX.

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Online Appendices for:

Varieties of Anxieties: Disaggregating Emotion and Voting Behavior in the COVID-19 Era

Ranjit Lall[*] David Vilalta[†]

Contents

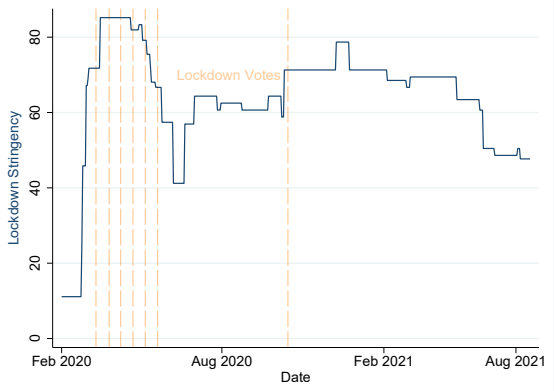
[*]Department of Politics and International Relations, University of Oxford, Oxford, United Kingdom. Email: ranjit.lall@sjc.ox.ac.uk.

[†]Department of Political Science, Columbia University, New York, United States of America. Email: david.vilalta@columbia.edu.

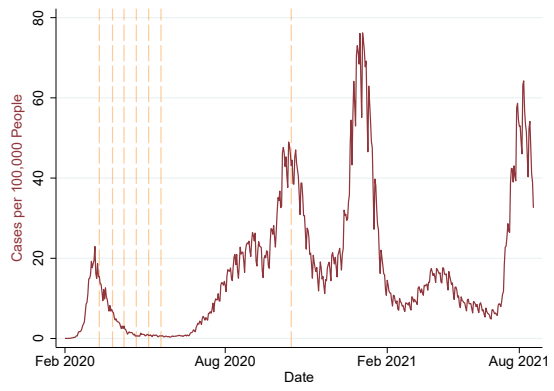
A Evolution of Spain's Pandemic and Policy Response

FIGURE A1. Evolution of COVID-19 Cases and Lockdown Restrictions in Spain

(A) Lockdown Stringency



(B) COVID-19 Cases per 100,000 Pop.



Notes: In panel A, lockdown stringency is measured with an index from the Oxford COVID-19 Government Response Tracker (Hale et al. 2021). In panel B, COVID-19 incidence is measured using data from Spain's National Epidemiological Center (El Centro Nacional de Epidemiología 2022). Dotted vertical lines denote parliamentary votes on whether to declare a national state of alarm.

TABLE A1. Parliamentary Votes on COVID-19 State of Alarm, April 2020–May 2021

Party	25 Mar	9 Apr	22 Apr	6 May	20 May	3 Jun	29 Oct
PP	✓	✓	✓	Abs.	✗	✗	Abs.
PSOE	✓	✓	✓	✓	✓	✓	✓
Ciudadanos	✓	✓	✓	✓	✓	✓	✓
Podemos	✓	✓	✓	✓	✓	✓	✓
Vox	✓	✗	✗	✗	✗	✗	✗
Más País	✓	✓	✓	✓	✓	✓	✓
End of Extension:	12 Apr 2020	26 Apr 2020	10 May 2020	24 May 2020	7 Jun 2020	21 Jun 2020	9 May 2021

Notes: This table records how Spain's five major national parties voted on the six extensions of the state of alarm imposed by the Congress of Deputies (parliament) on March 14, 2020 in response to the COVID-19 pandemic. Check marks denote votes in favor; crosses denote votes against; "Abs." denotes abstention. Data are from congressional voting records accessed at `https://www.congreso.es/opendata/votaciones`. We additionally include Más País, a regional party centered on Madrid, which features in our case study of the region's 2021 election.

TABLE A2: Party Statements on Lockdown Restrictions

Party	Representative	Party Position	Date	Statement (Translated)	Source
PP	Pablo Casado	President	May 6, 2020	"The exceptional situation does not allow for a constitutional dictatorship. . .We do not support this overstepping of legal boundaries that has turned into a covert state of exception."	Legislative record[a]
Vox	Santiago Abascal	President	May 6, 2020	"You, Mr Sánchez, are trying to blackmail this chamber. . .into renewing a power that you have abused. Maintaining the state of alarm [. . .] saves neither lives nor jobs. What would save lives and jobs would be a change of government."	Legislative record[a]
Ciudadanos	Inés Arrimadas	President	May 6, 2020	"The state of alarm can not be an eternal mechanism, we must think of a plan B and untie the aid to families, self-employed or SMEs of this exceptional period."	Press release[b]
PSOE	Pedro Sánchez	Secretary-General (and President of Spain)	May 6, 2020	"There are no absolutely correct decisions. . .but lifting the state of alarm now would be an absolute mistake"	Legislative record[a]
Podemos	Pablo Echenique	Spokesman in Congress	May 4, 2020	"The state of alarm is indispensable for the confinement measures, and it is these measures that have made it possible to subdue the epidemic."	ESdiario newspaper[c]

[a] https://www.congreso.es/public_oficiales/L14/CONG/DS/PL/DSCD-14-PL-21.PDF.

[b] https://www.ciudadanos-cs.org/prensa/prensa/12168?lg=va.

[c] https://www.esdiario.com/espana/563129816/Echenique-acusa-a-Casado-de-provocar-miles-de-muertos-si-no-traga-con-Sanchez.html.

B CIS Survey Analysis

B.1 Survey Questions

TABLE A3: CIS Survey Questions and Response Options

Question in Spanish (Original)	Question in English (Translation)	Waves (MM/YY)	Response Options	Coding (New = Old)
Me gustaría hacerle algunas preguntas sobre la crisis del coronavirus. Pensando en todos los efectos de esta pandemia, ¿diría Ud. que la crisis del coronavirus le preocupa mucho, bastante, poco o nada?	*I would like to ask you some questions about the coronavirus crisis. Thinking about all the effects of this pandemic, would you say that the coronavirus crisis worries you a lot, quite a bit, a little, or not at all?*	04/20 - 05/21	1: A lot 2: Quite a bit 3: Not much 4: Average 5: None	$1 = 5$ $2 = 3$ $3 = 4$ $4 = 2$ $5 = 1$
En estos momentos, ¿qué le preocupa a Ud. más, los efectos de esta crisis sobre la salud, o los efectos de la crisis sobre la economía y el empleo?	*At this time, what are you more concerned about, the effects of this crisis on health, or the effects of the crisis on the economy and employment?*	05/20 - 07/20	1: The effect on health 2: The effect on the economy and employment 3: Both equally 4: Neither	$0 = 2$ $0.5 = 3$ $1 = 1$ (for *Health-Weighted Anxiety*)
¿Cuántos años cumplió Ud. en su último cumpleaños?	*How old were you on your last birthday?*	All (04/20 - 05/21)	Continuous	$1 = < 25$ $2 = 25 - 34$ $3 = 35 - 44$ $4 = 45 - 54$ $5 = 55 - 64$ $6 = > 64$

Continued on next page

TABLE A3: CIS Survey Questions and Response Options (Continued)

Question in Spanish (Original)	Question in English (Translation)	Waves (MM/YY)	Response Options	Coding (New = Old)
¿Cuáles son los estudios de más alto nivel oficial que Ud. ha cursado (con independencia de que los haya terminado o no)?	*What is the highest level of formal education you have completed (whether you have finished it or not)?*	All (04/20 - 05/21)	1: No studies 2: Primary education 3: Secondary education (1st stage) 4: Secondary education (2nd stage) 5: Vocational training 6: Further studies	$1 = 1$ $2 = 2$ $3 = 3, 4$ $4 = 5$ $5 = 6$
¿A qué clase social diría Ud. que pertenece?	*What social class would you say you belong to?*	All (04/20 - 05/21)	1: Upper class 2: Upper middle class 3: Middle class 4: Lower middle class 5: Working class 6: Poor class 7: Underclass 8: Proletariat 9: The ones below 10: Excluded 11: Common people 12: Lower class	$1 = 6, 7, 8$ $2 = 5, 12$ $3 = 4$ $4 = 3$ $5 = 2$ $6 = 1$

Continued on next page

TABLE A3: CIS Survey Questions and Response Options (Continued)

Question in Spanish (Original)	Question in English (Translation)	Waves (MM/YY)	Response Options	Coding (New = Old)
¿En qué situación laboral se encuentra Ud. actualmente?	*What is your current employment situation?*	All (04/20 - 05/21)	1: Works 2: Retired or pensioner (previously worked) 3: Pensioner (not previously employed) 4: Unemployed and has worked before 5: Unemployed and looking for his first job 6: Student 7: Unpaid domestic work	$0 = 2, 3, 4, 5$ $1 = 1$
¿Me puede decir cuál es su ocupación actual?	*What is your current occupation?*	All (04/20 - 05/21)	1: Directors and managers 2: Scientists and intellectuals 3: Technicians and mid-level professionals 4: Administrative staff 5: Service workers and vendors 6: Farmers and skilled agricultural, forestry and fishery workers 7: Office workers, operators and craftsmen 8: Plant and machine operators 9: Elementary occupations 10: Military and police	$1 = 1$ $2 = 2$ $3 = 3$ $4 = 4$ $5 = 5$ $6 = 6$ $7 = 7$ $8 = 8$ $9 = 9$ $10 = 10$
¿Cual es su sexo?	*What is your sex?*	All (04/20 - 05/21)	1: Man 2: Woman	$0 = 2$ $1 = 1$

Continued on next page

TABLE A3: CIS Survey Questions and Response Options (Continued)

Question in Spanish (Original)	Question in English (Translation)	Waves (MM/YY)	Response Options	Coding (New = Old)
¿Y cómo evolucionó su enfermedad?	*And how did your illness evolve? [for those who report testing positive for COVID-19]*	05/20 - 05/21	1: I had mild symptoms and spent the period at home 2: I had important symptoms, but I spent the period at home 3: I was admitted to hospital	1 = 1 2 = 2 3 = 3
Suponiendo que mañana se celebrasen nuevamente elecciones generales, es decir, al Parlamento español, ¿a qué partido votaría Ud.?	*Supposing that tomorrow general elections were held again, that is, for the Spanish Parliament, which party would you vote for?*	All (04/20 - 05/21)	Every party (p) with parliamentary representation	0 = would not vote for party p 1 = would vote for party p
Situándonos en una escala de 10 casillas, como un termómetro, que van del 1 al 10, en la que 1 significa "lo más a la izquierda" y 10 "lo más a la derecha," ¿en qué casilla se colocaría Ud.?	*On a scale of 10 boxes, like a thermometer that ranges from 1 to 10, where 1 means "furthest to the left" and 10 means "furthest to the right," in which box would you place yourself?*	All (04/20 - 05/21)	Continuous: 1 (furthest left) to 10 (furthest right)	1 (furthest left) to 10 (furthest right)
¿Y podría decirme a qué partido o coalición votó en las últimas elecciones generales?	*And could you tell me which party or coalition you voted for in the last general elections?*	All (04/20 - 05/21)	Every party (p) running in the election	0 = did not vote for party p 1 = voted for party p

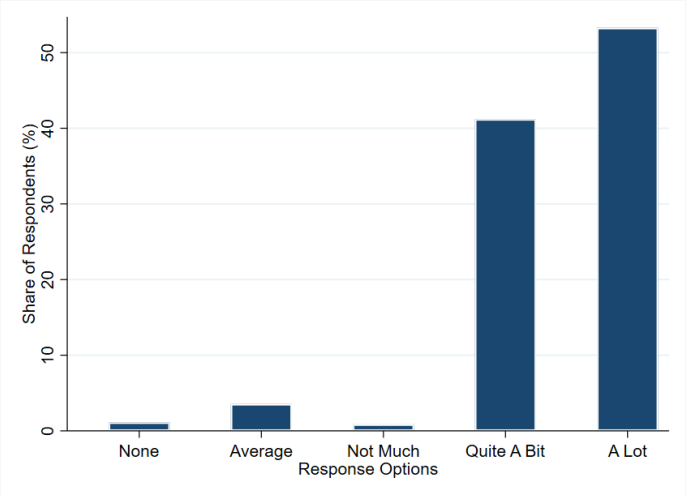
B.2 Summary Statistics

TABLE A4. Summary Statistics for CIS Survey Dataset

	N	Mean	Std. Dev.	Min.	25%	50%	75%	Max.
COVID Anxiety	46,523	4.42	0.78	1	4	5	5	5
Health-Weighted Anxiety	11,006	0.59	0.42	0	0	0.50	1	1
COVID-19 Symptoms	1,574	1.43	0.70	1	1	1	2	3
Age Group	46,523	4.04	1.57	1	3	4	6	6
Gender: Female	46,523	0.52	0.50	0	0	1	1	1
Social Class	43,050	3.48	0.93	1	3	4	4	5
Job Type	46,523	5.07	2.29	1	2	7	7	7
Labor Situation	46,433	1.82	1.11	1	1	1	2	6
Level of Studies	46,296	3.26	0.73	1	3	3	4	4
Left-Right Scale	42,310	4.61	2.08	1	3	5	6	10
Log COVID CPC	46,523	1.34	0.76	0.059	0.61	1.55	2.03	2.56
Previous Vote: Vox	42,002	0.063	0.24	0	0	0	0	1
Previous Vote: PP	42,002	0.13	0.34	0	0	0	0	1
Previous Vote: Ciudadanos	42,002	0.083	0.28	0	0	0	0	1
Previous Vote: PSOE	42,002	0.28	0.45	0	0	0	1	1
Previous Vote: Podemos	42,002	0.12	0.32	0	0	0	0	1
Party Sympathy: PP	46,523	0.024	0.15	0	0	0	0	1
Party Sympathy: PSOE	46,523	0.052	0.22	0	0	0	0	1
Party Sympathy: Ciudadanos	46,523	0.019	0.14	0	0	0	0	1
Party Sympathy: Podemos	46,523	0.008	0.086	0	0	0	0	1
Party Sympathy: Vox	46,523	0.006	0.076	0	0	0	0	1

Notes: The dataset pools available monthly survey waves conducted between April 2020 and July 2021. All waves are accessed from: https://www.cis.es/cis/opencm/ES/11_barometros/index.jsp.

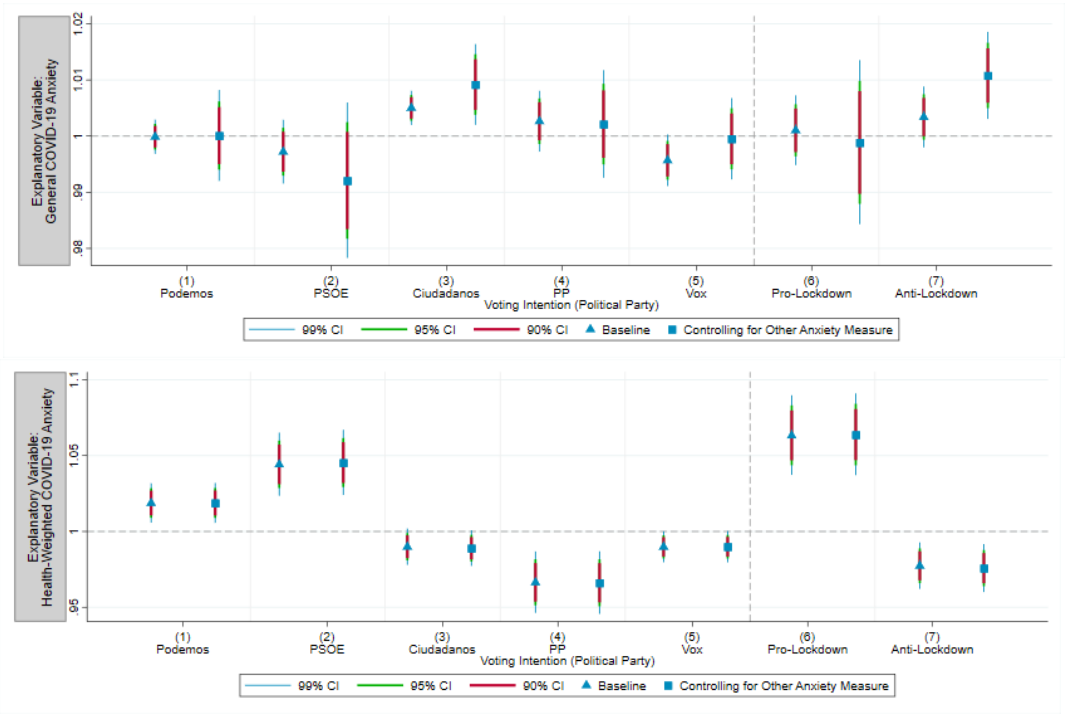
FIGURE A2. Distribution of General COVID-19 Anxiety



Notes: This figures shows the distribution of responses to the following CIS survey question between April 2020 and May 2021: "Thinking about all the effects of this pandemic, would you say that the coronavirus crisis worries you a lot, quite a bit, a little, or not at all?"

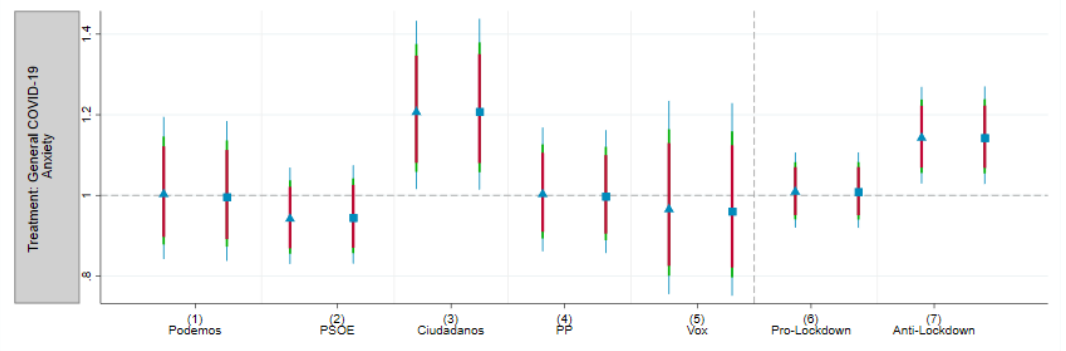
B.3 Additional Regression Results

FIGURE A3. COVID-Related Anxieties and Voting Intentions: OLS Results



Notes: OLS estimates with confidence intervals of varying levels based on robust standard errors clustered by NUTS-3 region. All models include NUTS-3 and survey wave fixed effects and control for gender, age, education level, social class, labor situation, job type, previous vote choice, and NUTS-3-level COVID-19 incidence.

FIGURE A4. General COVID-19 Anxiety and Voting Intentions: May-July 2020



Notes: This table shows that the results of the first variant of Equation 5 are similar when the sample is restricted to survey waves when *Health-Weighted Anxiety*$_{it}$ is measured. Odds ratios with confidence intervals of varying levels based on robust standard errors clustered by NUTS-3 region. All models include NUTS-3 and survey wave fixed effects and control for gender, age, education level, social class, labor situation, job type, previous vote choice, and NUTS-3-level COVID-19 incidence.

TABLE A5. Robustness Checks: Relationship between Health-Weighted COVID-19 Anxiety and Voting Intentions

DV = Intention to Vote for:	Pro-Lockdown Party					Anti-Lockdown Party				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Health-Weighted Anxiety	1.702***	1.703***	1.704***	1.752***	1.692***	0.512***	0.491***	0.492***	0.470***	0.490***
	(0.0884)	(0.0925)	(0.0922)	(0.128)	(0.0915)	(0.0281)	(0.0230)	(0.0230)	(0.0225)	(0.0229)
N	11021	10231	10231	7447	10231	11021	10231	10231	10151	10231
NUTS-3 FEs	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓
Survey Wave FEs	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓
Socio-Demographic Controls	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓
COVID Incidence Control	✗	✗	✓	✓	✓	✗	✗	✓	✓	✓
Ideology Control	✗	✗	✗	✓	✗	✗	✗	✗	✓	✗
Party Sympathy Control	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓

Notes: This table shows that the results of the second variant of Equation 5 are robust to alternative configurations of control variables and measures of partisanship. Odds ratios from logistic regressions with robust standard errors, clustered by NUTS-3 region, in parentheses. Socio-demographic controls: age, gender, social class, education level, labor situation, job category, NUTS-3-level COVID-19 incidence. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

TABLE A6. Analysis of Unobservable and Observable Selection Under Varying Assumptions About Model Fit

Dependent Variable (Eq. 5)	Explanatory Variable (Eq. 5)	Model R^2 (Eq. 5)	Model β_1 (Eq. 5)	Oster Test Parameter	Oster Test Results with $R_{\max}$ of . . .				
					0.55	0.60	0.65	0.70	0.75
Vote Choice:	Health-Weighted	0.37	0.061	δ	1.77	1.38	1.14	0.96	0.84
Pro-Lockdown Party	Anxiety		(σ = 0.009)	β_1^*	0.027	0.018	0.008	-0.002	-0.012
Vote Choice:	Health-Weighted	0.51	-0.023	δ	4.47	1.98	1.27	0.94	0.74
Anti-Lockdown Party	Anxiety		(σ = 0.006)	β_1^*	-0.017	-0.012	-0.005	0.002	0.008

Notes: This table reports the results of applying Oster's (2019) test of unobservable selection to the second variant of Equation 5 (estimated with OLS rather than logistic regression, which is not covered by the test). The key test parameters are $R_{\max}$, the R^2 from a hypothetical regression of the dependent variable on the explanatory variable and both observed and unobserved controls; δ, the degree of selection on unobservables relative to observables that would be necessary to eliminate the explanatory variable's estimated effect; and β_1^*, the explanatory variable's bias-adjusted effect. When $\delta > 1$, the degree of selection on unobservables would have to be stronger than the degree of selection on observables to explain away the estimated effect, increasing our confidence that this result is robust to omitted variable bias.

C Survey Experiment

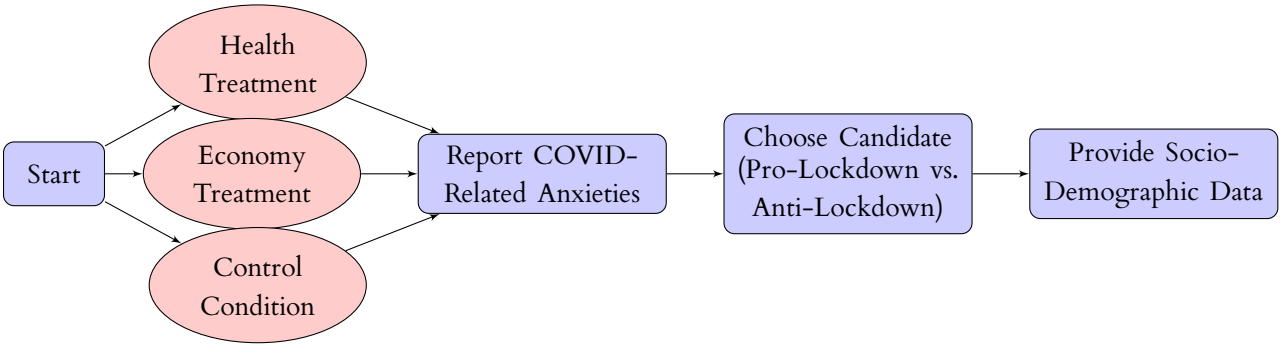
Our survey experiment was preregistered with the Open Science Framework on August 1, 2023 and implemented between August 23 and September 29.[1] We recruited 734 adult residents of Spain through two channels: (1) Amazon Mechanical Turk (AMT), a popular crowdsourcing website that permits "Requesters" to specify the location of "Workers"; and (2) advertising on social media networks, principally Spanish public Facebook groups. AMT Workers do not constitute a random sample of Spain's overall population. Nevertheless, several empirical results based on nationally representative samples have been replicated on the platform (Berinsky et al. 2012; Clifford et al. 2015; Crump et al. 2013). Facebook is more widely used and can generate samples as representative as those recruited via traditional methods in a variety of settings (Thornton et al. 2016; Whitaker et al. 2017). Importantly, our sample is similar to the wider Spanish population on key demographic characteristics, exhibiting only a small bias toward younger, male, nonwhite, and more educated individuals:

1. *Age*. The median age in our sample is 39 years, compared with 43.9 years in Spain as a whole (UN Department of Economic and Social Affairs 2022).
2. *Gender*. The male-female ratio in our sample is 1.09, compared with 0.96 in Spain as a whole (UN Department of Economic and Social Affairs 2022).
3. *Ethnicity*. The proportion of whites in our sample is 81%, compared with an estimated 84% in Spain as a whole.[2]
4. *Education level*. The proportion of our sample whose highest educational qualification is a secondary school diploma is 23.6%, while the proportion with an undergraduate, graduate, or professional degree is 42.5%. In Spain as a whole, 23% of people between 25 and 64 years old have an upper secondary but non-tertiary qualification and 41% have

[1] The preregistration can be found at https://osf.io/rtz3a. Our pre-analysis plan is provided in Online Appendix F.

[2] CIA World Factbook, accessed at https://www.cia.gov/the-world-factbook/countries/spain/.

FIGURE A5. Survey Experiment Structure



a tertiary qualification (OECD 2023, 50).

Table A7 in Section C.4 presents summary statistics for these and the remaining variables in our survey experimental analysis.

The survey, which was conducted in Spanish, was divided into four sections (summarized in Figure A5). First, after providing informed consent, respondents were either asked to read one of two vignettes describing the pandemic's impact on Spanish society or transferred to the second section (the control group). Since we are interested in the effect of different COVID-related anxieties on political preferences, we randomized these prompts to emphasize the pandemic's adverse consequences for either public health or the economy.[3] Second, respondents were asked to report their level of anxiety about the pandemic's health and economic ramifications on a 1-10 scale. Third, respondents were presented with descriptions of two hypothetical candidates running for political office (provided below) and invited to choose between them.[4] Finally, they were requested to disclose basic demographic and socioeconomic information (age, sex, race, education level, income bracket, health status, party affiliation) as well as whether they have been personally infected by COVID-19. The average survey completion time was 4.3 minutes (258 seconds).

[3] In total, 266 respondents were assigned the health-focused prompt, 264 were assigned the economy-focused prompt, and 204 received neither treatment.

[4] We placed the anxiety question before the candidate choice question to ensure that emotional expression was not influenced by the formulation of political preferences.

C.1 Candidate Descriptions

In the following descriptions presented to respondents, which are translated from Spanish, candidate A is always in favor of strong lockdown restrictions, while candidate B is always opposed to them. Sentences 2, 3, and 4 of each text are randomly assigned to the candidates.

> *If there is a resurgence of COVID-19 or a similar pandemic in the near future, Candidate A favors a prudent and vigilant response that protects all members of society. He supports robust lockdown measures where they are appropriate.* [SENTENCE 2]. [SENTENCE 3]. [SENTENCE 4].

> *If there is a resurgence of COVID-19 or a similar pandemic in the near future, Candidate B is keen to protect people's livelihoods by minimising any economic disturbance or damage that may arise. He opposes robust lockdown measures that risk undermining this goal.* [SENTENCE 2]. [SENTENCE 3]. [SENTENCE 4].

Sentence 2: (A) *He is 48 years old, and was born and brought up in your area, before going to university to study chemistry*; (B) *He is 46 years old, lives in your district, and studied biology at university*.
Sentence 3: (A) *After university he trained as an accountant, and set up a company 10 years ago; it now employs nine people*; (B) *After university he trained as a lawyer, and set up a practice 10 years ago; it now employs eight people*.
Sentence 4: (A) *He likes cycling and is a keen guitarist*; (B) *He likes tennis and is a keen chef*.

C.2 Ethical Considerations

The survey received research ethics approval from the University of Oxford's Department of Politics and International Relations Research Ethics Committee (#SSH/DPIR_C1A_23_014) and Columbia University's Institutional Review Board (#IRB-AAAU7133). In general, we do not believe that the exercise raised any ethical issues specific to the Spanish context — in

which our questions were unlikely to be perceived as particularly sensitive or controversial — or physical or psychological risks to the research team. Respondents were provided with an informed consent form detailing the purpose of the research, the survey procedure, their right to withdraw, confidentiality arrangements, remuneration, the complaints procedure, and contact information. Compensation was substantially higher than the Spanish minimum wage ($5 for an activity typically taking less than five minutes). As discussed earlier, the sample was approximately representative of the Spanish population on several demographic variables, reducing the likelihood that participation differentially benefited or harmed any specific group.

C.3 Departures from Pre-Analysis Plan

In implementing the survey, we deviated from our pre-analysis plan in three ways, none of which concerns our hypotheses or materially alters our empirical strategy. First, rather than recruiting all participants through AMT, we employed a combination of this platform and advertising on social media websites (mainly Facebook). We made this decision shortly after launching the survey, when it became clear that there were substantially fewer Spain-based AMT Workers than we had anticipated. In addition, since social media networks are widely used across the Spanish population, we believed that incorporating them into our recruitment strategy would enhance the sample's representativeness. Second, our pre-analysis plan specified that all respondents would be assigned one of the two treatment vignettes. After receiving additional feedback on the plan, we realized that a control group — a set of respondents who receive neither prompt — would be needed to estimate treatment effects relative to the appropriate baseline of "unprimed" individuals (Gaines et al. 2007). Third, to test our posited causal mechanism, we also followed advice to include posttreatment questions on COVID-related health and economic anxieties.

C.4 Summary Statistics

TABLE A7. Summary Statistics for Survey Experimental Dataset

	N	Mean	Std. Dev.	Min.	25%	50%	75%	Max.
Prefer Pro-Lockdown Candidate	734	0.53	0.50	0	0	1	1	1
Prefer Anti-Lockdown Candidate	734	0.47	0.50	0	0	0	1	1
Health Prime	734	0.36	0.48	0	0	0	1	1
Economy Prime	734	0.36	0.48	0	0	0	1	1
Health Anxiety	734	5.37	2.90	1	3	5	8	10
Economic Anxiety	734	5.77	2.78	1	3	6	8	10
Age	734	41.5	14.0	18	30	39	52	78
Gender: Female	734	0.48	0.50	0	0	0	1	1
Race: White	734	0.81	0.40	0	1	1	1	1
Party Identification: PP	734	0.26	0.44	0	0	0	1	1
Party Identification: PSOE	734	0.24	0.43	0	0	0	0	1
Party Identification: Vox	734	0.11	0.31	0	0	0	0	1
Party Identification: Podemos	734	0.13	0.34	0	0	0	0	1
Education: None	734	0.012	0.11	0	0	0	0	1
Education: Primary	734	0.22	0.41	0	0	0	0	1
Education: High School	734	0.24	0.42	0	0	0	0	1
Education: Vocational	734	0.11	0.31	0	0	0	0	1
Education: Community College	734	0.074	0.26	0	0	0	0	1
Education: Undergraduate	734	0.26	0.44	0	0	0	1	1
Education: Graduate School	734	0.095	0.29	0	0	0	0	1
Primary / Tertiary Education	734	0.33	0.47	0	0	0	1	1
Poor / Rich	734	0.23	0.42	0	0	0	0	1
Underlying Health Issue	734	0.27	0.44	0	0	0	1	1
COVID-19 Infection	734	0.50	0.50	0	0	0	1	1

C.5 Additional Regression Results

TABLE A8. Survey Experiment Results: OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Panel A: OLS Estimates, Outcome = Preference for Pro-Lockdown Candidate (0/1)					
Health Prime	0.270***	0.270***	0.271***	0.272***	0.414***
	(0.0420)	(0.0421)	(0.0425)	(0.0423)	(0.0358)
Panel B: OLS Estimates, Outcome = Preference for Anti-Lockdown Candidate (0/1)					
Economy Prime	0.254***	0.270***	0.268***	0.264***	0.409***
	(0.0437)	(0.0435)	(0.0439)	(0.0440)	(0.0363)
N	470	470	470	470	734
Socio-Demographic Controls	✗	✓	✓	✓	✓
Political Controls	✗	✗	✓	✓	✓
Previous COVID Infection Control	✗	✗	✗	✓	✓
Full Sample (Both Treatment Groups)	✗	✗	✗	✗	✓

Notes: OLS estimates with robust standard errors in parentheses. Socio-demographic controls: age, gender, ethnicity, education level. Political controls: strength of affiliation with PP, PSOE, Podemos, and Vox. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

TABLE A9. Survey Experiment Results: Attentive Subsample

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Outcome = Prefer Pro-Lockdown Candidate						
Health Prime	3.015***	0.446	2.282***			
	(0.754)	(0.362)	(0.705)			
Health Prime × Age		1.046**				
		(0.0190)				
Health Prime × Underlying Health Issue			4.829**			
			(3.127)			
Panel B: Outcome = Prefer Anti-Lockdown Candidate						
Economy Prime				4.061***	2.783***	2.117**
				(1.029)	(0.815)	(0.630)
Economy Prime × Poor/Rich					6.752***	
					(4.153)	
Economy Prime × Primary/Tertiary Education						8.496***
						(4.766)
N	385	385	385	383	383	383
Socio-Demographic Controls	✓	✓	✓	✓	✓	✓
Political Controls	✓	✓	✓	✓	✓	✓
Infection Controls	✓	✓	✓	✓	✓	✓

Notes: This table replicates column 4 of Table 1 restricting the sample to "attentive" respondents who spent at least three minutes completing our survey. Odds ratios from logistic regressions with robust standard errors in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

TABLE A10. Survey Experiment Results: Interactive Models

	(1)	(2)	(3)	(4)	(5)
Panel A: Odds Ratios, Outcome = Preference for Pro-Lockdown Candidate (0/1)					
Health Prime	0.678	0.595	0.562	0.540	1.725
	(0.452)	(0.401)	(0.382)	(0.370)	(1.003)
Health Prime × Age	1.039**	1.042***	1.044***	1.045***	1.032**
	(0.0155)	(0.0157)	(0.0159)	(0.0160)	(0.0137)
Health Prime	2.430***	2.411***	2.397***	2.465***	5.146***
	(0.603)	(0.605)	(0.606)	(0.628)	(1.040)
Health Prime × Underlying Health Issue	5.470***	6.274***	6.600***	6.367***	4.166***
	(3.103)	(3.646)	(3.859)	(3.748)	(2.262)
Panel B: Odds Ratios, Outcome = Preference for Anti-Lockdown Candidate (0/1)					
Economy Prime	1.564*	1.821**	1.814**	1.799**	3.678***
	(0.369)	(0.451)	(0.455)	(0.452)	(0.760)
Economy Prime × Primary/Tertiary Education	8.566***	7.869***	7.923***	7.765***	4.775***
	(3.994)	(3.735)	(3.779)	(3.708)	(1.978)
Economy Prime	2.165***	2.505***	2.525***	2.477***	4.460***
	(0.493)	(0.608)	(0.616)	(0.607)	(0.884)
Economy Prime × Poor/Rich	3.811***	4.542***	4.605***	4.634***	3.183**
	(1.901)	(2.357)	(2.421)	(2.440)	(1.494)
N	470	470	470	470	734
Socio-Demographic Controls	✗	✓	✓	✓	✓
Political Controls	✗	✗	✓	✓	✓
Previous COVID Infection Control	✗	✗	✗	✓	✓
Full Sample (Both Treatment Groups)	✗	✗	✗	✗	✓

Notes: This table reports the results underlying Figure 4. Odds ratios from logistic regressions with robust standard errors in parentheses. Socio-demographic controls: age, gender, ethnicity, education level. Political controls: strength of affiliation with PP, PSOE, Podemos, and Vox. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

TABLE A11. Survey Experiment: Analysis of Treatment Spillovers

Dependent Variable = *COVID-Related...*	Economic Anxiety (1-10)		Health Anxiety (1-10)	
	(1)	(2)	(3)	(4)
Economy Prime	2.229***		-0.0909	
	(0.219)		(0.239)	
Health Prime		-1.683***		3.603***
		(0.231)		(0.214)
N	468	470	468	470
Socio-Demographic Controls	✓	✓	✓	✓
Political Controls	✓	✓	✓	✓
Previous COVID Infection Control	✓	✓	✓	✓

Notes: OLS estimates with robust standard errors in parentheses. Socio-demographic controls: age, gender, ethnicity, education level. Political controls: strength of affiliation with PP, PSOE, Podemos, and Vox. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

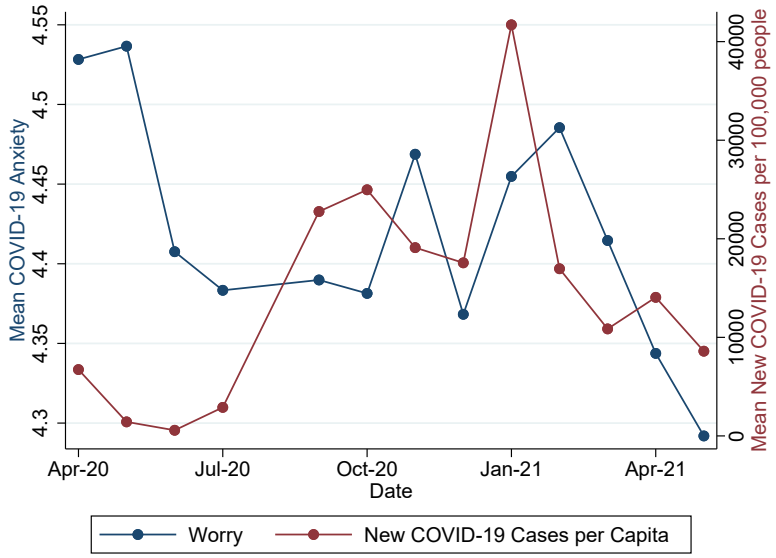
D COVID-19 Incidence and Anxiety

TABLE A12. Relationship between COVID-19 Incidence and COVID-19 Anxiety

Dependent Variable = COVID Anxiety	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Independent Variable = COVID Cases						
Log COVID CPCLog COVID cases pp	0.177***	0.148***	0.177***	0.148***	0.177***	0.148**
	(0.0436)	(0.0456)	(0.0309)	(0.0360)	(0.0626)	(0.0608)
N	46523	42909	46523	42909	46523	42909
R^2	0.019	0.046	0.019	0.046	0.019	0.046
Panel B: Independent Variable = COVID Symptoms						
Severity of COVID-19	0.112***	0.0804***	0.112***	0.0804***	0.112***	0.0804**
Symptoms	(0.0231)	(0.0237)	(0.0164)	(0.0167)	(0.0318)	(0.0313)
N	1554	1435	1554	1435	1554	1435
R^2	0.142	0.195	0.142	0.195	0.142	0.195
NUTS-3 FEs	✓	✓	✓	✓	✓	✓
NUTS-2 × Wave FEs	✓	✓	✓	✓	✓	✓
Socio-Demographic Controls	✗	✓	✗	✓	✗	✓
SE Cluster	NUTS-3	NUTS-3	NUTS-2	NUTS-2	NUTS-2 × Wave	NUTS-2 × Wave

Notes: OLS regressions with robust standard errors, clustered as indicated in the bottom panel, in parentheses. All models control for age, gender, class, and education level. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

FIGURE A6. New COVID-19 Cases and COVID-19 Anxiety, April 2020-May 2021



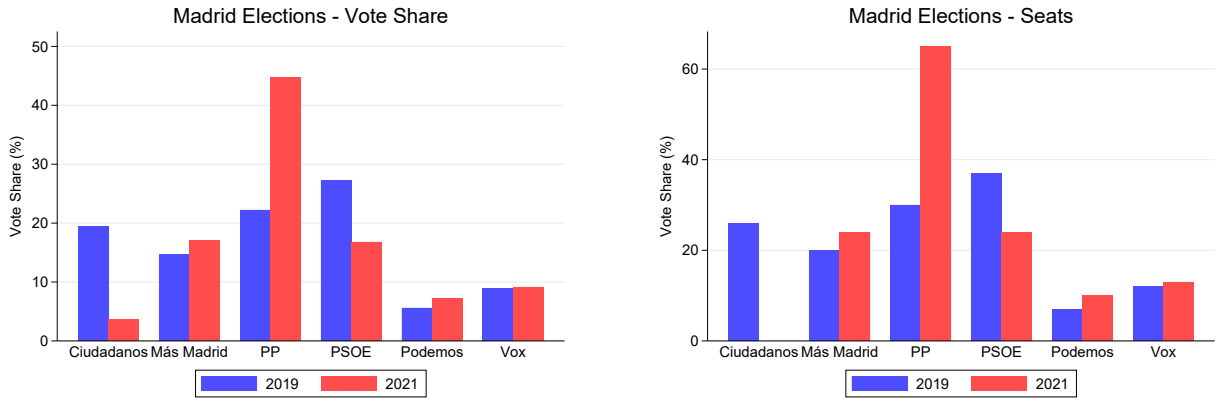
Notes: This graph plots the mean value of $COVID\ Anxiety_{it}$ and Spain's mean number of new COVID-19 cases per 100,000 population between April 2020 and May 2021.

E Madrid Regional Election Analysis

FIGURE A7. Campaign Slogans in 2021 Madrid Regional Election

Notes: The left tweet, published by PP's leader in the run-up to the Madrid 2021 regional election, translates to "COMMUNISM OR FREEDOM. 4th of May." The right tweet, published in response by Podemos' leader, translates to "Democracy or fascism. 4th of May."

FIGURE A8. Madrid Regional Election Results, 2021 versus 2019



Notes: The left panel displays the vote share of the five major parties in the Madrid regional elections of 2021 and 2019. The right panel shows their share of seats in the Madrid parliament.

E.1 Summary Statistics

TABLE A13. Summary Statistics for Madrid Regional Election Dataset

	N	Mean	Std. Dev.	Min.	25%	50%	75%	Max.
Log COVID CDC	179	0.077	0.027	0	0.064	0.078	0.091	0.22
Δ Population	179	650.8	5133.8	-270	19	78	226	68604
Δ Proportion of Women	179	0.00084	0.0066	-0.032	-0.0016	0.00025	0.0026	0.045
Δ Proportion Aged 0-20	177	0.00059	0.013	-0.046	-0.0054	0.00054	0.0062	0.062
Δ Proportion Aged 21-35	177	-0.056	0.044	-0.16	-0.085	-0.056	-0.036	0.10
Δ Proportion Aged 36-50	177	0.054	0.049	-0.076	0.022	0.047	0.086	0.21
Δ Proportion Aged 51-65	177	0.017	0.061	-0.059	-0.021	-0.000033	0.034	0.35
Δ Proportion Aged 66+	177	-0.055	0.086	-0.21	-0.12	-0.065	-0.017	0.24
Δ Voter Turnout	179	0.040	0.059	-0.15	0.0061	0.051	0.089	0.14
Nursing Places per Capita	179	0.017	0.029	0	0	0.0053	0.023	0.17
Altitude	179	810.7	209.0	476	652	744	941	1434
Area of Agricultural Holdings (ha)	179	2150.4	2430.4	0	801	1568	2783	21946
Δ Percentage Employed	179	-0.00079	0.019	-0.063	-0.0085	-0.0012	0.0071	0.12
Log GDP per Capita	179	22.1	12.7	6.93	13.4	18.4	26.3	83.3
Δ Vote Share of Pro-Lockdown Parties	179	-0.20	0.058	-0.34	-0.25	-0.22	-0.17	-0.025
Δ Vote Share of Anti-lockdown Parties	179	0.21	0.058	0.0031	0.17	0.22	0.25	0.34
Proportion Aged 66+	179	0.17	0.061	0.059	0.13	0.17	0.20	0.46
Log Respiratory DPC	179	0.0012	0.0026	0	0.00038	0.00068	0.0012	0.029
Top/Bottom Income	179	0.095	0.29	0	0	0	0	1
Hospitality Share	179	0.55	0.41	0	0.29	0.43	0.73	3.45

Notes: This table presents summary statistics for our Madrid regional election dataset. Electoral variables are differenced between the 2021 and 2019 elections; other variables are either differenced between 2020 and 2018 or measured at their 2020 level. Electoral data are from the Madrid regional government (Comunidad de Madrid 2022), nursing home statistics from Spain's Ministry of Economy and Competitiveness (Envejecimiento en Red 2022), and data on the remaining variables from Madrid's statistics office (Instituto de Estadística de la Comunidad de Madrida 2022).

E.2 Additional Results

TABLE A14. Relationship between COVID-19 Incidence and Support for Pro- and Anti-Lockdown Parties in Madrid Regional Elections

Dep. Var. = Δ Vote Share of:	Pro-Lockdown Parties				Anti-Lockdown Parties			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Exposure to Health Consequences								
Log COVID CPC	-0.790*	-0.502*	-0.563**	-0.624**	0.894*	0.630*	0.708**	0.762**
	(0.384)	(0.250)	(0.226)	(0.245)	(0.399)	(0.288)	(0.259)	(0.279)
Log COVID CPC ×	3.963***	2.774**	3.108***	3.216***	-4.611***	-3.538***	-3.921***	-4.012***
Elderly Share	(1.167)	(0.983)	(0.917)	(0.857)	(1.240)	(1.034)	(0.966)	(0.916)
Log COVID CPC	0.0694	-0.0327	-0.0499	-0.0770	-0.0819	0.0187	0.0367	0.0641
	(0.151)	(0.0890)	(0.0566)	(0.0728)	(0.140)	(0.0844)	(0.0548)	(0.0742)
Log COVID CPC × Log	63.46***	69.95***	89.40***	87.31***	-76.58***	-85.73***	-103.5***	-102.7***
Respiratory DPC	(5.266)	(10.98)	(14.71)	(16.28)	(6.677)	(12.68)	(16.23)	(17.18)
Panel B: Exposure to Economic Consequences								
Log COVID CPC	0.279*	0.228**	0.273***	0.251**	-0.322**	-0.283**	-0.320***	-0.301***
	(0.137)	(0.0835)	(0.0578)	(0.0781)	(0.131)	(0.0933)	(0.0672)	(0.0882)
Log COVID CPC ×	-0.438**	-0.585***	-0.765***	-0.932***	0.295	0.508**	0.671**	0.831***
Top/Bottom Income	(0.142)	(0.163)	(0.173)	(0.177)	(0.170)	(0.224)	(0.237)	(0.181)
Log COVID CPC	0.512**	0.405*	0.432**	0.390*	-0.594***	-0.492**	-0.509***	-0.477***
	(0.205)	(0.184)	(0.143)	(0.176)	(0.179)	(0.153)	(0.110)	(0.146)
Log COVID CPC ×	-0.465**	-0.417*	-0.415**	-0.385**	0.516**	0.463**	0.456***	0.437***
Hospitality Sector	(0.185)	(0.188)	(0.154)	(0.167)	(0.215)	(0.145)	(0.120)	(0.124)
N	178	177	177	177	178	177	177	177
NUTS-4 FEs	✓	✓	✓	✓	✓	✓	✓	✓
Socio-Demographic Controls	✗	✓	✓	✓	✗	✓	✓	✓
COVID-Related Controls	✗	✗	✓	✓	✗	✗	✓	✓
Economic Controls	✗	✗	✗	✓	✗	✗	✗	✓

Notes: OLS estimates of Equation 8 with robust standard errors, clustered by NUTS-4 region, in parentheses. Socio-demographic controls: Δ population, Δ age distribution, Δ gender ratio. COVID-related controls: log nursing home places per capita, share of agricultural land, altitude, Δ turnout. Economic controls: Δ unemployment rate, log GDP per capita. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

TABLE A15. Madrid Regional Election Results Simultaneously Including Proxies for Exposure to Health and Economic Effects

Dep. Var. = Δ Vote Share of:	Pro-Lockdown Parties				Anti-Lockdown Parties			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log COVID CPC	-0.350	-0.396	0.0770	0.0226	0.438	0.546*	-0.111	-0.0289
	(0.376)	(0.254)	(0.181)	(0.0610)	(0.341)	(0.286)	(0.144)	(0.0708)
Log COVID CPC × Elderly Share	2.796**	2.642**			-3.456**	-3.453***		
	(1.120)	(0.972)			(1.178)	(0.977)		
Log COVID CPC × Log Respiratory DPC			82.60***	84.42***			-96.98***	-100.0***
			(13.34)	(13.80)			(15.95)	(14.48)
Log COVID CPC × Hospitality Sector	-0.276		-0.231		0.308**		0.262*	
	(0.181)		(0.191)		(0.134)		(0.137)	
Log COVID CPC × Top/Bottom Income		-0.852***		-0.884***		0.729***		0.778***
		(0.202)		(0.180)		(0.179)		(0.162)
N	177	177	177	177	177	177	177	177
NUTS-4 FEs	✓	✓	✓	✓	✓	✓	✓	✓
Socio-Demographic Controls	✓	✓	✓	✓	✓	✓	✓	✓
COVID-Related Controls	✓	✓	✓	✓	✓	✓	✓	✓
Economic Controls	✓	✓	✓	✓	✓	✓	✓	✓

Notes: OLS estimates with robust standard errors, clustered by NUTS-4 region, in parentheses. Socio-demographic controls: Δ population, Δ age distribution, Δ gender ratio. COVID-related controls: log nursing home places per capita, share of agricultural land, altitude, Δ turnout. Economic controls: Δ unemployment rate, log GDP per capita. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

E.3 Difference-in-Differences Analysis

TABLE A16. Difference-in-Differences Version of Madrid Regional Election Analysis

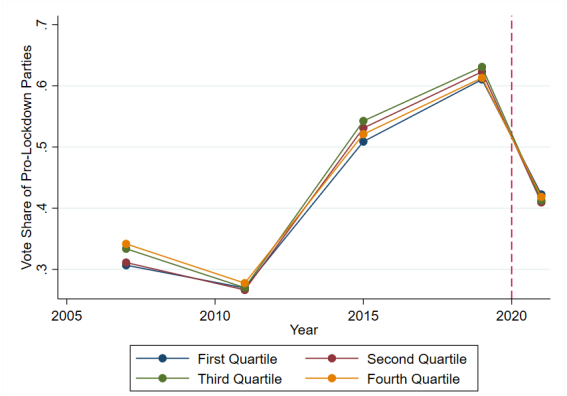
Dependent Variable = Δ Vote Share of:	Pro-Lockdown Parties						Anti-Lockdown Parties					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Health Exposure Proxies												
Log COVID CPC	-0.967**	-0.991**	-1.002**	-0.341	-0.0315	-0.0523	0.930**	1.144***	1.155***	0.318	0.0126	0.0352
	(0.396)	(0.424)	(0.421)	(0.301)	(0.151)	(0.151)	(0.422)	(0.438)	(0.437)	(0.309)	(0.159)	(0.160)
Elderly Share	0.224***	0.142	0.143		0.356***	0.356***	-0.218***	-0.0884	-0.0888		-0.346***	-0.346***
	(0.0773)	(0.139)	(0.137)		(0.0825)	(0.0817)	(0.0790)	(0.146)	(0.144)		(0.0875)	(0.0867)
Log COVID CPC × Elderly Share	4.310***	4.516**	4.473**				-4.392**	-5.387***	-5.346***			
	(1.618)	(1.862)	(1.803)				(1.755)	(1.979)	(1.925)			
Respiratory DPC				-1.941	0.183	-0.0779				2.638	0.464	0.748
				(1.839)	(1.118)	(1.083)				(1.978)	(1.118)	(1.084)
Log COVID PC × Respiratory DPC				133.9***	59.53**	59.58**				-144.8***	-72.78**	-72.83**
				(31.49)	(26.13)	(25.67)				(32.56)	(29.35)	(28.81)
N	354	354	354	358	354	354	354	354	354	358	354	354
R^2	0.973	0.974	0.974	0.952	0.974	0.975	0.974	0.975	0.975	0.955	0.975	0.975
Panel B: Economic Exposure Proxies												
Log COVID CPC	0.543	0.382	0.355	0.0598	0.0582	0.155	-0.613	-0.463	-0.437	-0.212	-0.107	-0.212
	(0.414)	(0.295)	(0.285)	(0.305)	(0.301)	(0.178)	(0.448)	(0.331)	(0.319)	(0.198)	(0.326)	(0.198)
Hospitality Sector	0.0355	0.0209	0.0204				-0.0358	-0.0228	-0.0224			
	(0.0261)	(0.0202)	(0.0199)				(0.0263)	(0.0219)	(0.0217)			
Log COVID CPC × Hospitality Sector	-0.895**	-0.475	-0.468*				0.914**	0.515*	0.508*			
	(0.410)	(0.288)	(0.283)				(0.413)	(0.310)	(0.304)			
Top/Bottom Income				0.0383	0.0440	0.0589**				-0.0574*	-0.0370	-0.0574*
				(0.0439)	(0.0459)	(0.0279)				(0.0295)	(0.0470)	(0.0295)
Log COVID CPC × Top/Bottom Income				-0.545	-0.624	-0.723*				0.665	0.499	0.665
				(0.709)	(0.704)	(0.387)				(0.403)	(0.714)	(0.403)
N	358	354	354	358	358	354	358	354	354	354	358	354
R^2	0.950	0.974	0.974	0.947	0.947	0.974	0.952	0.974	0.974	0.974	0.949	0.974
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: This table presents a difference-in-differences version of our analysis of the relationship between COVID-19 incidence and Madrid regional election vote shares as moderated by exposure to the pandemic's health (panel A) and economic (panel B) consequences. OLS estimates with robust standard errors, clustered by municipality, in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

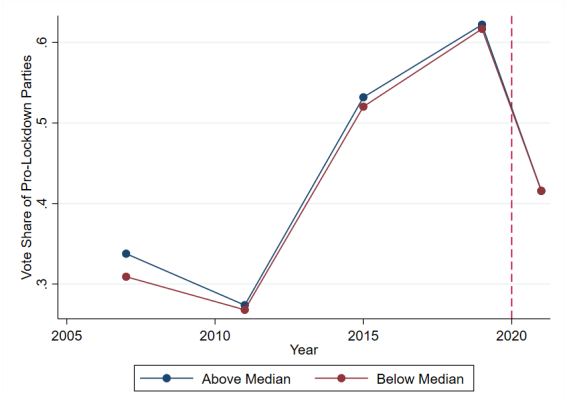
E.4 Parallel Trends Assumption

FIGURE A9. Evidence of Parallel Trends in Vote Shares of Pro- and Anti-Lockdown Parties

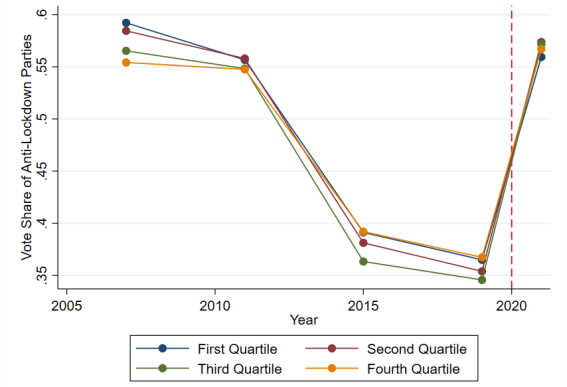
(A) Pro-Lockdown Parties, by COVID-19 Incidence Quartile



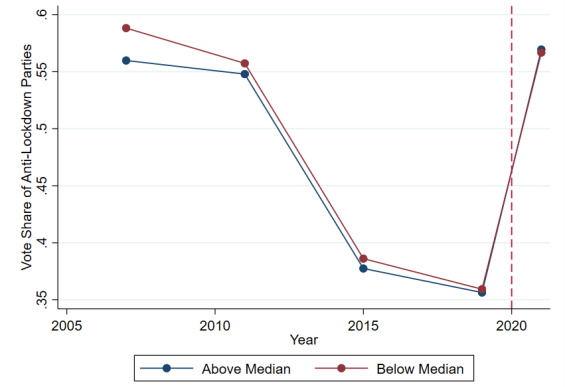
(B) Pro-Lockdown Parties, by COVID-19 Incidence Median



(C) Anti-Lockdown Parties, by COVID-19 Incidence Quartile



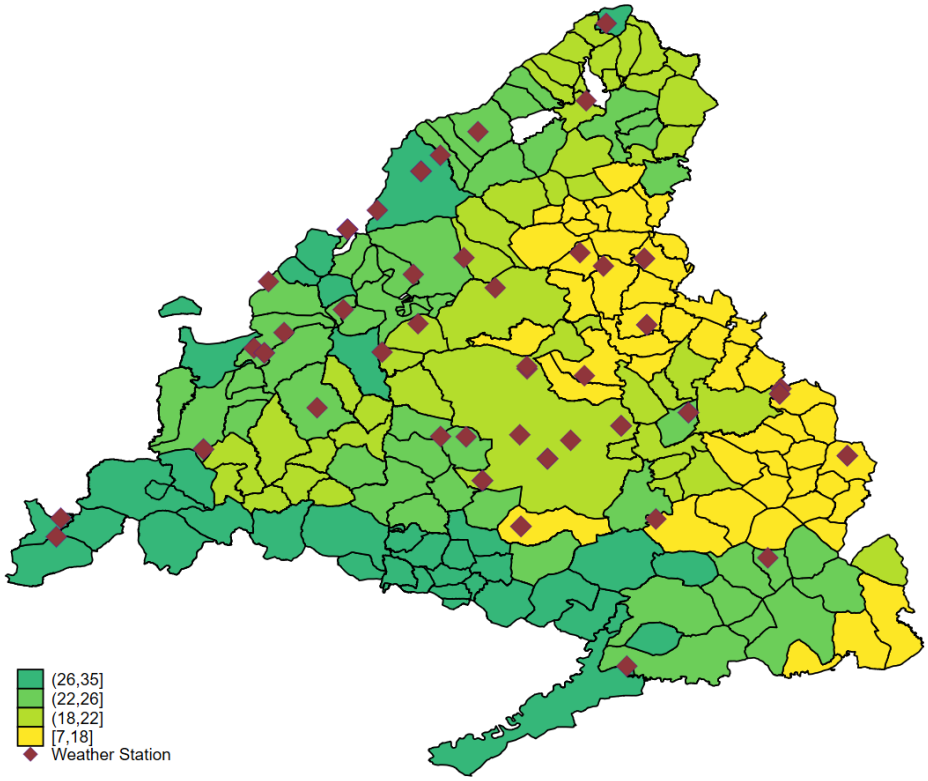
(D) Anti-Lockdown Parties, by COVID-19 Incidence Median



Notes: This figure shows that the combined vote shares of pro- and anti-lockdown parties in the 2021 Madrid regional election have followed approximately parallel trends since the 2007 election. In the left column (panels A and C), municipalities are divided by quartile of the logarithm of cumulative COVID-19 cases per capita as of the 2021 election (May 4). In the right column (panels B and D), they are grouped by whether their value of this variable is above or below the sample median.

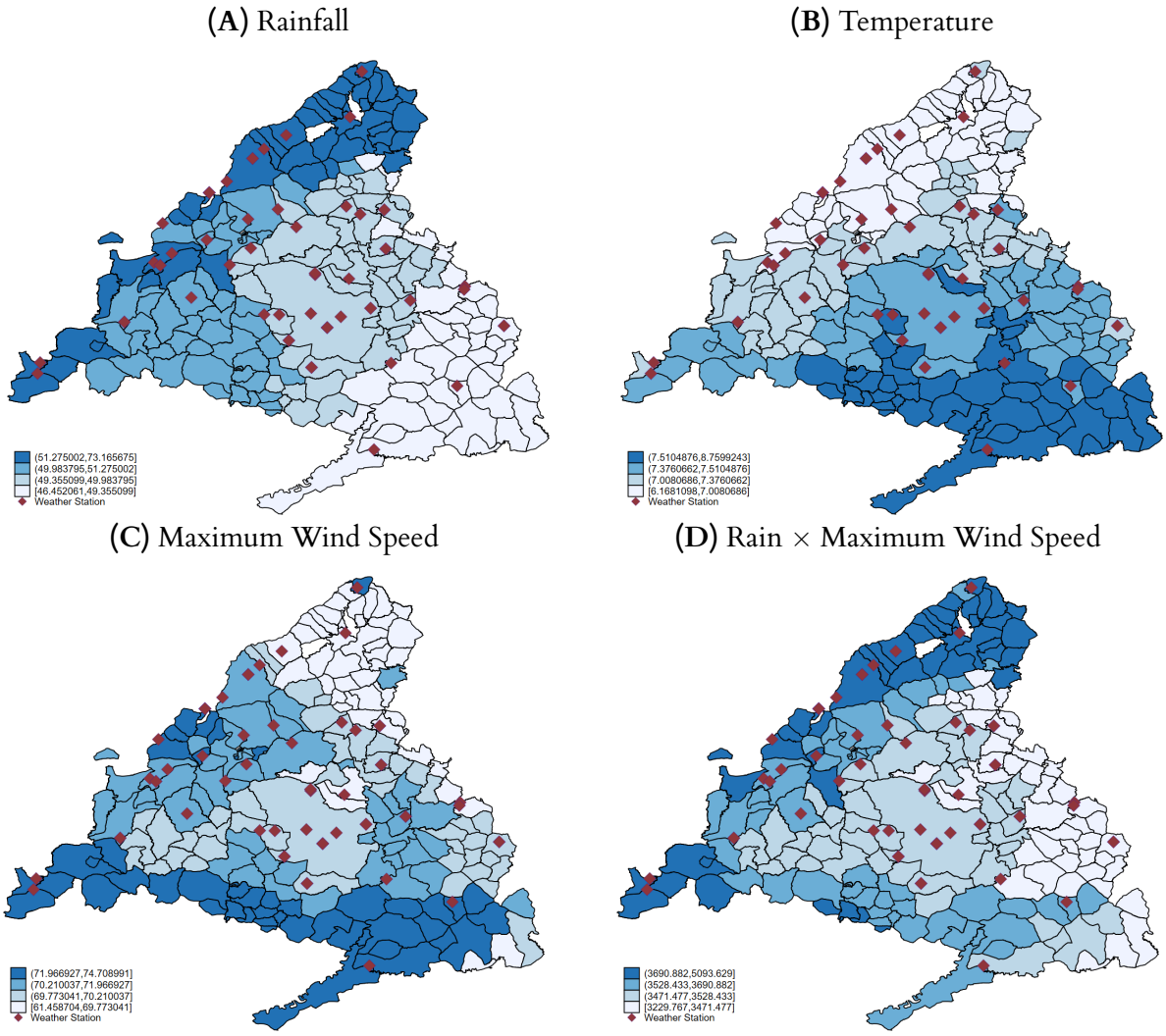
E.5 Instrumental Variables Analysis

FIGURE A10. Weather Patterns before 2021 Madrid Regional Election



Notes: Madrid municipalities are shaded by their quartile ranking on the sum of our four month-level weather instruments: total rainfall (panel A), mean daily temperature (panel B), maximum wind speed (panel C), and rainfall × maximum wind speed (panel D) over the six months from November 1, 2020 to April 30, 2021.

FIGURE A11. Geographical Distribution of Weather Instruments



Notes: Madrid municipalities are shaded by their quartile ranking on our four month-level weather instruments: total rainfall (panel A), mean daily temperature (panel B), maximum wind speed (panel C), and rainfall × maximum wind speed (panel D) over the six months from November 1, 2020 to April 30, 2021. Diamonds represent weather stations from which measurements were taken. Data were acquired via purchase from Spain's State Meteorological Agency.

TABLE A17. Madrid Election Analysis: Instrumental Variables Results

Dependent Variable = Δ Vote Share of:	Pro-Lockdown Parties		Anti-Lockdown Parties	
Panel A: Exposure to COVID Health Consequences	(1)	(2)	(3)	(4)
Log COVID CPC	-1.804	0.868	1.903	-1.114*
	(1.990)	(0.634)	(1.815)	(0.645)
Log COVID CPC × Elderly Share	11.04*		-12.07**	
	(6.474)		(5.669)	
Log COVID CPC × Log Respiratory DPC		26.23**		-23.78*
		(11.81)		(13.79)
First-Stage F-Statistic	206.9	1,758.7	206.9	1,758.7
Panel B: Exposure to COVID Economic Consequences	(5)	(6)	(7)	(8)
Log COVID CPC	0.793**	0.717*	-0.749**	-0.479
	(0.350)	(0.421)	(0.375)	(0.383)
Log COVID CPC × Top/Bottom Income	-1.694***		1.697***	
	(0.433)		(0.395)	
Log COVID CPC × Hospitality Share		-0.427		0.103
		(0.311)		(0.282)
First-Stage F-Statistic	134.7	141.9	134.7	141.9
N	177	177	177	177
NUTS-4 FEs	✓	✓	✓	✓
Socio-Demographic Controls	✓	✓	✓	✓
COVID-Related Controls	✓	✓	✓	✓
Economic Controls	✓	✓	✓	✓

Notes: Second-stage 2SLS estimates with robust standard errors, clustered by NUTS-4 region, in parentheses. The first stage is described by Equation 9. In both stages, the controls are the same as in Table A14. Lower-order interaction terms are omitted for the four moderator variables. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

F Pre-Analysis Plan for Survey Experiment

Overview

How does anxiety affect voting behavior? Whereas existing theories treat anxiety as a largely homogeneous emotional state, this study highlights how the same threat can elicit *multiple* types of anxieties in voters, leading to the formation of widely varying political preferences. As part of our empirical investigation, we plan to conduct a survey experiment involving exposure to different anxiety-inducing prompts regarding the societal impact of the COVID-19 pandemic: one prompt that emphasizes the disease's negative *health* consequences; and a second prompt that emphasizes its negative *economic* consequences. We will then ask respondents to choose between two hypothetical political candidates with conflicting positions on the strength of lockdown restrictions required to deal with the pandemic. Our aim is to examine how "varieties of anxieties" — in this case COVID-related health anxiety and economic anxiety — influence voting decisions.

Brief Summary of Hypotheses

The study proposes a simple theoretical framework based on the insight that societal threats can elicit multiple kinds of anxieties in voters, with widely varying consequences for their political preferences. Different types of anxieties, we posit, can give rise to different axes of political competition around threat mitigation and resolution that overlap with, but are not fully subsumed by, traditional social cleavages. As policies designed to address one type of anxiety may have little bearing on another type, voters concerned about the same threat may favor candidates with distinct — even opposing — platforms.

During the COVID-19 era, two types of anxiety have become particularly prevalent in the general public: (1) anxiety about the pandemic's adverse consequences for physical health; and (2) anxiety about the pandemic's adverse consequences for the economy. These two emo-

tional states have conflicting implications for perhaps the defining public policy issue around COVID-19: the stringency of lockdown measures for containing disease transmission. While assuaging health anxiety by reducing community infection rates, strict lockdowns are likely to deepen economic anxiety by curtailing commerce and business activity. Voters with high levels of health anxiety, who are often more vulnerable to severe COVID-induced illness, should therefore favor candidates who endorse restrictive lockdown measures. Conversely, voters with intense economic anxiety, who tend to be more exposed to COVID-induced market disruption, should prefer candidates who oppose such policies.

This line of reasoning implies two hypotheses:

H1 *Voters with high levels of COVID-related health anxiety will favor political candidates who support restrictive lockdown measures.*

H2 *Voters with high levels of COVID-related economic anxiety will favor political candidates who oppose restrictive lockdown measures.*

Research Design

Sample

To provide a well-identified test of these hypotheses, we intend to implement an online survey experiment using a convenience sample of 650 Amazon Mechanical Turk workers based in Spain (the country on which our study focuses). Our approach closely follows that of Bisbee and Honig (2022), who carried out a similar exercise assessing the impact of *general* anxiety on vote choice in the early stages of the COVID-19 pandemic.

Survey

Our anonymous survey will comprise four sections and is designed to be completed in approximately five minutes. First, after providing informed consent, participants will be asked to read

one of two paragraphs describing the pandemic's impact on society. Second, they will be presented with descriptions of two hypothetical candidates running for political office and asked to rate them on a 4-item Likert scale. One of the candidates favors strong lockdown measures, while the other prefers loose restrictions. The treatment texts and candidate descriptions are provided in Section F. Third, they will be asked to disclose basic demographic information (age, sex, race, party affiliation, income bracket, health status) and whether they have been personally infected by COVID-19 or are close to anyone who has. Finally, they will be shown the alternative description of the pandemic's impact, ensuring that all participants are given the same information. Since we are interested in the effect of different types of anxiety on voting decisions, we randomize the description of COVID-19's impact (to focus on either health consequences or economic consequences) in the second segment.

Treatment Texts

Health-focused prompt: "*The COVID-19 pandemic has been one of the deadliest plagues in history. In Spain alone, there have been 13.8 million confirmed cases and at least 120,000 deaths. Even among those who have survived, more than 40 percent have suffered long-lasting symptoms, including organ damage affecting the heart, kidneys, skin, and brain. Some experts believe that another pandemic could occur in the near future and have even more damaging health consequences.*"

Economy-focused prompt: "*The disruption caused by the COVID-19 pandemic sent shock waves through the world economy and triggered the largest global economic crisis for more than a century. Spain's economy contracted by more than 10% in 2020 and remains smaller than before the pandemic, with high inflation and low growth expected to persist for several years. Some experts believe that another pandemic could occur in the near future and have even more damaging economic consequences.*"

Candidate Descriptions

In the following descriptions, candidate A is always in favor of strong lockdown measures and candidate B is always against such restrictions. Sentences 2, 3, and 4 are randomly assigned to either candidate.

Candidate A (pro-lockdown): "*If there is a resurgence of COVID-19 or a similar pandemic in the near future, Candidate A favors a prudent and vigilant response that protects all members of society. He supports robust lockdown measures where they are appropriate. [SENTENCE 2]. [SENTENCE 3]. [SENTENCE 4].*"

Candidate B (anti-lockdown): "*If there is a resurgence of COVID-19 or a similar pandemic in the near future, Candidate B is keen to protect people's livelihoods by minimising any economic disturbance or damage that may arise. He opposes robust lockdown measures that risk undermining this goal. [SENTENCE 2]. [SENTENCE 3]. [SENTENCE 4].*"

Sentence 2:

A: *He is 48 years old, and was born and brought up in your area, before going to university to study chemistry.*

B: *He is 46 years old; he lives in your district and studied biology at university.*

Sentence 3:

A: *After university he trained as an accountant, and set up a company ten years ago; it now employs nine people.*

B: *After university he trained as a lawyer, and set up a practice ten years ago; it now employs eight people.*

Sentence 4:

NONE: roughly half of respondents will receive no fourth sentence.

A: *He is passionate about cycling and a keen guitarist.*

B: *He is passionate about tennis and a keen chef.*

IRB and Ethics

This study received research ethics approval from the [redacted] (Ref #: [redacted]) on July 3, 2023; and was determined to be exempt from review by [redacted] (Protocol #: [redacted]) on July 28, 2023.

In general, we do not believe that the study raises any ethical issues specific to the Spanish context (in which our questions would not be perceived as sensitive or controversial) or physical or psychological risks on the part of the research team. Participants will be provided with an informed consent form detailing the purpose of our project, the survey procedure, their right to withdraw, confidentiality arrangements, compensation, the complaints procedure, and contact information.

Subsequent Analysis

This section describes the planned post-survey analysis, providing a brief sample of Stata code to illustrate our empirical approach. We plan to estimate a logistic specification with regular (non-clustered) standard errors. Our main analysis will report odds ratios representing sample average treatment effects; no weights will be assigned to respondents initially.

Outcome and Treatment Variables

There is one primary outcome (dependent) variable and one primary treatment (independent) variable. The outcome is a dummy for whether a respondent would vote for candidate A, who supports stringent lockdown restrictions, rather than candidate B, who opposes such measures. This variable, named *vote_A*, will equal 1 if the respondent would vote for candidate A and 0 if the respondent would vote for candidate B. The treatment, *health_treatment*, will equal 1 if the respondent received the health-focused prompt and 0 if the respondent received the economy-focused prompt.

Control Variables

Our model will include a variety of control variables capturing respondents' demographic and socioeconomic characteristics as well as their personal exposure to COVID-19. These variables are: age (*age*); sex (*female*); race (indicator for *white*); party affiliation (indicators for *pp*, *psoe*, *vox*, *podemos*); income (*income*); and whether the respondent has — or is close to someone who has — been infected with COVID-19 (*infection*).

We will construct these variables using the following Stata code:

```
* Age (var name: age) - no transformation necessary

* Sex (var name: female)
. generate female = 0
. replace female = 1 if sex=="f"
. replace female = . if missing(sex)

* Race (var names: white)
. generate white = 0
. replace white = 1 if race=="blanco"
. replace white = . if missing(race)

* Party affiliation (var names: pp, psoe, vox, podemos)
. generate pp = 0
. replace pp = 1 if party=="pp"
. replace pp = . if missing(party)

. generate psoe = 0
. replace psoe = 1 if party=="psoe"
. replace psoe = . if missing(party)

. generate vox = 0
. replace vox = 1 if party=="vox"
. replace vox = . if missing(party)

. generate podemos = 0
```

```
. replace podemos = 1 if party=="podemos / sumar"
. replace podemos = . if missing(party)

* Income (var name: income) - no transformation necessary

* Infection (var name: infection) - no transformation necessary
```

Specification

Our baseline specification will be estimated with the code:

```
. logit vote_A health_treatment age female white pp psoe vox podemos income
    infection, or
```

The parameter of interest, the odds ratio for *health_treatment*, represents the likelihood of voting for candidate A (pro-lockdown) rather than candidate B (anti-lockdown) for respondents who received the health-focused treatment relative to respondents who received the economy-focused treatment, holding all other variables constant. For example, an odds ratio of 1.25 would indicate that receiving the health-focused treatment is associated with a 25% higher likelihood of voting for candidate A. We thus expect this parameter to exceed 1.

Robustness checks, such as omitting subsets of the control variables and weighting the sample to improve its representativeness of the Spanish population, may be included in the main presentation of our results or (depending on space constraints) the supplementary materials.

Treatment Effect Heterogeneity

Finally, we may explore heterogeneity in the treatment effect across respondents. In addition to the hypotheses summarized earlier, our framework suggests that levels of a given type of anxiety will vary depending on individuals' socioeconomic and demographic characteristics, which affect their exposure to underlying threats. COVID-related health anxiety, for instance, is likely to be more intense for those with greater exposure to the pandemic's adverse physical

consequences, such as elderly people. This prediction can be tested by adding an interaction between *health_treatment* and *age* in the baseline specification:

```
. logit vote_A health_treatment##age female white pp psoe vox podemos
    income infection
```

If the treatment effect is stronger for older respondents, we would expect the coefficient on the interaction term to be positive and statistically significant. Note that since odds ratios are difficult to interpret for interaction terms, we only compute regular logistic coefficients.

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