

# Pandemics meet democracy: Experimental evidence from the COVID-19 crisis in Spain\*

Francesc Amat

University of Barcelona - IPERG

Albert Falcó-Gimeno

University of Barcelona - IPERG

Andreu Arenas

University of Barcelona & IEB

Jordi Muñoz

University of Barcelona - IPERG

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## Abstract

The COVID-19 outbreak poses an unprecedented challenge for contemporary democracies. Despite the global scale of the problem, the response has been mainly national, and global coordination has been so far extremely weak. All over the world governments are making use of exceptional powers to enforce lockdowns, often sacrificing civil liberties and profoundly altering the pre-existing power balance, which nurtures fears of an authoritarian turn. Relief packages to mitigate the economic consequences of the lockdowns are being discussed, and there is little doubt that the forthcoming recession will have important distributive consequences. In this paper we study citizens' responses to these democratic dilemmas. We present results from a set of survey experiments run in Spain from March 20 to March 28, together with longitudinal evidence from a panel survey fielded right before and after the virus outbreak. Our findings reveal a strong preference for a national as opposed to a European/international response. The national bias is much stronger for the COVID-19 crisis than for other global problems, such as climate change or international terrorism. We also find widespread demand for strong leadership, willingness to give up individual freedom, and a sharp increase in support for technocratic governance. As such, we document the initial switch in mass public preferences towards technocratic and authoritarian government caused by the pandemic. We discuss to what extent this crisis may contribute to a shift towards a new, self-enforcing political equilibrium.

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# 1 Introduction

Could the COVID-19 outbreak weaken or endanger democracy? The 2020 pandemic poses, in many respects, an unprecedented challenge for modern democracies. It has produced a massive, global public health problem. It represents a direct life threat to millions of citizens worldwide, and is also potentially catastrophic for the economy. Its management poses a wide range of democratic dilemmas, most notably between globalism and nationalism, between public health and civil liberties, and between political and technocratic governance. It remains an open question how, and to what extent, democratic institutions will be able to deal with the virus, and how citizens' preferences will evolve alongside the crisis and the governments' response, possibly shifting towards a new social and political equilibrium.

The challenge posed by the COVID-19 outbreak can be characterized as a twofold collective action problem. On the one hand, at the international scale, the policy responses and decisions of one country affect the evolution of the pandemics elsewhere, and coordination is difficult. Without internalizing the spillovers, given the economic costs of the lockdowns, every country will tend to lock down later and less intensely than it would be globally optimal, increasing the spread of the virus. The fierce competition in the international market of medical supplies, or the European debate on the fiscal response to the crisis are good examples of this global coordination problem.<sup>1</sup> On the other hand, a decentralized management of the crisis may come along with responses more closely aligned to each country or region's needs, and can lead to experimentation and learning. So far, the response has been mostly led by nation-states. To what extent is this uncoordinated response aligned with citizens' preferences? Would they prefer more international coordination to deal with COVID-19?

But the COVID-19 crisis also poses a massive collective action problem within countries, because of the highly contagious nature of the virus. This problem can be solved either by citizens' voluntary compliance and cooperation in following social distancing, or by resorting to exceptional government powers, limiting basic civil liberties to impose quarantines and lockdowns, as it has been the case in many countries. The response has often relied on increasingly invasive surveillance and coercion, which many fear could outlast the COVID-19 crisis. China

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<sup>1</sup>For instance, amid a mask shortage, France seized stock from a Swedish producer that was headed for Spain and Italy. Source: France 24, April 3, 2020. Similar episodes have been reported between Spain and Turkey, or the US and Germany.

has been presented by some as a success story on how a state can effectively control the spread of the disease using mass surveillance. The case of Hungary, where the Parliament passed a bill granting the government of Viktor Orban the power to rule by decree with no constraints and no time limit is a clear example of the democratic perils posed by the COVID-19 crisis. In many other countries, we are witnessing the use of drones, smartphone-based individual tracking apps, or the deployment of military forces to control the population's compliance. To what extent are citizens willing to trade-off democratic principles and individual freedoms in exchange for protection against the pandemic? Is this trade-off more or less intense in this case as compared to other democratic dilemmas, such as security and liberty in the fight against terror?

On top of this health-freedom democratic dilemma, collective decision-making often involves a tension between politics and technocracy. Most scholars of democratic politics have portrayed the years between the great recession and the COVID outbreak as the age of populism. Distrust of experts and of established politicians has, in many countries, led to the emergence of populist leaders and parties that claim to represent the ordinary people as opposed to the allegedly detached elite. However, the nature of the COVID-19 crisis necessarily brings technical expertise at the forefront of the crisis' management. The question, therefore, is whether this crisis will favor citizens' demand for technocratic rule.

In this paper we address these questions through a set of survey experiments fielded in Spain in March 2020, right after the outbreak; and by using panel data, tracking within-individual changes in a number of political preferences between January to March 2020. We show that the national focus of the crisis management is congruent with citizens' preferences. As opposed to other global challenges, such as climate change or international terrorism, the preference for a national management is particularly strong in the case of the COVID-19 crisis.

Our results also reveal a sizable effect of the COVID-19 crisis on democratic attitudes. We first show, using panel data with individual fixed effects, a sharp increase in preferences for technocracy between January and March 2020. Right after the outbreak, citizens expressed significantly more support for expert rule and a technical approach to the management of public affairs. This shift towards technocracy was especially intense among those with direct relatives or close friends infected by the virus. We also find a change in the preferred qualities of

politicians: the shock makes citizens value capacity and training more intensely, at the expense of other qualities such as being honest or approachable.

Likewise, the results show both a widespread willingness to sacrifice basic civil liberties in order to contain the pandemic, and higher support for strong leadership to face this threat. These attitudes are much more widespread in the COVID-19 case than in the case of other external threats, such as terrorism or climate change. Moreover, hierarchical frames appear to be more effective in gathering citizens' support for restrictive measures than more horizontal, cooperative frames.

Overall, our results point to a wide agreement with the national-level response, and extensive willingness to trade-off ideological preferences and individual freedoms for protection against the virus. An extreme event such as the COVID-19 pandemic appears to be, at least in the short run, a fertile ground for the erosion of democratic principles, as public opinion appears to be relatively willing to accept a technocratic or authoritarian turn. Hence, the COVID may provide a window of opportunity for incumbents to centralize and accumulate power and increase surveillance and control. We believe that the effort to document this window of opportunity - identifying the initial shift in mass public preferences towards technocratic and authoritarian governance caused by the pandemic- is important to understand better the subsequent moves by political entrepreneurs and the possible social and political consequences of this crisis.

## 2 Theory: Pandemics and democratic preferences

There is little doubt that most democracies in the world are currently undergoing a massive exogenous health and economic shock. The COVID-19 outbreak will have severe consequences on a wide range of relevant societal outcomes, and it will represent a sizable negative welfare shock for a large share of the world's population.

Most research on the political effects of natural disasters (Healy and Malhotra, 2009) and economic shocks (Margalit, 2019) has focused on their impact on incumbent support. Evidence shows that often incumbents get punished by events that produce negative welfare shocks on the population, even if they are outside the incumbent's control. The literature disagrees on the interpretation of these results, and while some scholars take them as examples of *irrational*,

blind retrospection (Achen and Bartels, 2017), others make the case for rational punishment of incumbents following these exogenous shocks, as these situations provide opportunities for voters to learn about previously hidden qualities of politicians (Ashworth et al., 2018).

But there are theoretical reasons to believe that some of these extreme, exogenous shocks may have deeper consequences that go well beyond incumbent support and extend to the regime level. We know that negative shocks of this scale can be potentially destabilizing, especially for weak political regimes. Theories of democratization have long posed that exogenous negative economic shocks have the potential to open windows of opportunity for democratization. Perhaps one of the most influential versions of this classic argument is Acemoglu and Robinson's (2001) theory, in which negative shocks reduce opportunity costs of revolt, and hence induce autocrats to make economic concessions to prevent revolution. There is empirical evidence that droughts or floods, for example, can operate as potential democratizing devices (Aidt and Leon, 2016; Brückner and Ciccone, 2011), and they may be more important than slow-moving economic transformations, although their effect is probably highly conditional to preexisting characteristics, such as the level of inequality (Kotschy and Sunde, 2019).

However, not only autocracies may suffer from these extreme events. When a democracy faces a sudden, exogenous negative shock on citizens' welfare, this can also have potentially destabilizing consequences. The mechanisms through which these events may affect democratic preferences and attitudes are multiple. These shocks provide citizens with new information about the world, and the ability of a given political system to deliver societal welfare (Ashworth et al., 2018). As we know from historical cases, weather-induced disasters or earthquakes, for example, can erode democratic legitimacy and increase support for anti-democratic forces, especially in new democracies, that need to deliver public goods in order to sustain citizens' support, in absence of a sufficient reservoir of legitimacy (Carlin et al., 2014; Franck, 2016).

The duration of the effects of one-shot events on political and democratic preferences has been found to be heterogeneous across case-studies (Rehman and Vanin, 2017), and in some cases only short-lived effects were found (Katz and Levin, 2016). The magnitude of the shock is likely to matter here: a shock that is large enough, such as the COVID, may generate a shift towards a new, self-reinforcing political equilibrium. For instance, a large initial shift towards less civil liberties could reduce social trust and pave the way for a more authoritarian

governance (Xue and Koyama, 2018).

Recent research on the impact of negative economic shocks finds significant detrimental effects on political trust (Foster and Frieden, 2017; Ananyev and Guriev, 2019), increased political polarization and voting for non-mainstream parties (Autor et al., Forthcoming; Colantone and Stanig, 2018; Algan et al., 2017), and increased authoritarian preferences among voters (Ballard-Rosa et al., 2018).

Pandemics represent a very large shock to public health and the economy, which in turn gives citizens the opportunity to learn about their governments, based on their political and policy responses. Research on the effects of previous pandemics has found important and durable effects on attitudes. For instance, the Black Death of the 14th century has been shown to have negatively affected cooperation (Richardson and McBride, 2009) and inter-group relations (Voigtländer and Voth, 2012).<sup>2</sup> Aassve et al. (2020) show that the forced social distance and the social disruption caused by the so-called 1918 Spanish flu had long-term negative consequences for social trust. Hence, all these effects are important because they can shift societies towards different, self-sustained social and political dynamics.

Based on these theoretical and empirical antecedents, how can we expect the COVID-19 outbreak to affect democratic preferences? We argue that the characteristics of the pandemic make it a potential case for eroding preferences for democratic governance, at least in the short run.

First, the importance of coordination in dealing with the spread of the virus, both across and within countries, and of technical expertise, especially in public health, may foster preferences for strong leadership and technocratic forms of government amidst the COVID-19 crisis.

Second, the nature of this crisis comes along a liberty-public health trade-off. Governments are being rather invasive of citizens' private life in order to enforce restrictive shelter-in-place orders at a large scale over an extended period of time, and achieve effective contact tracing, testing and quarantine. China, where the use of mass surveillance mechanisms has been claimed as crucial for control of the pandemic, is probably a case in point, despite the fact that the nature of the Chinese regime also facilitated in a first stage the expansion of the virus by disincentivizing (and actually punishing) early alerts (Ang, 2020). In a democratic setting, the

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<sup>2</sup>It also led long-run economic growth (Jedwab et al., 2016; Alfani and Percoco, 2019), despite evidence of a positive effect on real wages (see Alfani and Murphy (2017) for a review).

much praised, and effective strategy of South Korea was also based on heavy use of surveillance technology, such as CCTV and tracking of bank card and mobile phone usage to identify at-risk individuals.

Third, beyond the direct COVID victims, the virus threatens the health of the whole population, and its expected economic effects have fostered a high level of economic anxiety (Fetzer et al., 2020), which may have deep consequences on mass political attitudes.

The COVID-19 crisis poses, therefore, a number of democratic dilemmas, most notably between globalism and nationalism, between public health and civil liberties, and between political and technocratic governance. Because this crisis relates to the protection of a highly valued good (health and life), we may expect citizens to be willing to pay a high cost, increasing the demand for competent and strong leaders who are capable of effectively managing the crisis, even if this comes at the expense of basic democratic procedures and freedoms and ideological preference representation.

In this regard, the COVID crisis may provide a window of opportunity for incumbents to centralize and accumulate power and increase surveillance and control, as citizens may be willing to trade-off civil liberties and ideological preference representation in exchange for protection and efficacy in the response. Democratic societies, as a result, might shift towards a new equilibrium. Our aim in what follows is to document this window of opportunity by identifying and quantifying the initial shift in mass public preferences towards national rule and technocratic and authoritarian governance as a result of the pandemic.

### **3 Data and empirical strategy**

We study citizens' reactions to the democratic dilemmas posed by the COVID-19 crisis using a survey fielded in Spain in March 20-28, 2020. During the days of the fieldwork, Spain witnessed one of the fastest escalations in number of COVID-19 positive tests and deaths in the whole world. At the same time, Spanish authorities issued a restrictive stay-at-home order, that entered into force in March 14. The Spanish government made use for the second time since the transition to democracy of the 'state of alarm', a constitutional device that allows the government to impose strict limitations on civil liberties and centralize power in the Spanish

executive<sup>3</sup>. The military started to patrol the streets, and the central government seized power from the autonomous regional and local authorities in order to impose a unified strategy against the virus. Spain is a case of a heavily affected country with an established (albeit relatively young) democracy.

Our data collection was based on an on-line survey that we fielded through the survey company Netquest. In order to limit self-selection, participants cannot self-register into the panel, and membership is solely based on invitation. Respondents receive a fixed compensation to answer each survey.<sup>4</sup> Our full sample is composed of 1,600 individuals, that were recruited using age, gender, region and education quotas in order to mirror the actual distribution of these variables in the voting-age Spanish population. A reduced sample of 818 of our respondents had been interviewed two months earlier, before the outbreak hit Europe (January 27-30), and the rest are new respondents.

Our empirical strategy is twofold. On the one hand, we use observational evidence combining data collected right before and right after the outbreak for the same individuals on the reduced sample. Using individual fixed-effect models we can estimate the effect of the outbreak on a number of attitudes while controlling for inter-individual differences. On the other hand, we embedded a number of randomized survey experiments within our survey to the full sample. These randomized experiments were designed to test citizens' reaction to the various democratic dilemmas outlined above. We provide details below.

## 4 Empirics

### 4.1 Global crisis, national response

We first address the issue of the global collective action problem. The COVID-19 pandemic is a global problem, and there are obvious international implications of the policy decisions taken by national governments. Although responses at a national or regional level could be beneficial by tailoring responses to citizens' needs and preferences, citizens may over-estimate these benefits if they fail to internalize the large externalities involved in this crisis.

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<sup>3</sup>The previous declaration of the state of alarm was in 2010 in response to a strike of air traffic controllers, that allowed the government to substitute them by military personnel.

<sup>4</sup>More information in the Netquest Panel Book

So far, the response to the crisis has been mostly national, and even within the EU, coordination among countries appears to be extremely weak, and international cooperation has been very limited. We explore to what extent this is congruent with citizens' preferences. In order to do so, we run two survey experiments. In the first one, we study citizens' willingness to contribute to the provision of COVID-19 control measures at the regional, national, European and global levels. More specifically, we ask them to report what part of a (hypothetical) €1,000 bonus they would be willing to pay in order to help control the outbreak in randomly varying areas: region, nation-state, Europe or Asian countries.

Table 1 presents the results of two OLS regression models in which the declared contribution is the dependent variable, and the various treatments are the predictors. As it can be seen, there are no significant differences between the national and regional scope. However, when asked about other European countries or Asia, respondents were significantly less willing to contribute. Around €100 less for Europe (20% of the mean contribution) and over €175 less for Asia. Results in Figure 1 represent this large and significant difference in the willingness to contribute to the COVID-19 control at the regional/national level, on the one hand, and the European/global level on the other hand.

Table 1: Share of €1000 bonus for COVID control

	(1)	(2)
Asia	-176.2*** (25.55)	-183.0*** (25.58)
Europe	-95.59*** (25.72)	-98.22*** (25.53)
Constant (Spain)	503.6*** (18.34)	
Region	-23.11 (26.07)	-22.56 (26.03)
Controls		✓
Mean Dep. Var	429.8	429.8
<i>N</i>	1606	1606

Robust standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Controls: gender, age, region FE, education FE.

Figure 1: Geographical scope

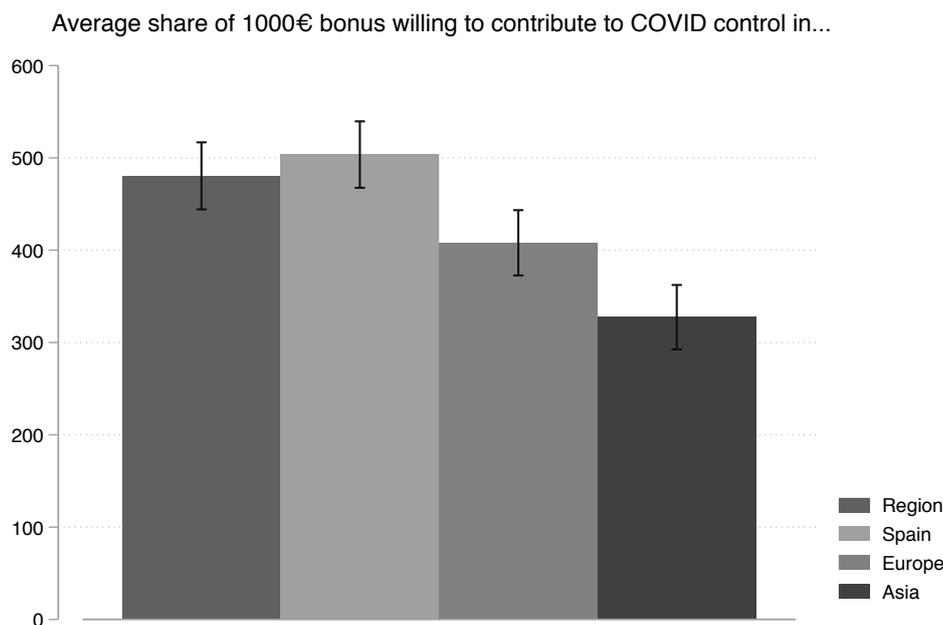


Table A1 in the Appendix reports covariate balance tests across treatment arms. As one would expect because of randomization, there are almost no statistical differences across groups. This also shows up in column 2 of Table 1: the estimates are very stable after including a number of covariates.

In the second experiment we directly address the question of the preferred level of government to manage the crisis. In order to have a reference point to evaluate citizens' response to the COVID crisis, we devised an experimental design to compare the COVID crisis to other global threats that share the same features of interdependence and potential externalities across countries. We presented respondents with a set of questions referred to one of the following three randomly assigned threats: COVID-19, climate change or international terrorism. Among other outcome questions, we inquired about the preferred level of response, by asking them to express agreement on whether power should be transferred to the national government or the EU in order to combat the threat, in a 0-10 scale.

We present the results of this experiment in Table 2 and Figure 2. We asked respondents whether they agreed in transferring power to the EU, first, and the national government, second, in order to combat the threat. The table shows how the COVID is, by far, the threat for which citizens seems trust less the EU and more the national government. The difference is large and statistically significant in both cases. Climate change and terrorism are cases for which

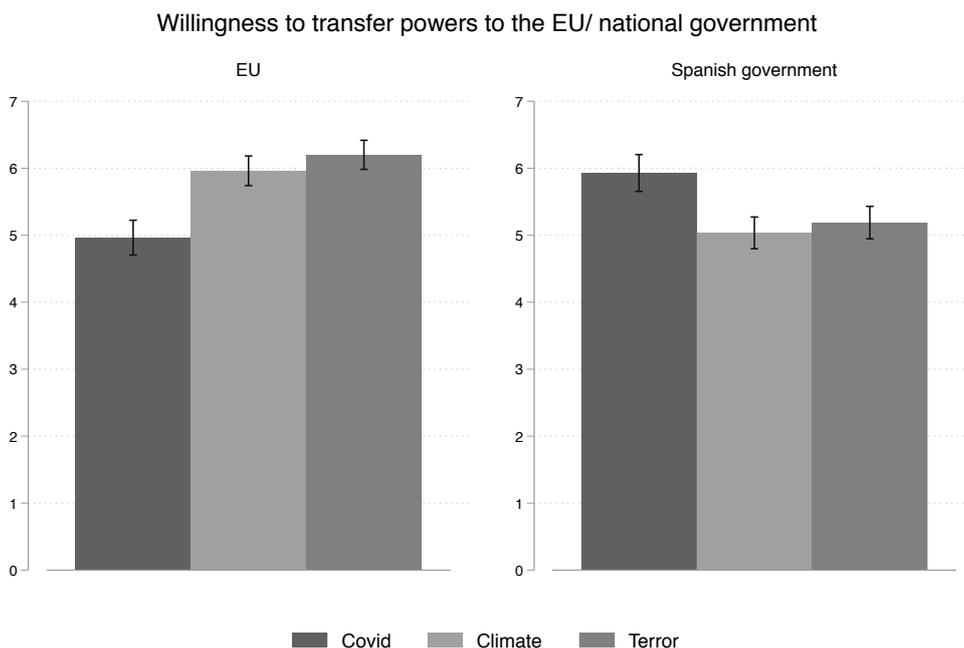
respondents seem to prefer a EU-wide management over a national response, while the COVID seems to behave differently. Table A2 in the Appendix reports covariate balance tests across treatment arms. As one would expect because of randomization, there are almost no statistical differences across groups, with very few exceptions that may arise because due to sampling and chance (in this case, the Prime Minister assessment, which happens to be slightly different for the COVID group). Nevertheless, the estimates in column 2 of Table 2 remain very stable after including a number of controls.

Table 2: Willingness to transfer powers to:

	EU		National Govt.	
	(1)	(2)	(3)	(4)
COVID	-0.998*** (0.174)	-0.756*** (0.181)	0.894*** (0.185)	1.083*** (0.180)
Terrorism	0.238 (0.158)	0.442*** (0.161)	0.154 (0.173)	0.400** (0.174)
Constant (Climate Change)	5.963*** (0.113)		5.035*** (0.121)	
Controls		✓		✓
Mean Dep. Var	5.709	5.709	5.384	5.384
N	1606	1606	1606	1606

Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .  
 Controls: gender, age, region FE, education FE, PM assessment, left voter, other parties' voter.

Figure 2: EU/National response to global threats



While this pattern may be endogenous to the dominant policy response to the COVID crisis, that has been essentially national, it reveals nonetheless congruence with public preferences. The Spanish public does not seem to demand, on average, an europeanization of the response.

## 4.2 COVID and democracy

The responses of national governments to the COVID crisis in most countries have required unprecedented policy interventions. The highly contagious nature of the virus, together with the large number of asymptomatic infected people and the absence of a vaccine, implies that social distancing is crucial in dealing with the spread of the virus and avoiding a collapse of the health system. Social distancing can be achieved with citizens' cooperation and voluntary compliance. However, this needs large levels of altruism –internalizing the damage of social distancing for the benefit of society at large. Such a response also requires high levels of trust on other citizens' behavior –that they will comply with instructions issued by public authorities as well as by health experts– in a period when citizens' trust on experts and governments has been declining.

Effective social distancing can also be achieved through coercion, for instance imposing fines or jail threats to the non-compliers. Effective monitoring of non-compliance, however, requires special powers, often involving privacy violations as well as other punitive legal measures. Hence, the COVID crisis poses evident collective action and democratic dilemmas which, in many countries, have come down to stay-at-home orders and large scale lockdowns, with governments resorting to exceptional powers and curtailing basic civil liberties to enforce them. In this section we analyze citizens' response to these dilemmas.

### 4.2.1 Political Trust

We start by analyzing to what extent the COVID shock had negative consequences on the levels of individuals' political trust and democratic preferences. We investigate this relationship by correlating personal exposure to the virus with standard measures of political trust and democratic preferences. Specifically, we analyze first how personal exposure to the virus affects the levels of trust in the Spanish Government and trust in the European Union. We also investigate how exposure to the virus affects general support towards democracy, and to what

extent individuals support an authoritarian response to the COVID crisis.

We presented respondents the following questions:

1. *Trust in Spanish Government: Personally, ¿How much do you trust the following institutions? Use a scale that goes from 0 to 10, where 0 means I don't trust at all and 10 means I trust completely. The Spanish Government.*
2. *Trust in the EU: Personally, ¿How much do you trust the following institutions? Use a scale that goes from 0 to 10, where 0 means I don't trust at all and 10 means I trust completely. The European Union.*
3. *Democratic Preferences: Regarding having a democratic political system. What is your opinion about this way of governance? A very bad way of governance (1), A rather bad way of governance (2), a rather good way of governance (3), a very good way of governance (4).*
4. *Authoritarian Response: I believe that in order to enforce the indications on home confinement, special powers should be granted to the authorities, even if this requires sacrificing democratic principles and individual rights (1). I think we should try to enforce the indications on home confinement but without sacrificing democratic principles or individual rights (0).*

In order to proxy for individuals' direct exposure to the COVID shock during the outbreak we employ a dummy variable that takes value 1 if the survey respondent has some direct relative or friend that has been tested positive. As such, this variable measures direct personal exposure: it takes value 1 when someone in the personal acquaintance network of the respondent and with one degree of distance to her is a confirmed COVID case. The goal is to analyze the shock by focusing on early exposed individuals, since they are the most affected.

In our survey, which was implemented relatively early on during the outbreak, 11.96% of the respondents report direct exposure in their personal network to COVID-19. We believe this is roughly plausible estimate. According to the available estimates<sup>5</sup>, on March 25th there were 40,000 confirmed cases in Spain. This represents approximately 0.1% of the Spanish adult

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<sup>5</sup>For instance, see Source: El Pais, April 4, 2020.

population. Therefore, 12% of COVID exposure would require roughly 120 contacts on average per individual if we consider only clinically confirmed positives.

In order to study the effect of exposure to COVID on political trust we estimate a set of OLS models that include individual controls (age, gender and education) as well as a set of regional fixed effects. The inclusion of individual controls and regional fixed effects is important for several reasons. First, because individuals' direct exposure to the virus might be driven by individual characteristics such as age and education. Second, because the intensity of the virus outbreak in Spain had significant variation across the regions. Third, there might be a compound treatment effect between the outbreak and the slightly varying political and institutional responses to combat it across regions.

The results in Table 3 provide correlational, preliminary evidence that the COVID shock has significant detrimental effects on individuals' political trust and democratic preferences. Not only that, it seems that the demand for a more authoritarian response increases significantly when someone has direct personal exposure to the virus. Admittedly, this evidence is just suggestive (not causally identified) since it is based on conditional correlations based on self-reported exposure. These correlations might be confounded by unobserved variables.

Table 3: Political Trust, Democratic Preferences and Exposure to Coronavirus March 2020.

	(1)	(2)	(3)	(4)
	Trust Spanish Gov.	Trust EU	Democratic Preferences	Authoritarian Response
COVID exposure	-0.425** (0.159)	-0.459** (0.184)	-0.107* (0.0526)	0.0709** (0.0299)
Controls	✓	✓	✓	✓
Mean Dep. Var	3.557	3.612	3.386	0.582
<i>N</i>	1604	1604	1604	1604

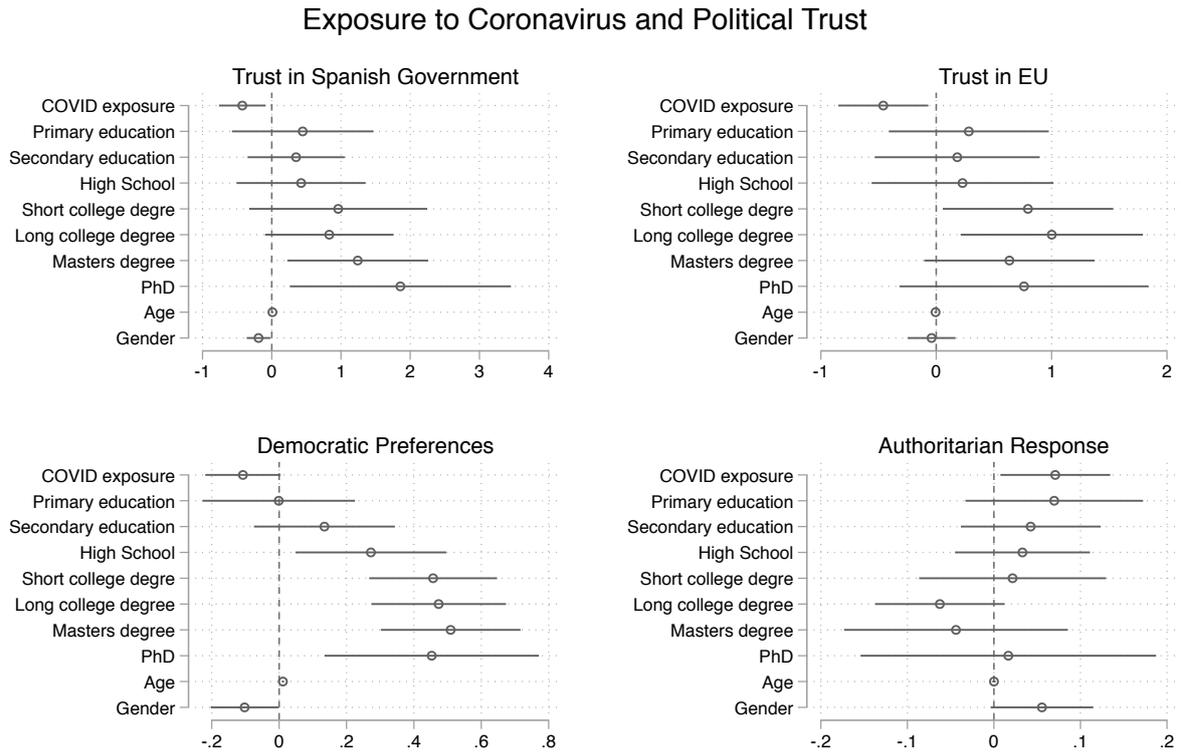
Standard errors clustered at the regional level in parentheses.

Controls: gender, age, region FE, education FE.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Figure 3 plots the coefficients estimated for direct exposure to the virus and the other individual controls included in Table 3. The coefficients for the regional FEs are not plotted in this figure but included in the estimations. It is remarkable to see how the estimated negative effects of exposure to Coronavirus on political trust and democratic preferences are sizable and comparable in magnitude to the standard effects of education on political trust and democratic preferences.

Figure 3: Political Trust and Democratic Preferences



All models control for region FE. Standard errors clustered at the regional level. Education base category: no schooling.

The negative correlation between direct personal exposure to COVID and political trust begs the question of whether it is a causal relationship, and to what extent individuals' also switch their preferences towards politicians' behavior and qualities. Below, we more directly analyze citizens' evaluations of the trade-off between liberty and health, and the trade-off between political preferences and technical expertise by studying preferences for technocratic government, for strong leadership, and for curtailing civil liberties to curb the pandemic. In order to provide credible causal estimates, we address these questions both experimentally and by using panel data on democratic preferences, which allow us to analyze intra-individual changes from January to March 2020. We use individual fixed effects models, that control for individual unobserved heterogeneity.

#### 4.2.2 Technocracy

Now we turn to the question of preferences for technocracy. It is easy to see why a crisis such as the COVID-19 can be a fertile ground for increased demand for technocratic government, understood as the exercise of political power based on neutral technical expertise and competent

management of public affairs, rather than ideological representation of preferences (Bertsou and Caramani, 2019; Dommett and Pearce, 2019). A pandemic is an extremely complex public health issue that requires, to be effectively managed, a great deal of technical expertise. For citizens to comply with social distancing, trust on health experts, which give technical instructions that may not be understood by a large fraction of the population, is key.

Has the crisis caused a shift towards technocratic attitudes among the public? Are citizens more predisposed to trade-off ideological representation by technical expertise in this context? In order to answer this question, we first exploit an individual panel with two waves, in which we used three different measures of technocratic attitudes. We presented respondents with the following statements:

1. *Some people prefer to vote for a party that shares their ideas, even if they have not managed public affairs well, while others prefer to vote for a party that has managed public affairs well, although they do not share their ideas. What do you prefer?*
2. *Some people believe that politicians should put aside their political agenda and tackle public problems from a technical point of view. Do you agree?*
3. *It is better to have experts, and not politicians, deciding which policies are best for the country. To what extent do you agree?*

The first one refers to the willingness to trade off ideological representation for competent management, while the other two tap more directly into preferences for technocratic government. In all three items, we used seven-point response scales.

The first wave of our panel survey was fielded at the end of January 2020, and the second one was fielded at the end of March 2020. We look at variation in technocratic attitudes within individuals over time, using individual fixed-effects models. The identifying assumption is that there are no time varying confounders: no relevant changes between the end of January and the end of March other than the COVID outbreak. The short time span, the absence of other relevant events and the extraordinary salience of the COVID crisis contribute to credibility of the assumption. Table 4 displays the results of these fixed-effects models.

Results in Table 4 are consistent with the expected technocratic turn. The effect of the outbreak, if our identifying assumption holds, is positive and strong across the three items.

Table 4: Change in technocratic attitudes January-March 2020.

	(1)	(2)	(3)
	Good management	Technical approach	Experts not politicians
March 2020	0.428*** (0.0793)	0.220*** (0.0707)	0.305*** (0.0504)
Individual FE	✓	✓	✓
Mean Dep. Var	4.754	5.055	4.926
<i>N</i>	1108	1162	1182

Baseline: January 2020.

Standard errors clustered at the individual and regional level in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

The size of the effect ranges between 15% and one quarter of a standard deviation of the dependent variable. In all three cases, the average expected response moves from being slightly over the neutral point 4, to be around or above 5. This is arguably a sizable effect, taking into account that we are looking at short-term intra-individual change in attitudes. Moreover, the short time span between the two waves may contribute to a panel conditioning effect that biases the estimates downwards.

In order to further investigate the mechanism and lend additional credibility to our interpretation of the estimates, we check if the effect of the outbreak is positively moderated by individuals' actual exposure to COVID-19. The expectation is that those directly exposed to the virus should be specially prone to modify their attitudes. In Table 5 we add an interaction term between the outbreak (*March*) and the dummy that measures individuals' direct personal exposure to the virus -which is the same one that we employed before when exploring the effects of COVID exposure on political trust. It is worth noting that the effect is twice as large for the COVID-exposed individuals than for the less exposed.

The technocratic turn may also be conditional to the previous levels of information. Those citizens with higher levels of political awareness may *a priori* be expected to be less likely to move away from democratic preferences following the outbreak. We also investigate the moderating role of political information. In order to look at this interaction, we use a composite index of political knowledge from the first wave of the panel based on three factual knowledge items.<sup>6</sup>

In Table 6 we present the same models as above, but including an interaction between

<sup>6</sup>The first item asked respondents to recognize the picture of the Spanish transport minister. The second one asked who was the second prime minister of the Spanish democracy, and the third one asked how many seats are in the Spanish lower chamber.

Table 5: Change in technocratic attitudes and COVID exposure January-March 2020.

	Good management		
	(1)	(2)	(3)
March 2020	0.394*** (0.0758)		
March 2020 × COVID exposure	0.347* (0.180)	0.338* (0.179)	0.332 (0.219)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	4.754	4.754	4.754
<i>N</i>	1108	1108	1108
	Technical approach		
	(1)	(2)	(3)
March 2020	0.185** (0.0763)		
March 2020 × COVID exposure	0.331** (0.153)	0.287* (0.140)	0.343*** (0.111)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	5.055	5.055	5.055
<i>N</i>	1162	1162	1162
	Experts not politicians		
	(1)	(2)	(3)
March 2020	0.301*** (0.0484)		
March 2020 × COVID exposure	0.0382 (0.146)	0.0202 (0.146)	0.00650 (0.156)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	4.926	4.926	4.926
<i>N</i>	1182	1182	1182

Baseline: January 2020.

Standard errors clustered at the individual and regional level in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 6: Change in technocratic attitudes and previous political information January-March 2020.

	Good management		
	(1)	(2)	(3)
March 2020	0.484*** (0.110)		
March $\times$ knowledge	-0.209 (0.143)	-0.198 (0.133)	-0.256* (0.135)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	4.754	4.754	4.754
<i>N</i>	1108	1108	1108
	Technical approach		
	(1)	(2)	(3)
March 2020	0.276*** (0.0755)		
March $\times$ knowledge	-0.211 (0.179)	-0.130 (0.171)	-0.110 (0.163)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	5.055	5.055	5.055
<i>N</i>	1162	1162	1162
	Experts not politicians		
	(1)	(2)	(3)
March 2020	0.366*** (0.0583)		
March $\times$ knowledge	-0.236*** (0.0627)	-0.167** (0.0774)	-0.176** (0.0798)
Individual FE	✓	✓	✓
March*Individual Controls		✓	✓
March*Regions			✓
Mean Dep. Var	4.926	4.926	4.926
<i>N</i>	1182	1182	1182

Baseline: January 2020.

Standard errors clustered at the individual and regional level in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

March and political knowledge. In all cases the interaction term has a negative sign, indicating that those with high levels of knowledge have lower propensity to switch towards technocratic preferences following the outbreak. The interaction only reaches conventional levels of statistical significance in the case of the "experts not politicians" outcome, which is the item more directly measuring the preference for substituting politicians for experts.

We conclude this section by analyzing whether the qualities that citizens value from politicians have changed as a consequence of the pandemic. In the two waves, our respondents were asked to rank the following four characteristics of politicians from more to less important: *share my ideas*, *capacity to manage*, *training*, *honesty*, and *approachability to people*. Table 7 shows the within-individual variation over time in the first ranked quality. We regress preferred politicians' qualities on the outbreak dummy and individual fixed-effects. Consistent with the idea of the technocratic turn, the demand for capable and trained politicians grows substantially –between 5 and 7 percentage points–, while valence traits like being approachable or, in particular, honest seem to matter less. The importance of ideology, on the other hand, remains unaltered.

Table 7: Change in preferred qualities for politicians, January-March 2020.

	(1)	(2)	(3)	(4)	(5)
	Ideology	Capacity	Training	Honesty	Approachability
March 2020	-0.00605 (0.00937)	0.0651*** (0.0165)	0.0499* (0.0238)	-0.0893*** (0.0281)	-0.0197** (0.00823)
Individual FE	✓	✓	✓	✓	✓
Mean Dep. Var	0.0303	0.181	0.249	0.498	0.0416
<i>N</i>	1322	1322	1322	1322	1322

Baseline: January 2020.

Standard errors clustered at the individual level and regional level in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

The COVID-19 outbreak appears to have caused a shift towards technocratic preferences among Spanish citizens. After the outbreak, they are on average more willing to be ruled by experts rather than politicians, and favor technical expertise and good management over ideological representation. This is especially the case for those more exposed to the virus, and holds irrespective of how we measure these preferences.

### 4.2.3 Strong leadership and civil liberties

A large number of governments have responded to the COVID crisis with emergency powers that curtail civil liberties, instead of relying on regular powers and citizens' cooperation and trust in each other and in the governments' instructions. In this section, we explore whether these coercive measures are in line with citizens' assessment of the health vs. individual freedom dilemma.

To this aim, we use the experiment that compared the three global threats: COVID, climate change, and international terrorism, with two additional outcomes. Specifically, we asked for the level of agreement with the following statements: (1) *drastic measures should be taken to stop [coronavirus/climate change/international terrorism], even if that may entail a limitation of individual liberty* and (2) *in order to cope with a challenge like [coronavirus/climate change/international terrorism], we need to unite around a strong leadership*. The nature of the threat was assigned randomly to each respondent.

The main result in Table 8 and Figure 4 is that the COVID-19 crisis triggers a significantly different response than the other two threats considered in the experiment. This is especially the case for individual freedom: in this case, citizens are especially willing to support drastic measures even if they curtail basic individual liberties. The average level of agreement with this trade-off is extremely high in the case of the COVID, more than two points higher than in the cases of climate change and terrorism. A similar, but less pronounced effect is found in the strong leadership outcome. While agreement is high in all cases, the COVID threat seems to be especially effective at fostering support for a strong leader.

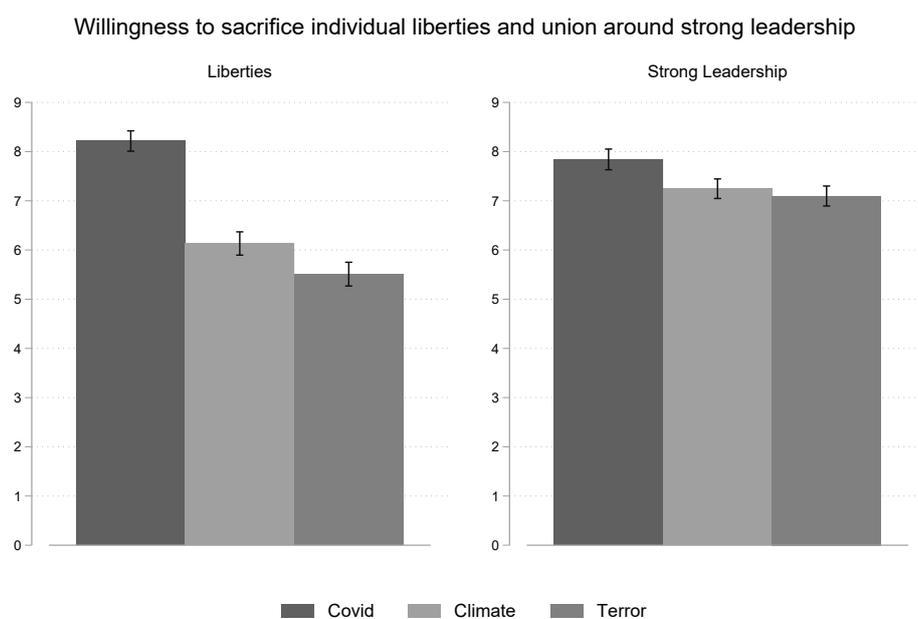
Table 8: Willingness to:

	Sacrifice individual freedoms		Unite around strong leader	
	(1)	(2)	(3)	(4)
COVID	2.083*** (0.160)	2.929*** (0.171)	0.595*** (0.148)	1.705*** (0.170)
Terrorism	-0.623*** (0.172)	0.0966 (0.182)	-0.148 (0.145)	0.796*** (0.165)
Constant (Climate Change)	6.132*** (0.121)		7.246*** (0.101)	
Controls		✓		✓
Mean Dep. Var	6.619	6.619	7.395	7.395
<i>N</i>	1606	1606	1606	1606

Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Controls: gender, age, region FE, education FE, PM assessment, left voter, other parties' voter.

Figure 4: Global threats and democracy



This is an interesting result, since climate change and terrorism are also global threats with large externalities that require coordination across countries - and hence, would benefit from a strong leadership-, and because many effective steps towards climate change mitigation and terrorist attacks prevention could come along important liberty reductions. Nonetheless, citizens are more willing to give up liberty to fight COVID, which could presumably have a larger direct and immediate impact on their individual welfare.

#### 4.2.4 Cooperation or discipline?

The previous results suggest that the COVID-19 threat is especially suited for creating demand for authoritarian responses. Governments all over the world used warlike vocabulary to frame the emergency and the expected response from citizens. Such a framing exercise could reinforce the authoritarian turn and, perhaps, favor compliance. We designed an additional experiment to explore to what extent an authority/discipline frame of the crisis was able to elicit support from citizens, as opposed to what we call a cooperation/trust frame. We randomly assigned respondents to two pairs of statements regarding citizens' behavior during the crisis, and asked them to express their level of agreement. The items were phrased as follows:

##### **Cooperation/trust frame**

1. To cope with the coronavirus crisis, we must all cooperate with each other
2. We should all trust the indications of the experts to mitigate the effects of the coronavirus

##### **Discipline/authority frame**

1. In order to face the coronavirus crisis, we must all be disciplined
2. We should all strictly follow the authorities' orders to mitigate the effects of the coronavirus

In this case, results show relatively modest but significant differences, as displayed in Table 9 and Figure 5. However, in both cases, we find that on average citizens tend to support the discipline/authority frame more than the cooperation/trust one. This suggests that, to some extent, the widely adopted coercive framing have slightly more support than a cooperative approach. This result points in a similar direction as the previous experiments: the COVID-19 crisis appears to be a fertile ground for obedience and acceptance of a more authoritarian and hierarchical rule.

Table 9: Cooperation vs discipline

	Must cooperate vs be disciplined		Should trust experts vs follow orders	
	(1)	(2)	(3)	(4)
Discipline/Authority	0.139* (0.0733)	0.149** (0.0747)	0.268*** (0.0726)	0.276*** (0.0739)
Constant (Cooperation/Trust)	5.045*** (0.118)		4.806*** (0.116)	
Controls	✓		✓	
Mean Dep. Var	5.253	5.253	5.208	5.208
<i>N</i>	1606	1606	1606	1606

Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .  
 Controls: gender, age, region FE, education FE, PM assessment, left voter, other parties' voter.

Figure 5: Cooperation vs discipline

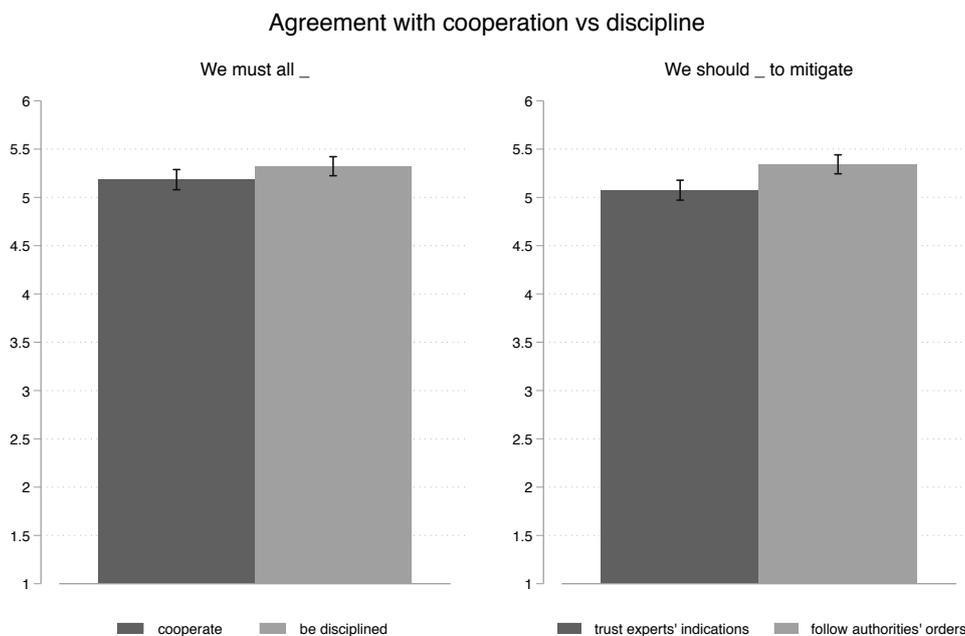


Table A3 in the Appendix reports covariate balance tests across treatment arms. As one would expect because of randomization, there are almost no statistical differences across groups, with very few exceptions that may arise because due to sampling and chance (in this case, the Prime Minister assessment, and left wing and other parties' voters). Nevertheless, the estimates in column 2 of Table 9 remain very stable after including a number of controls.

## 5 Conclusions

In this paper we have explored citizens' political reaction to the democratic dilemmas posed by the COVID-19 outbreak. A global pandemic that poses immediate health and economic threats to a large share of the population can be expected to have deep political consequences. And the nature of this threat makes it potentially a fruitful opportunity for a technocratic and perhaps authoritarian turn.

We have shown how, following the outbreak, citizens shifted strongly towards a preference for technocratic governance and strong leadership. They appear to be willing to trade-off protection against the virus for individual liberties and ideological representation. Of course this preference change might be temporary. While a short term exchange of civil liberties and pluralism for protection against the virus may be rational and even relatively innocuous, the question is whether this shift towards technocratic and authoritarian preferences will have long lasting consequences for the affected democracies.

There are at least two channels through which the pandemics might endanger democracy: a direct and an indirect one. The direct channel would be a durable transformation of preferences for representation. If citizens negatively update their beliefs about the ability of democratic, representative and liberal systems to protect them against these types of threats, the preference change we have documented here may be more stable in the long term.

Indirectly, the shock opens a window of opportunity for would-be authoritarian leaders and institutions to seize and centralize power, limit checks and balances and increase population control and surveillance. In the first stage they will not encounter resistance from the public, and then the authoritarian turn may outlast the pandemics. The early shift of preferences that we have documented in this paper, even if it turns out to be short-lived, could offer an opportunity for policy changes that may then self-enforce and move some democracies towards a new political equilibrium of more centralized and less limited power, as well as more invasive surveillance of the population.

As we have emphasized throughout the paper, the COVID crisis is a very large shock to public health and to the economy, which in turn gives citizens the opportunity to learn about their governments, based on their political and policy responses. Further disentangling the

relative importance of the health and economic shock is left for future research.

## References

- Aassve, Arnstein, Guido Alfani, Francesco Gandolfi and Marco Le Moglie. 2020. Epidemics and Trust: The Case of the Spanish Flu. Working Papers 661 IGIER (Innocenzo Gasparini Institute for Economic Research), Bocconi University.
- Acemoglu, Daron and James A Robinson. 2001. “A theory of political transitions.” *American Economic Review* 91(4):938–963.
- Achen, Christopher H and Larry M Bartels. 2017. *Democracy for realists: Why elections do not produce responsive government*. Vol. 4 Princeton University Press.
- Aidt, Toke S and Gabriel Leon. 2016. “The democratic window of opportunity: Evidence from riots in Sub-Saharan Africa.” *Journal of Conflict Resolution* 60(4):694–717.
- Alfani, Guido and Marco Percoco. 2019. “Plague and long-term development: the lasting effects of the 1629–30 epidemic on the Italian cities.” *The Economic History Review* 72(4):1175–1201.
- Alfani, Guido and Tommy E. Murphy. 2017. “Plague and Lethal Epidemics in the Pre-Industrial World.” *The Journal of Economic History* 77(1):314–343.
- Algan, Yan, Sergei Guriev, Elias Papaionnaou and Evgenia Passari. 2017. “The European trust crisis and the rise of populism.” *Working Paper EBRD* .
- Ananyev, Maxim and Sergei Guriev. 2019. “Effect of Income on Trust: Evidence from the 2009 Economic Crisis in Russia.” *The Economic Journal* .
- Ang, Yuen Yuen. 2020. “When COVID-19 Meets Centralized, Personalized Power.” *Nature Human Behavior* forthcoming.
- Ashworth, Scott, Ethan Bueno de Mesquita and Amanda Friedenberg. 2018. “Learning about voter rationality.” *American Journal of Political Science* 62(1):37–54.

- Autor, David, David Dorn, Gordon Hanson and Kaveh Majlesi. Forthcoming. “Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure.” *American Economic Review* .
- Ballard-Rosa, Cameron, Amalie Jensen and Kenneth Scheve. 2018. “Economic decline, social identity, and authoritarian values in the United States.” *American Political Science Association, Boston* .
- Bertsou, Eri and Daniele Caramani. 2019. “People Haven’t Had Enough of Experts: Technocratic Attitudes among Citizens in Nine European Democracies.”. <https://ecpr.eu/Events/PaperDetails.aspx?PaperID=45843EventID=123>.
- Brückner, Markus and Antonio Ciccone. 2011. “Rain and the democratic window of opportunity.” *Econometrica* 79(3):923–947.
- Carlin, Ryan E, Gregory J Love and Elizabeth J Zechmeister. 2014. “Natural disaster and democratic legitimacy: The public opinion consequences of Chile’s 2010 earthquake and tsunami.” *Political Research Quarterly* 67(1):3–15.
- Colantone, Italo and Piero Stanig. 2018. “The Trade Origins of Economic Nationalism: Import Competition and Voting Behavior in Western Europe.” *American Journal of Political Science* 62(4):936–953.
- Dommett, Katharine and Warren Pearce. 2019. “What do we know about public attitudes towards experts? Reviewing survey data in the United Kingdom and European Union.” *Public Understanding of Science* 28(6):669–678.
- Fetzer, Thiemo, Lukas Hensel, Johannes Hermlé and Chris Roth. 2020. “Coronavirus Perceptions and Economic Anxiety.” *arXiv preprint arXiv:2003.03848* .
- Foster, Chase and Jeffrey Frieden. 2017. “Crisis of trust: Socio-economic determinants of Europeans’ confidence in government.” *European Union Politics* .
- Franck, Raphaël. 2016. “The political consequences of income shocks: explaining the consolidation of democracy in France.” *Review of Economics and Statistics* 98(1):57–82.

- Healy, Andrew and Neil Malhotra. 2009. "Myopic voters and natural disaster policy." *American Political Science Review* 103(3):387–406.
- Jedwab, Remi, Noel D. Johnson and Mark Koyamah. 2016. "Bones, bacteria and break points: the heterogeneous spatial effects of the Black Death and long-run growth." *GMU Working Paper in Economics No. 16-30* . Available at SSRN: <https://ssrn.com/abstract=2800002>.
- Katz, Gabriel and Ines Levin. 2016. "The dynamics of political support in emerging democracies: evidence from a natural disaster in Peru." *International Journal of Public Opinion Research* 28(2):173–195.
- Kotschy, Rainer and Uwe Sunde. 2019. "Income Shocks, Inequality, and Democracy." *The Scandinavian Journal of Economics* forthcoming.
- Margalit, Yotam. 2019. "Political responses to economic shocks." *Annual Review of Political Science* .
- Rehman, Faiz Ur and Paolo Vanin. 2017. "Terrorism risk and democratic preferences in Pakistan." *Journal of Development Economics* 124:95–106.
- Richardson, Gary and Michael McBride. 2009. "Religion, longevity, and cooperation: The case of the craft guild." *Journal of Economic Behavior & Organization* 71(2):172–186.
- Voigtländer, Nico and Hans-Joachim Voth. 2012. "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany\*." *The Quarterly Journal of Economics* 127(3):1339–1392.
- Xue, Melanie Meng and Mark Koyama. 2018. Autocratic Rule and Social Capital: Evidence from Imperial China. Technical report Mimeo, Northwestern University.

# Appendix

Table A1: Covariate Balance, Geographical Scope treatment

Variable	(1)	(2)	(3)	(4)	T-test						F-test for joint orthogonality
	Region Mean/SE	Spain Mean/SE	Europe Mean/SE	Asia Mean/SE	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)	
Female	0.509 (0.025)	0.510 (0.025)	0.505 (0.025)	0.509 (0.025)	-0.001	0.004	0.000	0.005	0.001	-0.004	0.008
Age	45.229 (0.765)	45.885 (0.785)	45.094 (0.764)	45.865 (0.782)	-0.656	0.135	-0.636	0.791	0.020	-0.771	0.288
Less than secondary school	0.429 (0.025)	0.465 (0.025)	0.411 (0.025)	0.436 (0.025)	-0.036	0.018	-0.007	0.054	0.029	-0.026	0.825
Secondary/High School	0.090 (0.014)	0.058 (0.012)	0.089 (0.014)	0.085 (0.014)	0.032*	0.001	0.005	-0.032*	-0.027	0.004	1.541
College	0.239 (0.021)	0.217 (0.021)	0.218 (0.021)	0.207 (0.020)	0.022	0.022	0.032	-0.000	0.011	0.011	0.422
Andalusia	0.142 (0.017)	0.145 (0.018)	0.171 (0.019)	0.197 (0.020)	-0.003	-0.029	-0.055**	-0.026	-0.052*	-0.026	1.846
Catalonia	0.157 (0.018)	0.198 (0.020)	0.158 (0.018)	0.150 (0.018)	-0.040	-0.001	0.007	0.039	0.048*	0.009	1.237
Madrid	0.162 (0.018)	0.170 (0.019)	0.163 (0.018)	0.192 (0.020)	-0.008	-0.001	-0.030	0.007	-0.022	-0.029	0.516
Valencian Community	0.147 (0.018)	0.100 (0.015)	0.099 (0.015)	0.090 (0.014)	0.047**	0.048**	0.057**	0.001	0.010	0.009	2.353*
Other Regions	0.392 (0.024)	0.388 (0.024)	0.408 (0.024)	0.372 (0.024)	0.004	-0.017	0.020	-0.021	0.016	0.037	0.387
Prime Minister Assessment	3.264 (0.060)	3.270 (0.060)	3.300 (0.059)	3.379 (0.059)	-0.006	-0.035	-0.115	-0.030	-0.109	-0.080	0.794
Regional PM Assessment	3.032 (0.054)	2.953 (0.055)	2.928 (0.050)	2.930 (0.052)	0.080	0.104	0.102	0.024	0.022	-0.002	0.853
Generalised trust	4.489 (0.133)	4.268 (0.124)	4.475 (0.135)	4.314 (0.138)	0.221	0.014	0.175	-0.208	-0.047	0.161	0.739
Left-wing voter	0.347 (0.024)	0.325 (0.023)	0.332 (0.023)	0.289 (0.023)	0.022	0.015	0.057*	-0.007	0.036	0.042	1.114
Right-wing voter	0.204 (0.020)	0.225 (0.021)	0.215 (0.020)	0.242 (0.021)	-0.021	-0.011	-0.037	0.010	-0.017	-0.027	0.579
Regional party voter	0.065 (0.012)	0.075 (0.013)	0.057 (0.012)	0.050 (0.011)	-0.010	0.008	0.015	0.018	0.025	0.007	0.794
Other parties/responses	0.384 (0.024)	0.375 (0.024)	0.396 (0.024)	0.419 (0.025)	0.009	-0.012	-0.035	-0.021	-0.044	-0.023	0.603
COVID exposure	0.122 (0.016)	0.113 (0.016)	0.121 (0.016)	0.122 (0.016)	0.010	0.001	0.000	-0.009	-0.010	-0.001	0.087
N	401	400	404	401							
F-test of joint significance (F-stat)					0.967	0.671	1.461	0.626	0.862	0.403	
F-test, number of observations					801	805	802	804	801	805	

Notes: Values for t-tests refer to cross-group mean differences. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A2: Covariate Balance, Global threats treatment

Variable	(1) Covid Mean/SE	(2) Climate Mean/SE	(3) Terror Mean/SE	(1)-(2)	T-test Difference (1)-(3)	(2)-(3)	F-test for joint orthogonality
Female	0.508 (0.022)	0.507 (0.022)	0.509 (0.022)	0.002	-0.001	-0.003	0.004
Age	45.809 (0.660)	45.240 (0.663)	45.504 (0.688)	0.569	0.306	-0.264	0.185
Less than secondary school	0.452 (0.022)	0.443 (0.021)	0.410 (0.021)	0.009	0.042	0.033	1.079
Secondary/High School	0.095 (0.013)	0.074 (0.011)	0.071 (0.011)	0.021	0.024	0.003	1.152
College	0.207 (0.018)	0.218 (0.018)	0.236 (0.018)	-0.010	-0.028	-0.018	0.638
Andalusia	0.168 (0.016)	0.171 (0.016)	0.152 (0.016)	-0.003	0.017	0.020	0.447
Catalonia	0.179 (0.017)	0.149 (0.015)	0.169 (0.016)	0.030	0.011	-0.020	0.945
Madrid	0.191 (0.017)	0.158 (0.016)	0.167 (0.016)	0.032	0.024	-0.008	1.030
Valencian Community	0.088 (0.012)	0.121 (0.014)	0.118 (0.014)	-0.033*	-0.030	0.003	2.027
Other Regions	0.374 (0.021)	0.400 (0.021)	0.395 (0.021)	-0.027	-0.021	0.005	0.447
Prime Minister Assessment	3.198 (0.052)	3.326 (0.052)	3.386 (0.050)	-0.128*	-0.188***	-0.060	3.487**
Regional PM Assessment	2.985 (0.047)	2.952 (0.044)	2.946 (0.045)	0.033	0.039	0.006	0.210
Generalised trust	4.366 (0.115)	4.348 (0.112)	4.446 (0.118)	0.018	-0.079	-0.097	0.200
Left-wing voter	0.340 (0.021)	0.309 (0.020)	0.320 (0.020)	0.031	0.020	-0.011	0.602
Right-wing voter	0.198 (0.017)	0.229 (0.018)	0.238 (0.018)	-0.031	-0.040	-0.009	1.393
Regional party voter	0.052 (0.010)	0.067 (0.011)	0.066 (0.011)	-0.015	-0.013	0.001	0.650
Other parties/responses	0.409 (0.021)	0.395 (0.021)	0.376 (0.021)	0.015	0.033	0.018	0.611
COVID exposure	0.135 (0.015)	0.106 (0.013)	0.118 (0.014)	0.028	0.017	-0.012	1.025
N	535	537	534				
F-test of joint significance (F-stat)				1.150	1.540*	0.404	
F-test, number of observations				1072	1069	1071	

Notes: Values for t-tests refer to cross-group mean differences. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A3: Covariate Balance, Cooperation vs. Discipline treatment

Variable	(1) Cooperation Mean/SE	(2) Discipline Mean/SE	T-test Difference (1)-(2)	F-test for joint orthogonality
Female	0.504 (0.018)	0.512 (0.018)	-0.009	0.124
Age	45.424 (0.548)	45.611 (0.546)	-0.187	0.058
Less than secondary school	0.442 (0.018)	0.429 (0.018)	0.013	0.273
Secondary/High School	0.079 (0.010)	0.081 (0.010)	-0.002	0.018
College	0.218 (0.015)	0.223 (0.015)	-0.004	0.040
Andalusia	0.167 (0.013)	0.160 (0.013)	0.007	0.164
Catalonia	0.166 (0.013)	0.165 (0.013)	0.001	0.005
Madrid	0.161 (0.013)	0.182 (0.014)	-0.021	1.268
Valencian Community	0.115 (0.011)	0.102 (0.011)	0.013	0.686
Other Regions	0.390 (0.017)	0.390 (0.017)	-0.000	0.000
Prime Minister Assessment	3.352 (0.043)	3.254 (0.041)	0.099*	2.758*
Regional PM Assessment	2.950 (0.038)	2.971 (0.037)	-0.021	0.157
Generalised trust	4.297 (0.092)	4.478 (0.095)	-0.181	1.866
Left-wing voter	0.301 (0.016)	0.345 (0.017)	-0.044*	3.477*
Right-wing voter	0.220 (0.015)	0.224 (0.015)	-0.004	0.040
Regional party voter	0.058 (0.008)	0.065 (0.009)	-0.007	0.310
Other parties/responses	0.421 (0.017)	0.366 (0.017)	0.054**	4.979**
COVID exposure	0.115 (0.011)	0.124 (0.012)	-0.008	0.267
N	806	800		
F-test of joint significance (F-stat)			0.723	
F-test, number of observations			1606	

*Notes:* Values for t-tests refer to cross-group mean differences. Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .