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Do institutions matter in a crisis? Regime type and decisive responses to Covid-19

Democratization

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# Do institutions matter in a crisis? Regime type and decisive responses to Covid-19

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#### **ABSTRACT**

Governments around the world have been implementing measures to contain the COVID-19 pandemic and ease its economic fallout, and there has been extensive variation in the speed and extent to which they have introduced new policies. This article examines the role that regime type plays in determining the decisiveness of government policies to tackle the coronavirus pandemic and its spill over effects. We hypothesize that democratic regimes may be slower to introduce restrictions on civil liberties due to a "freedom commitment" and may be faster to provide economic protections due to a "welfare commitment". We use event history analysis and data from the Oxford COVID-19 Government Response Tracker to examine whether less democratic regimes are more likely to implement restrictions faster, and spending programmes slower. Contrary to expectations, our findings suggest that more authoritarian regimes do not implement constraints more quickly or spending more slowly than more democratic regimes. The finding holds across various regime measures and model specifications.

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## Introduction

The coronavirus pandemic has had a profound global impact and has posed a series of major social, political, economic challenges for countries across the world. With over 750 m confirmed cases and 6.8 million deaths at the time of writing, the pandemic has created a catastrophic public health crisis and plunged the global economy into the deepest recession since WWII.<sup>1</sup>

These potent challenges have required all countries in the world to act in order to mitigate the pandemic's worst effects. However, not all states responded in the same way, and there has been considerable cross-country variation in government responses to COVID-19. Yet, to date, we lack a clear understanding of why this variation exists.

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An extensive body of literature suggests that regime type is a potent explanation for cross-countries differences in policy formulation in a range of areas, including public health, social policy and the economy.<sup>2</sup> As the coronavirus pandemic unfolded, many observers pointed to these differences between regime types as a possible explanation for divergent responses to the pandemic.<sup>3</sup>

In this article, we systematically examine whether political regime type determines the variation in government policies designed to mitigate the worst effects of the coronavirus. We examine two sets of government response: measures designed to suppress the virus (e.g. lockdowns, travel restrictions) and measures designed to support the economy (e.g. income support, debt relief). We evaluate the effect of political regime type on the decisiveness of government responses, measured in terms of the speed and intensity of response after a country's initial exposure. We derive and test two hypotheses from the scholarship on political regimes that relate to each category of government response. First, we test for a "freedom commitment" in democracies that might lead them to act more slowly to introduce restrictions on basic civil rights and freedoms. Second, we test for a "welfare commitment" in democracies that might lead them to act faster to provide economic and welfare support to mitigate the social and economic costs of the pandemic.

Our analysis builds on, but also challenges, recent studies that have identified political regime type as an important explanatory factor in explaining government responses to COVID-19.4 We improve on these early studies by examining a wider range of government responses, by developing theory-driven hypotheses, by testing our argument using several different regime types measures rather than just one, and by using event history analysis to capture crucial issues of timing and speed.

Contrary to much of the early work on the role of regime type in COVID-related policy formation, we find that political institutions do not account for cross-country variation in the speed and intensity of the policy response to COVID-19. Our findings challenge an extensive body of scholarship that points to the importance of political institutions in shaping government policy making in the public health and economic spheres. Our conclusions suggest that the pressures of the pandemic outweighed the effects we would expect political regimes to have and led either to broadly similar responses across regimes of all type (e.g. on swift school closures) or variation in other forms of response (e.g. fiscal stimulus) that appear unrelated to political institutions.

We present our analysis as follows: first, we identify what we call the dual challenge of the coronavirus pandemic: the need to both suppress the virus with a wide array of public health restrictions and to protect the economy through a series of economic policies. Second, we review the scholarship on the impact of political regime type and point to two core reasons for why we should expect regime type to influence government responses to the dual challenge of COVID-19. Third, we present and test a set of event history models of regime decisiveness using data on government responses from 186 countries. Finally, we discuss the implications of our findings and conclude.

# The dual challenge of COVID-19

We frame the pandemic primarily as a dual crisis, entailing two core challenges. The first challenge stems from the public health threat that the virus poses. There was considerable uncertainty in the early months of the pandemic about the lethality of the



virus, and initial policy decisions had to be made in a fluid informational environment. However, by March 2020 it was clear that the virus was highly contagious and lethal, and early estimates from the UK and US suggested that if left unchecked it could lead to millions of deaths and the collapse of entire health systems. <sup>5</sup> The prognosis was considerably worse for countries in the developing world with fewer resources (e.g. intensive care beds, ventilators, oxygen supplies) and less-developed health systems.<sup>6</sup>

The second challenge of the pandemic is economic, and stems from the collapse of economic activity in a broad range of sectors as a result of the spread of the virus. Some of the decline in economic activity resulted from mandated restrictions on social/economic activity introduced by countries in order to reduce the transmission of the virus. Even before countries began to introduce these measures, however, there is also evidence that people were taking matters into their own hands and stepping back from their normal activities to reduce their own risk of being infected. The fear of the virus and its effects thus led to a catastrophic drop in a range of economic activities, such as trade, transport, retail and manufacturing.

In response to these challenges, governments across the world responded with a range of policy tools. We frame these responses in terms of two broad strategies. First, countries took measures to suppress the virus. These measures were designed to limit social interaction and reduce the transmission of the virus, and often involved sweeping restrictions on what in most parts of the world are considered basic civil liberties, such as movement outside the home and family gatherings. Schools and workplaces were closed, sporting and entertainment events were outlawed, and restrictions on international travel were introduced.8 Within a matter of months, the highly unusual city lockdown in Wuhan in January 2020 became a familiar policy tool used by governments across the world.

Second, countries took measures to support the economy. These policies were designed to protect businesses and citizens from the severe economic effects of efforts by governments and their citizens to reduce the risk of transmission. Government restrictions designed to suppress the virus led to the closure of whole industries, while citizens (mandated or otherwise) stayed at home and avoided outside travel. The result was a precipitous decline in economic activity and a similarly precipitous rise in the risk of economic calamity for individuals and businesses through bankruptcy, unemployment, mortgage default and other financial problems. Many governments swiftly moved to create an unprecedented economic safety net to compensate for the costs of COVID, offering support through policies such as direct cash transfers, salary support, debt relief and moratoria of evictions and home foreclosures.9

However, not all countries responded the same way, and there were large variations in the speed and extent of policy response. Countries selected different measures from each other, introduced them at different time points after their first exposure to the virus, and varied in how long they kept them in place. In this study, we examine the role that regime type played in shaping these policy responses. We focus here on one key point of variation, that is, how decisive different countries were in their response. Decisiveness refers to the ability of a state to enact and implement policy change when needed. 10 Countries that struggle to govern decisively have legislative processes characterized by prolonged negotiation and gridlock. By contrast, decisive governments introduce new policies quickly to meet the prevailing challenges that arise. In the context of a complex transboundary crisis like the coronavirus pandemic,

decisive policy making is hugely important, as it is literally a life-or-death issue. Epidemiologists have estimated that delaying the introduction of measures to suppress the virus by even a single week led in some cases to tens of thousands of avoidable deaths.<sup>11</sup>

Our approach differs from several studies that have sought to assess the government response with reference to policy *outcomes* such as death rates,<sup>12</sup> or measures of a country's economic health.<sup>13</sup> We do not seek to examine if the policies that were introduced were *effective* in their goals, and rather focus exclusively on the speed and intensity of the policy response as important issues in their own right. Policy choice is logically prior to the outcomes that those policies have, and public health and economic outcomes may be determined by more than the policies that governments design to influence them.<sup>14</sup>

We find clear evidence that there is variation in the decisiveness of COVID-related policy making across the world. <sup>15</sup> Countries often varied in how quickly they implemented policies, and how stringent their policy response was. Figure 1 illustrates the number of countries implementing different severity levels of eleven measures against the pandemic in the period between January 2020 and May 2021, drawing on data from the Oxford COVID-19 Government Response Tracker. <sup>16</sup> Some measures are quite uniform. For example, almost all countries immediately closed their schools: the first panel in the figure shows a peak of strict school closings already early in March. A similar pattern characterizes the banning of public events. By contrast, the implementation of other measures is much more varied. For example, while many countries quickly implemented workplace closings, stay home requirements, or restrictions on travel, the severity of these measures was very different, with many implementing only light restrictions. With regard to economic support measures – the last two panels – the picture is even more disparate: the number of countries introducing economic relief rises much more slowly, and many issue limited programmes for

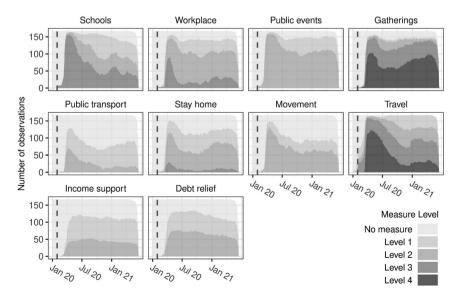


Figure 1. Implementation of ten government suppress and support measures over time, 1 January 2020 - 19 May 2021.



only a fraction of citizens and businesses. Some had not introduced any economic relief by May 2021.

# Early findings on regime type and responses to COVID-19

Our analysis builds on, and also challenges, a new and varied body of scholarship that emerged to address the political fallout from the pandemic. Several studies also sought to directly examine different policy responses by different regime types. A number of studies found that more democratic regimes are less stringent and often also slower at introducing restrictive COVID measures. 17 Trein shows that countries with a more authoritarian history implement more stringent COVID lock-down measures. 18

Some authors combined responses and outcomes, finding that less stringent democracies also have worse outcomes - more deaths and greater economic loss. 19 Annaka finds that autocracies have fewer deaths despite not being more stringent.<sup>20</sup> By contrast, some studies find democracies to be more decisive than authoritarian regimes in responding to the pandemic.<sup>21</sup> There is evidence that democracies might be less stringent at first, but eventually catch up with and even surpass non-democratic regimes when their case numbers rise.<sup>22</sup> Finally, some scholars find that regime type has no effect on government responses.<sup>23</sup>

To our knowledge, no study has yet been carried out on the effect of regime type on the economic measures that governments have introduced in response to the COVID pandemic. Hancké et al show that differences in political and economic institutional frameworks affected variation in economic responses, but they focus on varieties of capitalist institutions rather than political regime type.<sup>24</sup> There has also been some analysis of the effect of regime type on economic outcomes such as GDP growth,<sup>25</sup> and some scholars have analysed the economic consequences of restrictive COVID suppression measures.<sup>26</sup> As yet, however, there is no systematic study of the effect of regime type on the economic policy responses governments have taken to protect the economy from the fallout of the pandemic.

While the recent surge of research into the political dimensions of the international response to COVID-19 have led to many illuminating findings, the scholarship is also characterized by a number of problems. Several previous studies select only a single or a small number of government response measures.<sup>27</sup> Other studies use highly aggregate indices of COVID measures that make it difficult to identify fine-grained patterns.<sup>28</sup> For example, Chiplunkar and Das (2021) examine a similar research question but explore the impact of regime type on a single aggregated measure of lockdown and health responses. We seek to address these issues by examining a wider range of response measures and retaining the ability to measure them individually.

Furthermore, some studies focus on one particular type of regime measure, for example a dichotomous distinction between democracies and autocracies,<sup>29</sup> or various gradual measures. 30 This approach is too restrictive, however, and risks papering over variation across a wider range of regime categories. Consequently, we employ a range of regime categorisations in order to ensure that our findings are not due to the choice of one particular regime typology.

Another problem is that while some authors have studied the timing of government response measures, they have estimated OLS models recording the number of days until a given measure.<sup>31</sup> This is problematic because OLS struggles to capture



important issues of timing and sequence. By contrast, we use event history analysis which allows us to flexibly assess risk over time, consider censored observations, and include time-varying covariates.

A final problem is that some of the early studies of COVID measures are theoretically under-developed and examine the causal impact of regime type without discussing potential causal mechanisms. In the next section, we draw on an extensive body of scholarship on the political importance of regime type in order to derive theoretically grounded and testable hypotheses.

# **Regime type and COVID-19**

According to a vast array of political science scholarship, political regime type matters. Many scholars have found that political institutions play an important role in shaping government policy on a wide range of public health and economic issues. Democracies have been shown to differ from authoritarian regimes in their approach to political freedoms and repression, 32 their policies on redistribution and welfare spending, 33 and their responses to public health challenges.<sup>34</sup> Although some studies question the importance of regime type, 35 a significant body of work provides strong reason to expect that democratic political institutions increase the likelihood of economic and public health service provision.

This scholarship points to three sets of mechanisms that lead democratic states to differ from authoritarian regimes across these policy areas. The first concerns the values associated with each regime. Democratic and authoritarian regimes are associated with different value systems, and place profoundly different emphasis on issues such as freedom, accountability, justice and the rule of law. 36 The second mechanism concerns the potential for mobilization and free expression within democratic systems. With more scope for the free flow of information and the activism of citizens and civil society, democratic leaders can quickly learn about citizen concerns and be exposed to domestic pressures that authoritarian leaders are insulated from.<sup>37</sup> Finally, the role of elections means that democratic elites have strong incentives to tailor their policy platforms to align with public preferences and offer public goods (such as health and education services) to a greater extent than authoritarian leaders that often rely on the support of a much smaller ruling coalition.<sup>38</sup>

Drawing on these insights we derive two testable hypotheses about the relationship between regime type and government responses to the dual challenge of the COVID pandemic. The first hypothesis concerns government efforts to suppress the virus, and rests on the idea that democracies have a "freedom commitment" that will make them more reluctant to restrict civil and political liberties. This commitment rests in part on the attachment that citizens and elites in democracies have to values relating to individual freedoms and the right to choose their own leaders.<sup>39</sup> If citizens are to be able to hold their governments to account, they must be able to formulate their own preferences, express those preferences and engage in collective action.<sup>40</sup> The core values of democracy must therefore be enshrined in government policies that allow for a range of civil and political rights. Electoral mechanisms also play a role, as democratic elites are likely to be reluctant to restrict individual freedoms as they know it will be unpopular with voters. The result is a broad-based commitment to wide array of individual rights and freedoms.

However, the measures that were required to suppress the coronavirus entailed often very strong limitations on civil and political rights. Countries across the world introduced measures to reduce social interaction in ways that compromised civil liberties, including bans on large outdoors gatherings, domestic and travel restrictions, and limits on how often and when people leave their own homes. The extent to which these measures clash with the commitments that underpin democratic rule created dilemmas for democratic leaders. When German Chancellor, Angela Merkel, introduced Germany's strict COVID measures in March 2020, she spoke of her personal fight to secure political freedoms and talked explicitly of the difficulty of justifying political restrictions in an open democracy. 41 These challenges are also likely to be stronger for leaders in countries which offer the strongest guarantees of political and civil freedoms. Recent research on the response to the coronavirus has suggested that democracies in which liberties and freedoms were more strongly protected were slower to introduce restrictions compared with democracies with lower levels of protection. 42

Consequently, the combination of citizen and elite values, as well as the institutional incentives associated with elections, might lead democratic leaders to be more reluctant to introduce restrictions on civil and political rights.

Hypothesis 1: The more democratic the regime, the less decisive the government policy response to suppress the virus.

The second hypothesis concerns government efforts to support the economy, and rests on the idea that democracies have a "welfare commitment" that will make them more decisive in introducing economic measures to mitigate the spill over effects from the pandemic and the virus suppression policies. Political economy work on the distributive effects of democratic institutions (especially elections) suggests that leaders in democracies have particular incentives to respond to the needs of citizens and provide public goods. By contrast, authoritarian leaders do not face the same public pressures and can direct spending towards members of their ruling coalitions rather than policies that create benefits for a broad pool of voters in society. Furthermore, citizens and interest groups in democracies can mobilize and lobby governments in between electoral cycles in ways that put pressure on elites to respond to short-term demands for public policy change. 43 There is extensive empirical evidence that democracies provide greater levels of public services and economic protections than authoritarian regimes.44

Some also argue that the pressure from voters to provide economic support in times of crisis has increased in democracies over time. For example, Chwieroth and Walter argue that citizens in democracies have developed "great expectations" about the extent of financial protection that will be provided by the state, especially in the wake of financial crises that threaten the wellbeing of the middle classes. This is mirrored by increasing commitments on behalf of democratic elites that they will provide economic protections in times of crisis.<sup>45</sup>

Some of these dynamics were quickly on display once the profound economic implications of the coronavirus pandemic began to become clear. The pandemic posed a profound economic challenge across the world, threatening individual livelihoods directly through forced business closures, as well as indirectly through effects on trade, manufacturing, travel and consumption that drastically reduced economic activity and contributed to a global economic recession. 46 Billions of people had



work and education interrupted, and nearly ninety-five per cent of the world's economies suffered a simultaneous contraction in per capita GDP. 47

Citizens quickly sought economic support from their governments, mobilizing through a range of formal and informal organizations to lobby for economic relief. Civic protests increased in many countries across the world and were often fuelled by economic grievances brought on by COVID-related hardships. 48 Business groups made political demands for relief and support, including financial aid from governments.<sup>49</sup> Labour unions acted quickly to make a case for emergency economic and social protection for workers, including income protection and health benefits.<sup>50</sup> Pressure for economic support was thus intense during the pandemic, and elites in democratic systems were more exposed to these demands due to their need to consider voter preferences and look beyond a narrow ruling coalition.

Consequently, if regime type plays a role in shaping government responses to COVID-19, we would expect to see a faster introduction of more stringent economic protection measures in democratic countries.

Hypothesis 2: The more democratic the regime, the more decisive the government policy to protect the economy.

#### Data and methods

# Main data source: the Oxford COVID-19 Government Response Tracker

Our main data source is the Oxford COVID-19 Government Response Tracker (OxGCRT).<sup>51</sup> It provides a dataset on government responses to the pandemic starting on 1 January 2020 with ongoing daily updates in 186 countries at the time of writing. The version of the dataset we use dates from 17 June 2021. OxCGRT is one of the most important data sources on coronavirus measures and has been used by many studies on regime types in the pandemic.<sup>52</sup>

From the dataset, we employ all variables recording either a government suppress or support measure. The dataset contains eight suppress measures: school closings, workplace closings, cancellation of public events, banning of gatherings, public transport closure, stay-home requirements, restrictions on internal movement, and restrictions on incoming international travel. It contains three variables on economic support measures: income support, debt contract relief, and financial measures (effectively stimulus packages). Ten of the 11 variables give the severity of government measures on three to five ordinal categories. (The exception is the variable on stimulus packages, which gives the size of the package in US-Dollars.<sup>53</sup>) Most variables have three levels, coded numerically from 0 to 2, where a level-0-coding means "no measure implemented", and a level-2-measure means "following the regulation is obligatory for everyone". For example, regarding the variable on the cancellation of public events, level 0 stands for "no cancellations", level 1 for "cancellations recommended", and level 2 means "cancellations obligatory". Some variables have more categories making finder intermediate distinction. For example, the variable on school closings differentiates "required closing for some schools, for example high schools" (level 3) and "required closing of all schools" (level 3).54 We use the information encoded in these variables to operationalize the decisiveness of government strategies to suppress the virus and support the economy.



# Competing risk event history analysis of regime decisiveness

We argue that government decisiveness can be operationalized by the *speed* and *sever*ity of the implementation of suppress and support measures: How quickly do governments act? And how resolute are they when they do? The daily records of OxCGRT allow us to determine exactly when a suppress or support measure is implemented. The coding of the variables in ordinal categories allows us to determine the severity of the implemented measures.

Given the timing and differentiation of measures, the ideal method to assess the effect of regime type on government decisiveness is event history analysis.<sup>55</sup> Event history or survival analysis models the likelihood and timing of events (here, the implementation of a COVID-measure) conditional on covariates of interest(here, regime types).<sup>56</sup>

# Dependent variable: timing of measures and competing risks

Regarding timing, we capture the number of days it takes for a regime to react and first implement a particular measure after the WHO declares COVID-19 a global emergency, on 30 January 2020.

For each variable (except one), we employ a Latent Survivor Competing Risk framework and estimate Cox Proportional Hazards models of the different levels of severity of our suppress and support variables. How likely is it that, for example, a level-2 measure is implemented rather than a level-1 measure, and what are the effects of different regime types on these likelihoods? The competing risk approach lets us differentiate the implemented levels of COVID measures and therefore evaluate government decisiveness: the implementation of a more severe measure signifies a more decisive regime.

The stimulus package variable does not lend itself to a competing risk analysis because it does not have alternative levels that may be implemented, but just gives the date and size of the stimulus. However, a government may issue several stimulus packages, and the size and succession of these may indicate its decisiveness. Instead of a competing risk analysis, we run a Conditional Gap Time Repeated Events analysis, taking into account that repeated stimulus packages may indicate more decisive regimes.

# Independent variable: four regime types

To evaluate the effect of regime types on the likelihood of implementing stricter or more lenient measures more or less quickly, we employ a four-fold regime typology of liberal and electoral democracies, and electoral and closed autocracies. This kind of typology is frequently applied in comparative regime studies, and it has the advantage of being more nuanced than a binary distinction while at the same time allowing for a more substantive interpretation of differences between regimes than a gradual democracy scale. We use the four-fold v2x\_regime-variable from the Varieties of Democracy dataset to differentiate regimes.<sup>57</sup> V-Dem define liberal democracies as holding free and fair elections, and fulfilling the additional criteria of "access to justice, transparent law enforcement and the liberal principles of respect for personal liberties, rule of law, and judicial as well as legislative constraints on the executive."58



By contrast, electoral democracies hold free and fair elections but violate at least one of the additional criteria. Electoral autocracies do hold de jure multiparty elections for government and legislature that are, however, not free and fair, while closed autocracies to not hold multiparty elections at all.

#### **Control variables**

We include an ambitious list of control variables, and test multiple combinations of these to make sure that our findings hold beyond the single model specification we show here. Our control variables are potential confounders of any association we find between regime type and the speed and severity of government responses. We start with a parsimonious model by including the log of GDP per capita, a measure of government effectiveness, and the log of the daily cumulative number of infections as a proportion of the population. GDP per capita is a common proxy for economic development as well as state capacity, both of which are known to vary with regime type, but both might also affect the ability to impose corona measures and can therefore be considered potential confounders. We use figures from the World Development Indicators to measure GDP. We also use the World Bank Worldwide Governance Indicators' index of government effectiveness for very similar reasons: government effectiveness is known to vary with regime type, and it is also likely to facilitate or impede COVID measures.<sup>59</sup> The indicators measures perception of government effectiveness and combines a variety of sources such as population surveys and evaluations by NGO and business organizations. The proportion of infected among the population increases the scale of the challenge and therefore the motivation to impose measures; it may also vary due to systematic differences in regime responses. We construct the variable from the case count in OxCGRT and World Bank population figures. Note that to avoid potential endogeneity of case numbers and suppress measures, we introduce a time-lag on the indicator of daily cumulative infections (as we do on all time-varying determinants).

Next, we add to this initial group of control variables two sets that are specific to the suppress and support measures, respectively. In the suppress models, we include hospital beds per 10,000 inhabitants, population density, the lagged stringency index from OxCGRT, and the daily cumulative number of deaths as a share of the population. Hospital bed availability affects the scale of the challenge and therefore the need to implement suppress measures, and varies with the nature of the health care system, which in turn may vary with regime type. Population density may differ between regimes and may accelerate the spread of the disease and therefore require harsher suppress measures. OxCGRT's Stringency Index is a sum index that reflects the severity of the combined imposed suppress measures. Stringency may vary with regime type and also affect how likely it is that additional measures will be imposed. Hence, we include a lagged version capturing the previous day's stringency. 60 The number of deaths further increases the problem load, and may also vary due to systematic differences in regime responses. We add four variables to the support models: annual GDP growth; the share of the population between 15 and 64, a lagged economic support index from OxCGRT, and the log of total sum issued in stimulus packages to date. GDP growth is known to vary systematically between regime types; it may also inhibit a country's ability to grant economic support. A larger population at working age (i.e. between 15 and 64) requires larger economic support measures when working is no



longer possible; and democracies and autocracies by and large have different population structures. The level of economic support measure already implemented affects the need for any further measures, and might also differ regularly between regime types. Finally, we complete both the support and suppress models with the log of population size, and a six-fold categorization of world regions. Larger countries might face more difficulties implementing COVID measures, and are more likely to have autocratic regimes. World regions often gather countries of similar regime types, and diffusion processes might lead to similar COVID measures.

# Robustness: alternative model specifications

We think that all of the above amounts to a nuanced and promising operationalization and model specification. However, we also implement a range of alternatives to assess the robustness of our findings. Findings of these alternative model specifications can be found in our extensive online appendix that documents all of our analyses. All of these alternative models confirm the overall finding of the article.

As for the time-frame that forms the basis of our event history models (days elapsed since the WHO declaration of a global emergency), we rerun all models using the days elapsed since a given country experiences its first confirmed cases. The alternative models reflect a more subjective threat scenario that might alter the associations between covariates.

Regarding the severity of measures, we run two alternative specifications to the competing risk analysis. First, we estimate a set of "pooled" models for all dependent variables in which we do not discriminate between severity levels of measures and record any measure that has been implemented. Second, we estimate "maximum" models for all government measures in which we register an event only once the most severe level of the respective measure has been implemented. These two alternative specifications depict two scenarios in which difference between regimes play out either with any implemented measure, or only the most dramatic ones.

We rerun all models with two *alternative regime conceptualisations*: a dichotomous distinction between autocracies and democracies; and a gradual measure of levels of democracy. The dichotomous regime measure we derive form V-Dem's four-fold variable we have used above (v2x\_regime). The gradual measures is from V-Dem's variable of electoral democracy (v2x\_polyarchy).<sup>61</sup>

In sum, we estimate Cox models for eleven response measures, three specifications of the dependent variable event (including competing risks with varying outcome categories), two time-frames, three regime measures, and four combinations of control variables for a total of 3696 models.

# Findings: more authoritarian does not mean more (or less) decisive

The following figures illustrate findings from (a subset of) our competing risk analysis. We think the selection is a good representation of our overall results, which can be found in the online appendix. The plots below show regime effects on COVID measures and can be read as follows: The dots and whiskers represent regression coefficients from Cox Proportional Hazards models, depicted as hazard ratios, with confidence intervals. Hazard ratios give the relative risk - in this case the relative risk that one of the three less democratic regime types, compared to the reference category, liberal democracy, implements a given measure. The three types are given in the columns of the figures. A hazard ratio lower than one means that a regime is less likely than a liberal democracy to implement a particular measure; a hazard ratio higher than one indicates it is more likely. For example, a hazard ratio of HR = 2means a regime is twice as likely as a liberal democracy to implement a measure at any given time. Note that for more convenient interpretation, the x-axis is given in a log-scale.

On the y-axis on the left-hand side, we see the respective response measure. Each line in the figures represents one model, each with a different dependent variable, i.e. a different level of a given response measure. These are grouped in vertical panels into the different levels of severity of the measures, indicated on the righthand side of the figure. The lowest line of panels gives effects of implementing a level-1 measure, the second line a level-2 measure and so forth. All measures have at least two levels (see Figure 1). There are fewer measures in the two upper rows, because some measures do not have three or more levels.

To asses all the competing risks of, for example, restrictions on international travel, the reader can examine the top row of all panels. We can use this differentiation to assess regime decisiveness: If more autocratic regimes were more decisive, we would see them implement the more severe-level measures more quickly than liberal democracies.62

Figure 2 shows the models on suppress measures. Overall, there is almost no evidence that less democratic regimes react more decisively to suppress the virus. Most effect sizes are very small and, more importantly, not statistically significant. Interestingly, electoral democracy does not differ much from the more authoritarian regimes types, electoral and closed autocracies.<sup>63</sup>

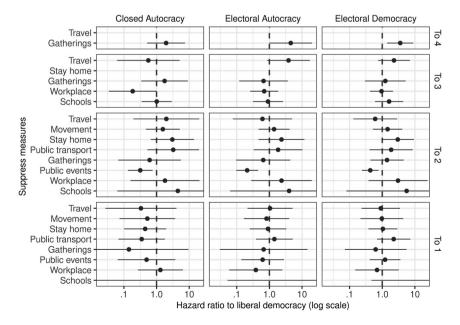


Figure 2. Effects of three regimes on competing suppress measures.

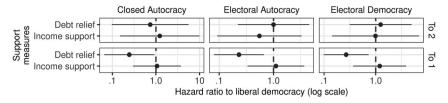


Figure 3. Effects of three regimes on competing support measures.

Some coefficients even are smaller than 1, indicating that a given less democratic regime is slower and less likely to implement a given measure than a liberal democracy. For example, all three less democratic regime appear to be less likely and slower to implement level-2 restrictions on public events. Closed autocracies implement level-3 workplace closing more decisively.

Considering the competing risks of decisiveness, there is no pattern that suggests that less democratic regimes are particularly quick to implement more rigorous measures (i.e. the ones in the upper panels). Effect sizes would have to be positive, larger, and more significant in upper panels. They are not.

There are only a few exceptions to the overall pattern: electoral democracies are (just) faster to implement level-2 stay home orders. Both electoral democracies and electoral autocracies implement level-4 restrictions on gatherings more quickly. (There are two off-the-charts effects - on level-3 stay home orders and level-4 restrictions on international travel, but these findings rest on very few observations and are not very reliable.)

A similar picture emerges with regard to economic support measures (Figure 3). More authoritarian regimes are *not* less decisive to issue economic support measures. By contrast, in most instances, there is virtually no difference between regime types. Almost all hazard ratios are all but identical to 1, and not significant by a stretch.

The sole exception - and only result lending support to expectations raised by theory - are level-1 debt relief measures ("Narrow relief, specific to one kind of contract", as opposed to level 2 "broad debt contract relief"). Here, all three less democratic types are indeed more reluctant and less decisive to implement measures than liberal democracies.

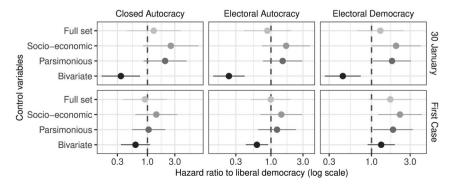


Figure 4. Effects of three regimes on timing of repeated stimulus packages.

On stimulus packages, we ran a Conditional Gap Time Repeated Events analysis – there are no competing risks here, stimulus packages are issued or not - but the measure can be implemented repeatedly, and this is what the model accounts for. Because the model is less complex (no competing risks) we can include two robustness checks in Figure 4, the alternative time-frame, and different control variable configurations. The upper and lower panels now show the two different time-frames - days elapsed since 30 January and the first infections in a given country - instead of COVID measure levels. The y-axis now gives four different configurations of control variables instead of the different outcome measures (from bottom to top: bivariate models, parsimonious controls, plus suppress-specific or support-specific controls, and a full model plus region and population).

Similar to our other findings, there are no robust effects indicating that less democratic regimes are less decisive when issuing stimulus packages. Some configurations of controls even suggest that less democratic regimes might be more decisive; however, these apparent effects disappear once the full set of control variables is introduced. Note that from the bivariate models one might get the impression that authoritarian regimes are significantly slower to issue stimuli. There is a chance that omitted variable bias might have contributed to widespread findings about the importance of regime effects in previous studies. Our findings thus have significance not only for our understanding of COVID-related policies but also for the broader study of regime types and their political implications.

# Robustness checks: findings

We test a number of alternative model specifications to the robustness of our findings. All of them amount to the same conclusion: regime types do not significantly affect the decisiveness of government responses to COVID-19. Our robustness checks include tests of alternative time-frames, regime variables, operationalisations of the outcome event, and configurations of control variables, and all combinations of these amount to a total of 3696 estimated models. The complete findings can be found in our extensive online appendix.

## Regime variables

We test two alternative regime variables, a dichotomous and gradual measure. Both lead to very similar conclusions. In either measure, democratic (or more democratic) regimes do not implement suppress measures faster, or support measures more slowly, regardless of the examined time-frame, outcome event, or configuration of control variables.

# Pooled severity levels and maximum severity levels

Rather than differentiating between different levels of severity of a measure, as we have done in the competing risk analysis, we run a set of models that records any measure implemented, regardless of severity, and one that records only the implementation of the maximum severity level of each measure. Findings are similarly non-confirmative.

## Multistage models

If autocracies are not more eager to introduce COVID restrictions, are they maybe more reluctant to retract them once they are in place? To answer this question, we



estimated a series of multistage models that examine not only the introduction of measures, but also how quickly different regimes take them back. However, the answer is no. More autocratic countries are not more reluctant to retract measures once they are in place.

#### **Conclusion**

We are at the very early stages of understanding the political dimension of the COVID-19 pandemic, and to date we lack a full understanding of why governments have responded in the way that they have. While there been an outpouring of new research into the political drivers of government COVID policies (and their effectiveness) across the world, the new research is characterized by a range of limitations, including inappropriate methods, under-developed theory and mixed findings. In this article, we offer a focused and methodologically robust analysis of the impact of regime type on a specific outcome, namely the decisiveness of the government policy response.

A wide array of scholarship has shown regime type to be instrumental in shaping social, economic, and public health policies. However, our event history analysis of government responses across multiple regime types in 186 countries suggests that regime type was not a determining factor in driving the divergent policy responses to the pandemic that the data reveals. We find almost no evidence that the decisiveness of policy response is driven by the country's regime type, and our analysis holds up across numerous robustness checks using diverse measures of our key variables.

Our findings raise the question of why regime type has not significantly influenced the government response to the coronavirus pandemic when so many prior studies have identified the key role that political institutions play in shaping the domestic policy making process. One option may be that the importance of regime type has simply been overstated in prior research. Several studies have questioned the relevance of political institutions in shaping economic and public policies and in affecting social outcomes such as poverty alleviation.<sup>64</sup> As mentioned, we find that the apparent influence of regime type on COVID policies that appears in bivariate models washes away once a robust set of control variables are included. It is thus possible that regime type is simply not an important factor in the politics of public policy making.

However, given the sheer number of high-quality studies that have identified an important role for regime type in domestic policy making, a more compelling alternative explanation is that the nature of the coronavirus crisis generated pressures and incentives that were so intense that they simply outweighed the divergent incentive structures generated by regime differences in more normal times. As discussed at the beginning of the article, crises pose immediate threats that have to be dealt with quickly and in a context of great uncertainty. One of the defining features of a crisis moment is that standard operating procedures and routines do not continue as normal, and the predictable work of well-established institutions is replaced by ad hoc and often unconventional arrangements.<sup>65</sup> In some ways, such situations resemble periods of regime transition when politics is in flux and the normal rules and institutions are in question.<sup>66</sup> The COVID pandemic represented a transboundary crisis of epic proportions. The threat to public health was severe and, in the early months at least, highly uncertain. The spread of the virus led to exponential rises in death rates in every country it affected and policy makers had to scramble to respond. The

virus also threatened economic stability as people quickly limited their activities and it became clear that virus suppression measures would have a devasting economic impact. Given the scale of the crisis and the speed at which it hit, it is possible that distinctive and divergent incentives created by democratic and authoritarian institutions were effectively displaced, as the usual processes of policy making shifted to an emergency footing and political elites had to face multiple severe challenges at once. Political institutions may simply be less important in a crisis.

Further research could add to our understanding of the political dimensions of the COVID response by examining a number of additional issues. Our analysis focuses in particular on the onset of COVID response policies, and we do not analyse the duration and lifting of these policies in detail. It may be the case that regime type plays a more distinct role in the latter stages of the policy response and that decisions to ease suppression measures and lift economic protections may align more clearly with the boundaries between different regime types. The tentative findings from a series of multistage models in our online appendix do not suggest this: here, lifting measures is just as unaffected by regime type as introducing them. However, many countries had their COVID measures still in place at the end of our period of observation (17 June 2021). We might have to wait until the pandemic is over before models on easing and lifting measures offer more reliable insight.

Future research might also want to address the potential interaction effects between a regime's suppress and support measures. Countries with more lenient suppress measures may not experience the same economic distress, altering the necessity to implement support measures, and in turn their effects (and vice versa).

There is also considerable potential for more rigorous research into the thorny question of whether different regimes have been more or less effective at realizing their policy aims of suppressing the virus and protecting the economy. While several recent studies have sought to address these issues, there remains a need for more systematic analysis of the political, economic and epidemiological drivers of the outcomes of COVID-related policies. Further research could also examine the question of whether government responses were influenced by cross-border diffusion processes. If particular sets of responses were influenced by policy spillover from neighbouring countries and clustered by region, it might account for the limited impact of regime type. Correcting for some of the gaps, flaws and limitations in the early analysis of the politics of the pandemic could significantly change understandings of the role of regime type in times of social and political turmoil.

#### **Notes**

- 1. Gill and Nishio, "Recovery Bypassing Poorest Countries"; WHO, "WHO Coronavirus
- 2. Sen, "Democracy Universal Value"; Lake and Baum, "Invisible Hand of Democracy"; Avelino, Brown, and Hunter, "Effects of Capital Mobility"; Acemoglu and Robinson, Economic Origins of Dictatorship; Stein, "Democracy, Autocracy, and Everything."
- 3. Niblett et al., "Why Democracies Do Better"; "Democracies Contain Most Effectively," The Economist, June 6, 2020; Frey, "Democracies Have Proven Edge," Financial Times, May 5, 2020.
- 4. For example, Cheibub, Hong, and Przeworski, "Rights and Deaths"; Frey, Chen, and Presidente, "Demoracy, Culture, and Contagion"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Lins, Rebouças, and Domingos, "Democracy Really Best Medicine?"; Engler et al., "Democracy in the Pandemic."
- 5. Ferguson et al., "Impact Non-Pharmaceutical Interventions."

- 6. Alon et al., "Policy Responses Developing World."
- 7. Maloney and Taskin, "Determinants of Social Distancing."
- 8. Hale et al., "Variation in Government Responses."
- 9. Tooze, Shutdown: Covid World Economy.
- 10. Cox and McCubbins, "Political Structure Economic Policy."
- 11. Glanz and Robertson, "Lockdown Delays Cost Lives," The New York Times, May 5, 2020; Stewart and Sample, "Enforcing UK Lockdown Earlier," The Guardian, June 6, 2020.
- 12. Alon et al., "Policy Responses Developing World"; Alvarez, Argente, and Lippi, "Simple Planning Problem Lockdown"; Amuedo-Dorantes et al., "Timing Is Everything"; Argente, Hsieh, and Lee, "The Cost of Privacy"; Bosancianu et al., "Political and Social Correlates"; Cepaluni, Dorsch, and Dzebo, "Populism, Political Regimes, COVID-19."
- 13. Alon et al., "Impact COVID-19 Gender Equality"; Alvarez, Argente, and Lippi, "Simple Planning Problem Lockdown"; Argente, Hsieh, and Lee, "The Cost of Privacy"; Ashraf, "Economic Impact Government Interventions."
- 14. Rosas, "Bagehot or Bailout?," 176; Justesen, "Democracy, Dictatorship, and Disease," 375.
- 15. See also Hale et al., "Variation in Government Responses."
- 16. Hale et al., "Oxford Covid-19 Response Tracker." 19 May 2021 is the last time a country that had not previously done so implemented a given measure. This is the point in time up to which our event history models will estimate the likelihood of introducing a measure, and hence the time until which it makes sense for us to interpret a descriptive timeline.
- 17. Cepaluni, Dorsch, and Branyiczki, "Political Regimes and Deaths"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Frey, Chen, and Presidente, "Demoracy, Culture, and Contagion"; Engler et al., "Democracy in the Pandemic"; Narita and Sudo, "Curse of Democracy"; Toshkov, Carroll, and Yesilkagit, "Government Capacity, Societal Trust."
- 18. Trein, "Authoritarian Rule Democracy Crisis."
- 19. Cepaluni, Dorsch, and Branyiczki, "Political Regimes and Deaths"; Narita and Sudo, "Curse of Democracy."
- 20. Annaka, "The Truth and Myth."
- 21. Piazza and Stronko, "Democrats, Authoritarians, Coronavirus"; Shvetsova et al., "Institutional Origins COVID-19 Policy."
- 22. Cheibub, Hong, and Przeworski, "Rights and Deaths"; Chiplunkar and Das, "Political Institutions Policy Responses"; Annaka, "The Truth and Myth."
- 23. Narita and Sudo, "Curse of Democracy"; Lins, Rebouças, and Domingos, "Democracy Really Best Medicine?"
- 24. Hancké, Overbeke, and Voss, "Crisis and Complementarities."
- 25. Narita and Sudo, "Curse of Democracy."
- 26. Alon et al., "Impact COVID-19 Gender Equality"; Alvarez, Argente, and Lippi, "Simple Planning Problem Lockdown"; Argente, Hsieh, and Lee, "The Cost of Privacy"; Ashraf, "Economic Impact Government Interventions."
- 27. Cheibub, Hong, and Przeworski, "Rights and Deaths"; Engler et al., "Democracy in the Pandemic"; Lins, Rebouças, and Domingos, "Democracy Really Best Medicine?"; Petersen, "Democracy, Authoritarianism, COVID-19 Testing"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Toshkov, Carroll, and Yesilkagit, "Government Capacity, Societal Trust."
- 28. Adolph et al., "Pandemic Politics"; Annaka, "The Truth and Myth"; Chiplunkar and Das, "Political Institutions Policy Responses"; Cepaluni, Dorsch, and Branyiczki, "Political Regimes and Deaths"; Frey, Chen, and Presidente, "Demoracy, Culture, and Contagion"; Narita and Sudo, "Curse of Democracy"; Piazza and Stronko, "Democrats, Authoritarians, Coronavirus"; Trein, "Authoritarian Rule Democracy Crisis."
- 29. Cheibub, Hong, and Przeworski, "Rights and Deaths"; Chiplunkar and Das, "Political Institutions Policy Responses"; Lins, Rebouças, and Domingos, "Democracy Really Best Medicine?"; Piazza and Stronko, "Democrats, Authoritarians, Coronavirus."
- 30. Annaka, "The Truth and Myth"; Engler et al., "Democracy in the Pandemic"; Narita and Sudo, "Curse of Democracy"; Petersen, "Democracy, Authoritarianism, COVID-19 Testing"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Shvetsova et al., "Institutional Origins COVID-19 Policy"; Toshkov, Carroll, and Yesilkagit, "Government Capacity, Societal Trust."
- 31. Piazza and Stronko, "Democrats, Authoritarians, Coronavirus"; Narita and Sudo, "Curse of Democracy."



- 32. Davenport and Armstrong, "Democracy Violation Human Rights"; Davenport, State Repression Democratic Peace; Møller and Skaaning, "Autocracies, Democracies, Civil Liberties."
- 33. Lake and Baum, "Invisible Hand of Democracy"; Boix, Democracy and Redistribution; Acemoglu and Robinson, Economic Origins of Dictatorship; Avelino, Brown, and Hunter, "Effects of Capital Mobility."
- 34. Worsnop, "Domestic Politics WHO Health"; Justesen, "Democracy, Dictatorship, and Disease"; Schwartz, "Compensating for 'Authoritarian Advantage."
- 35. Kaufman and Segura-Ubiergo, "Globalization, Spending Latin America"; Mulligan, Gil, and Sala-i-Martin, "Democracies Different Public Policies."
- 36. Sen, "Democracy Universal Value"; Sen, Poverty and Famines.
- 37. Brown, "Reading, Writing, Regime Type"; McGuire, "Political Regimes Social Performance."
- 38. Boix, Democracy and Redistribution; Acemoglu and Robinson, Economic Origins of Dictatorship; Wigley and Akkoyunlu-Wigley, "Impact Regime Type Health."
- 39. Sen, "Democracy Universal Value."
- 40. Dahl, Polyarchy: Participation & Opposition.
- 41. "Coronavirus Germany's Greatest Challenge," Deutsche Welle, March 18, 2020.
- 42. Engler et al., "Democracy in the Pandemic."
- 43. Brown, "Reading, Writing, Regime Type"; McGuire, "Political Regimes Social Performance."
- 44. Lake and Baum, "Invisible Hand of Democracy"; Boix, Democracy and Redistribution; Acemoglu and Robinson, Economic Origins of Dictatorship; Huber, Mustillo, and Stephens, "Social Spending Latin America."
- 45. Chwieroth and Walter, "Great Expectations, Bank Bailouts."
- 46. IMF, "World Economic Outlook" Chapter 2; International Labour Office, "Impact COVID-19 G20 Economies."
- 47. Tooze, Shutdown: Covid World Economy, 5.
- 48. "It's Catching," The Economist, July 31, 2021.
- 49. Rasmussen, "Covid-19 Changed Lobbying Europe"; Fuchs, Sack, and Spilling, "Function, Shock or Resources?"
- 50. International Labour Office, "Trend Trade Unions COVID-19."
- 51. Hale et al., "Oxford Covid-19 Response Tracker."
- 52. For example Cepaluni, Dorsch, and Branyiczki, "Political Regimes and Deaths"; Piazza and Stronko, "Democrats, Authoritarians, Coronavirus"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Trein, "Authoritarian Rule Democracy Crisis"; Annaka, "The Truth and Myth"; Chiplunkar and Das, "Political Institutions Policy Responses"; Narita and Sudo, "Curse of Democracy."
- 53. In addition, OxCGRT differentiates whether a measure is implemented nationwide or locally. We code measures regardless, also if it is regionally limited: local limitations are most likely due to local hot-spots, not a sign of lack of decisiveness. What is more, most measures are implemented nationwide in most countries.
- 54. For more details, please see our codebook provided with the supplementary material to this
- 55. For other applications, see for example Adolph et al., "Pandemic Politics"; Cheibub, Hong, and Przeworski, "Rights and Deaths"; Cepaluni, Dorsch, and Branyiczki, "Political Regimes and Deaths"; Lins, Rebouças, and Domingos, "Democracy Really Best Medicine?"; Sebhatu et al., "Explaining the Homogenous Diffusion"; Toshkov, Carroll, and Yesilkagit, "Government Capacity, Societal Trust."
- 56. Box-Steffensmeier and Jones, Event History Modeling, Golub, "Survival Analysis."
- 57. Coppedge et al., "V-Dem Dataset 2021."
- 58. Coppedge et al., "V-Dem Codebook V12," 287.
- 59. Kaufmann, D., Kraay, A., and Mastruzzi, M., "Worldwide Governance Indicators Methodology."
- 60. Note that the control also alleviates any endogeneity problems between case numbers (infections and deaths) and outcome measures by holding constant previous levels of decisiveness (or stringency).
- 61. For similar approaches using multiple regime variables to assess effects on Covid measures, see also Frey et al. "Demoracy, Culture, and Contagion." and Cepaluni et al. "Political Regimes and Deaths.".

- 62. We test for non-proportional hazards in all models using the test proposed by Grambsch and Therneau, "Proportional Hazards Tests." We include time-interactive terms for all variables showing signs of non-proportionality. For clarity we report proportional hazards without time-interactive terms here. Only very few of the regime-variables displayed nonproportionality issues, and none of the included time-dependent effects substantially altered the findings reported here. We discuss the time-interactive models in detail in the online-appendix.
- 63. Note that we have "zoomed in" on the y-axis to show the important coefficient range, at the cost of losing some outliers from the figure. These unusually large (or small) coefficients are due to data distortions, such as small event numbers in some competing-risk categories. We show a version of the figure with the full coefficient range in the online appendix.
- 64. Ross, "Good for the Poor?"; Mulligan, Gil, and Sala-i-Martin, "Democracies Different Public Policies"; Kaufman and Segura-Ubiergo, "Globalization, Spending Latin America."
- 65. Lipscy, "COVID-19 Politics of Crisis."
- 66. O'Donnell and Schmitter, Transitions from Authoritarian Rule.

#### Disclosure statement

No potential conflict of interest was reported by the author(s).

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