THE POLITICS OF PANDEMICS:
DEMOCRACY, STATE CAPACITY, AND ECONOMIC INEQUALITY

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Abstract

What political features make epidemics more likely and deadly? Do they affect the speed with which governments implement containment policies? This paper is the first to explore the effects of democracy, state capacity, and income inequality on epidemic dynamics. In democracies, greater transparency, accountability, and public trust are expected to reduce the frequency of epidemics and shorten response time. State capacity has the same effects because of the government's greater organizational ability to formulate and implement policy. Finally, income inequality has the opposite effect because it exposes an impoverished part of the population to the pandemic, controlling for overall standards of living. Empirical tests using data on epidemic outbreaks in 146 countries since 1995 and on the COVID-19 global pandemic show that state capacity reduces the number of epidemics and enhances the government's response through effective policymaking. Democracy has no systematic effects on the occurrence of epidemics. Inequality increases their frequency. The main theoretical implication is that state capacity is a bulwark against the occurrence and ill effects of crises and emergencies, while economic inequality exacerbates them.

Introduction

The COVID-19 global pandemic has reignited long-standing debates about the roles of democracy, state capacity, and economic inequality in coping with national emergencies and

crises. Given the disproportionately high numbers of cases and deaths in Europe and the United States during the first nine months of COVID-19, the conventional wisdom is that democracies are less prepared to deal with epidemics and pandemics due to their inability to make decisions quickly and to compel the population to comply with whatever measures are put in place (e.g. Berengaut 2020; Bieber 2020; Kleinfeld 2020). The pandemic has also brought the spotlight on state capacity, or the extent to which the government has the organizational mechanisms at its disposal to implement policy efficiently and on a timely basis, especially in the areas of testing and the provision of healthcare (e.g. Klinger-Vidra et al. 2020; Rosenberg 2020). Meanwhile, libertarians blame state bureaucrats for misidentifying the priorities during the crisis (Caplan 2020). Finally, COVID-19's impact has also been discussed in the context of the broader debate about the sources and consequences of rising economic inequality (e.g. Babic 2020; LaFave 2020; Ray 2020).

While research on the politics of epidemics and pandemics is scant, there is a large literature on economic crises in sociology and political science. Writing about the East Asian financial crisis of 1997, Stephan Haggard (2000) concluded that democracies have an advantage in managing economic and financial crises only when the government has preexisting ties with the business and financial sectors that it can use to coordinate and implement a response, as in South Korea in contrast to Thailand. Semi-authoritarian (Malaysia) or dictatorial regimes (Indonesia) took action more swiftly, but with less consistency, and with uncertain outcomes due

to favoritism and corruption (Guillén 2001). During the 2008-2010 global financial crisis, which primarily affected the high-income democracies, incumbents on both sides of the Atlantic were defeated at the polls, but democracy itself survived and economic growth resumed relatively quickly in most countries (Diamond 2011; Guillén 2016). By contrast, the Arab Spring, which involved both an economic downturn and a crisis of political legitimacy, resulted in the downfall

of several governments, the overthrow of political regimes, a continued economic slide, and, in some cases, civil war (UN 2016).

While democracies have managed the economic and financial crises of the last three decades relatively successfully, a crisis induced by a pandemic may be different in terms of the sacrifices that it demands from the population in order to contain it. The conventional wisdom suggests that dictatorships can act more swiftly and resolutely to impose quarantines and other measures that directly infringe on individual liberties. By contrast, in a democracy the government faces a number of constraints when it comes to imposing restrictions on the free movement of people and using private data for monitoring and policymaking purposes. The counter-argument is that only democracies can be transparent enough to organize a prompt response to a public-health emergency, build public trust, and elicit collaboration among organized groups in society (Berengaut 2020; Bieber 2020; Kleinfeld 2020). In addition, democratic governments are accountable to the people, and thus face a strong incentive to save lives. Using data on thousands of epidemic outbreaks of disease since 1960, the Economist (2020) found that democracies exhibited slightly lower rates of mortality than dictatorships at every level of GDP per capita.

Governments subject to democratic accountability may harbor all the good desires and face the right incentives to save lives during a pandemic, but, especially in the case of young

democracies, they may lack the organizational capacity to act swiftly and efficiently (Hanson 2015). State capacity is essential to effective policy formulation and implementation (Savoia and Sen 2015). The sociology of development has invoked the concept of state capacity to explain why some countries do better than others over the long run thanks to a Weberian state apparatus with the administrative capacity to allocate resources and monitor performance (Evans and Rauch 1999), capitalize on societal advantages and institutions (Hamilton and Biggart 1988;

Reinsberg et al. 2019), and achieve internal coherence (Chibber 2002). State capacity can also reside within niches or subunits of the state, and serve as a foundation for development (McDonnell 2017).

Previous research has also pointed to economic inequality as a factor that makes it harder for countries to overcome economic and financial crises, which in turn tend to exacerbate inequality in a two-way causal pattern. Income and wealth inequalities drags down the economy, especially during times of crisis. For instance, the recovery from the Great Recession triggered by the 2008 financial crisis was slower than any other post World War II recovery due to the stagnation of middle-class purchasing power (Temin and Vines 2013:132). Wealth inequality has deeper and longer-lasting effects because it polarizes the economy (Picketty and Saez 2014), and increases its rigidity and inability to adapt to changing circumstances due to the entrenchment of interest groups (Olson 1982). Both income and wealth inequalities undermine the ability of governments to deal with crises of an economic kind (Guillén 2016:70-74).

In this paper I draw on these three strands of the literature to cast light into which countries are more exposed to epidemic outbreaks and have more difficulty implementing containment policies. I draw on a variety of data at the country level of analysis over time to

provide the first empirical investigation of the general proposition that democracy and state capacity tend to exert positive effects, while the opposite is true of economic inequality.

Politics and Pandemics: Theoretical Arguments

There is considerable debate in the social sciences as to the relationship between political variables and the wellbeing of the population. One long-standing area of dispute involves the

effect of democracy on economic growth and on indicators of wellbeing in the areas of education and health. In democracies, political leaders seek reelection and thus must deliver appropriate levels of wellbeing to a majority of the population. By contrast, in dictatorships leaders might prefer to allocate rents and subsidies to core support groups in their quest to perpetuate themselves in power. The implication is that democracies tend to invest more than dictatorships in the provision of education and healthcare services to a broader segment of the population (Lake and Baum 2001).

The empirical evidence is largely consistent with the democracy-health link. In a detailed review of the literature, the political scientist Adam Przeworski (2004) concluded that democracies have lower mortality rates at every age than dictatorships, a finding that holds when controlling for per capita income and the passage of time. He suggested that democracies achieve average life expectancies seven years longer than dictatorships. More recently, a research team led by economists Daron Acemoglu and James Robinson (2019), concluded that democracy boosts GDP per capita in the average country by approximately 25 percent during the first 25 years of democratic rule, and that the effect was due to "increasing investment, encouraging economic reforms, improving the provision of schooling and health care, and reducing social unrest" (2019:51). Bivariate research on COVID-19 mortality in a cross-section of countries

found cross-sectional correlations between trust, democracy, state capacity, and other political variables, on the one hand, and mortality, on the other (Bosancianu et al. 2020). By contrast, political scientist Rory Truex (2017) conducted a sensitivity analysis of the relationship between democracy and health-related outcomes, finding a relatively weak association with higher life expectancies and lower infant mortality rates, but no association (or even a negative one) with education, immunization, and healthcare services.

In addition to the provision of more robust healthcare services and better health

outcomes, democracies have other characteristics that enhance the government's response to epidemic outbreaks. Democracies are associated with higher levels of transparency, accountability, and public trust than dictatorships, and especially less fluctuations of those variables over time (Adserà, Boix, and Payne 2003), traits that make a policy response to a sudden outbreak faster and easier to implement. For these reasons, I expect:

> Proposition 1: Democracy reduces the frequency of epidemic outbreaks and enhances the government's speed of response.

Democracies, however, may or may not have the necessary means at their disposal to effectively formulate and implement policy, even after adjusting for the level of economic development. The debate as to whether democracy and state capacity covary is a long-standing one in the social sciences. State capacity refers to the administrative and organizational ability of the state to identify, evaluate, formulate, and implement policies (Savoia and Sen 2015). It is important to distinguish between state capacity and state goals or policy priorities (Levi 1988; North 1981). State capacity is "the ability of state institutions to effectively implement official

goals" (Hanson and Sigman 2019:2), or "the institutional capacity of a central state, despotic or not, to penetrate its territories and logistically implement decisions" (Mann 1993:59). In other words, state capacity is the administrative infrastructure that enables states to pursue certain goals or priorities, to implement policy, to get things done (Mann 1984; Tilly 1990). As Skocpol (1985:17) put it, states have "capacities" related to their "territorial integrity, financial means, and staffing," and these capacities enable them to address crises and emergencies more readily. Sociologists of development have conceptualized and measured state capacity in terms of the

extent to which state structures exhibit the characteristics of the Weberian ideal-type of legal rational, or bureaucratic, rule (Evans and Rauch 1999). In this vein, "sheer sovereign integrity and the stable administrative-military control of a given territory are preconditions for any state's ability to implement policies. […] Loyal and skilled officials and plentiful financial resources are basic to state effectiveness in attaining all sorts of goals" (Skocpol 1979:16). State capacity ultimately involves "the ability of the permanent machinery of government to implement policies, deliver services and provide policy advice to decision-makers" (Polidano 2000: 805).

When it comes to health outcomes, the evidence indicates a strong link between, on the one hand, state capacity, and, on the other, lower infant mortality (Hanson 2015), lower child mortality (Dawson 2010), and higher life expectancy (Burkle 2006). Prior research on epidemics found that countries with "low levels of state capacity have failed to contain the spread of a contagion and mitigate its economic and political toll," with about 75 percent of worldwide epidemics occurring in "countries where war and conflict left little or no state capacity" (Burkle 2006:247), as in Sierra Leone during the Ebola epidemic (Anderson and Beresford 2015). Similarly, the African swine fever epidemic of the late 1990s overwhelmed local capacities to respond throughout West Africa (Brown et al. 2018). For these reasons, I expect:

> Proposition 2: State capacity reduces the frequency of epidemic outbreaks and enhances the government's speed of response.

A third factor affecting health outcomes is economic inequality, which at the cross national level is deeply rooted in political patterns. The voluminous cross-national literature on inequality and health offers mixed evidence when it comes to identifying a direct link between income inequality and health (Beckfield 2004; Neckerman and Torche 2007; Elo 2009). Recent research has shown not only that changes in income inequality over time tend to reduce

longevity in advanced countries, but also that income redistribution through taxation and transfers increased average life expectancy (Neumayer and Plumper 2016). Similarly, obesity is associated with economic inequality, though only in high-income countries (Vogli et al. 2014).

Besides its effects on health outcomes, inequality tends to complicate efforts at epidemic prevention and control, for a number of reasons. First, workers at the lower end of the socioeconomic scale tend to have jobs that cannot be performed from the home during an outbreak, and thus need to continue commuting between home and work. For instance, the National Compensation Survey of the U.S. Bureau of Labor Statistics (BLS 2019a) shows that in 2019 approximately 25 percent of the top decile of wage earners had access to telework, and about 19 percent of the highest 25 percent of wage earners. By contrast, only one percent of the bottom 25 percent of wage earners did. The ability to telework is highly correlated with education: about 52 percent of workers with a college education or higher, versus 4 percent of those with less than a high school diploma (BLS 2019b). Second, a majority of "essential" workers during an epidemic outbreak earn relatively low wages, and they are required to go to

work during an emergency. In the state of Pennsylvania, two thirds of essential workers make less than the state's median household income of $60,000 (Feliciano Reyes 2020). Third, people with a higher level of savings are in a better position to stay at home during an epidemic, while those living from paycheck to paycheck need to take more risks in order to bring food to the table (Valentino-DeVries et al. 2020). Finally, the use of home delivery services for groceries and non-essential goods is beyond the reach of those at the bottom of the socioeconomic scale, who oftentimes have to stand in line for hours at food banks to meet their needs (North 2020). Based on the effects of economic inequality, I expect:

Proposition 3: Economic inequality increases the frequency of epidemic

outbreaks and undermines the government's speed of response.

Empirical Analysis

I test the propositions on the impact of political regime, state capacity, and economic inequality on epidemic dynamics using two cross-sectional and longitudinal datasets. Study 1 examines the occurrence of epidemic outbreaks worldwide between 1995 and 2019. Study 2 analyzes the speed with which a government-mandated lockdown came into being during COVID-19 as the most dramatic policy to curb the spread of a contagious disease.

Study 1: Epidemic Outbreaks, 1995-2019

The Emergency Events Database at the Catholic University of Louvain contains information on epidemic outbreaks (UCL 2020), with reasonably complete data since 1995. I estimated a model predicting the number of epidemic events in a given country-year by means of

a negative binomial regression with random effects and clustering by country, and also with pseudo country fixed effects (Allison and Waterman 2002). I chose the negative binomial model over Poisson regression because the sample variance exceeds the sample mean for the dependent variable (see Table 1).

To measure democracy, I used the Polity V scale, which ranges between 10 (full democracy) and -10 (complete autocracy), and provides a time-varying, annual indicator for a large number of countries (Center for Systemic Peace 2020). Alternatively, I used a time-varying dummy variable equal to one if the polity scale was equal or greater than 6, and zero otherwise, to test if a dichotomous measure of democracy yielded robust results.

To measure state capacity, I used the reversed-sign state fragility index, which oscillates

between 0 (no state fragility) and 25 (extreme state fragility), using the same source (Center for Systemic Peace 2020). This index is especially relevant in the context of epidemics because it approximates the state's "systemic resilience in maintaining system coherence, cohesion, and quality of life," and its ability to respond "effectively to challenges and crises" (Ferreira 2017:1301). Alternative measures of state capacity are less focused on crisis or emergency management, and are available for a much smaller number of countries. For instance, the Hanson-Sigman index of state capacity is not available for the last five years in the sample and contains more missing data throughout the period (Hanson and Sigman 2019). The correlation between the reverse-sign state fragility measure and the Hanson-Sigman index is nonetheless extremely high (.84), indicating that both are capturing a similar underlying concept. I also considered using tax revenue as a percentage of GDP as a proxy for state capacity. Due to missing data the sample was 65 percent smaller. The correlation between the reverse-sign state fragility measure and tax revenue for the available country-years was high (.37).

I used the income Gini coefficient to measure economic inequality, obtained as a time varying, annual measure from the V-Dem (2020) database. All analyses include two control variables: population density per square kilometer and GDP per capita in constant dollars adjusted for purchasing power parities (World Bank 2020). I also considered other control variables, but they had a considerable amount of missing data (more than 50%), and the correlations with GDP per capita were high enough to pose problems of multicollinearity: health care expenses as a percentage of GDP (correlation of .56), the proportion of the population above age 65 (.68), and life expectancy (.55). Finally, the number of tourist arrivals and departures might also potentially affect epidemic dynamics by virtue of the country's interconnections with the rest of the world. This variable also contained many missing data and was very highly correlated with GDP per capita (.70). Thus, the level of economic development, as measured by

GDP per capita, serves as a control for the healthcare system, the age structure of the population, life expectancy, and tourism. The descriptive statistics and correlations for the sample of 146 countries and 3,485 country-years between 1995 and 2019 appear in Table 1.

Table 2 reports the empirical results. In model A, the control variables behave as expected, with GDP per capita reducing the number of epidemics and population density increasing them. The number of cumulative epidemics until the previous year reduced epidemics in previous year, a surprising result that may be explained in terms of an experience effect, oftentimes driven by the fact that more domestic and international resources are deployed over time in countries that suffer from epidemics frequently, with the population also learning effective ways of minimizing their exposure (WHO 2018).

Model B provides support for two of the theoretical arguments: state capacity is associated with a smaller number of epidemics (proposition 2), and inequality with a greater one

(proposition 3). The democracy continuous score was not significant. The control variables behaved as expected: GDP per capita reduced the number of epidemics while population density increases it. The cumulative number of epidemics until the previous year did not reach significance. In model C, there is support for each of the three arguments, with the dichotomous measure of democracy being negative and significant. Finally, model D reports the pseudo fixed effects estimation with the same specification as model A for the purposes of assessing the robustness of the results. We lose 35 countries and 672 country-years in which there is no variation in the dependent variable over time. In this specification, state capacity is significant but not income inequality.

The magnitude of the significant effect of state capacity is very large. Using the estimates from model B in Table 1, a one standard deviation increase in state capacity leads to a 63 percent decrease in the expected number of epidemics ($\exp[-.1482 \times 6.66] = .37$). To put this finding in

context, one standard deviation of state capacity separates Norway from Senegal. A one standard deviation increase in inequality results in an increase of 15 percent in the expected number of epidemics (exp[.0144 × 10.00] = 1.15). Using the estimates from model C, a democracy has a 22 percent smaller expected number of epidemics than a dictatorship (exp[-.2511] = .78). Thus, the effect of state capacity is not only consistently significant across all models but also the strongest in terms of magnitude. I discuss the theoretical implications and the practical relevance of these findings in the discussion section.

Study 2: Speed to Lockdown during COVID-19

In order to further analyze the effects of political variables on epidemic dynamics, I obtained data on the timing of lockdowns by governments during early 2020 from media reports,

treating countries whose governments did not implement a lockdown as right censored. I defined a lockdown as a round-the-clock restriction of people movements through social distancing and sheltering in place. The closing of borders, schools, or stores by themselves were not considered to be lockdowns. I included in the analysis national lockdowns only. I estimated a Cox proportional hazards regression model, allowing for right censoring in the case of countries that did not implement a lockdown during the observation period starting in December 31, 2019 and ending on May 4, 2020). No country in the world announced a lockdown after the beginning of May. The sample for analysis includes 144 countries, 13,365 country-day observations or spells, and 90 lockdowns. The control variables included GDP per capita and the number of cumulative cases as of the previous day. Table 3 shows the descriptive statistics and correlations.

Table 4 reports the results. In models A and B, state capacity increased the hazard rate of a lockdown. Democracy and economic inequality failed to reach statistical significance. Curiously, neither GDP per capita nor the number of cumulative cases increased the hazard rate.

Considering subnational lockdowns (26 countries) in addition to the 90 national lockdowns made the effect of state capacity disappear. A plausible interpretation is that state capacity only makes national lockdowns more likely because subnational units (cities, provinces, or states) have their own varying degrees of administrative and organizational capacity.

The magnitude of the effect of state capacity is large. Using the estimates from model A in Table 4, the probability of a lockdown at mean state capacity is 54 percent (exp[.0749 × (-8.2578)] = .54), whereas at mean plus one standard deviation is 86 percent (exp[.0749 × (-9.2578 + 6.1675)] = .86). I discuss the theoretical and practical implications of these findings in the next section.

Discussion and Conclusion

The analysis of epidemics and lockdowns in this paper considered how countries fare when it comes to managing crises in terms of their political regimes, state capacity, and degree of economic inequality. The only systematic evidence was that state capacity reduced the frequency of epidemics between 1995 and 2019, and accelerated the process of implementing a lockdown during COVID-19. Countries with higher levels of state capacity are better prepared to deal with crises and emergencies (Ferreira 2017; Savoia and Sen 2015), and, most importantly, to reduce their rate of occurrence through preventative measures and a reduced exposure of the population to health hazards. For instance, the analysis resulted in a much higher probability of a lockdown for countries that score higher in state capacity, a finding that is consistent with the cross sectional study by Bosancianu et al. (2020). While Cronert's (2020) study on school closings during COVID-19 found no statistical connection between state capacity and school closings, the analysis of lockdowns in this paper clearly indicated that state capacity leads to greater speed of response.

Economic inequality was significantly associated with the number of epidemics, but not of lockdowns. Income and wealth disparities expose certain segments of the population more than others to hazards of all kinds, including health related ones. In turn, greater rates of infection may increase inequality in the wake of the pandemic, a two-way causation pattern that future research ought to explore by using carefully controlled longitudinal studies of individuals and families. In sum, inequality tends to increase the exposure of populations to epidemics at every level of state capacity and economic development. This finding is theoretically meaningful in two important ways. First, investing in state capacity is expensive, and it takes decades to build an effective administrative apparatus. If economic inequality is not held in check, such

investments will offer smaller returns to the population in terms of wellbeing. Second, ignoring inequality can seriously bias empirical results in favor of the role of state capacity in addressing crises and emergencies.

The analysis produced no systematic evidence on the impact of democracy, except when using a dummy variable. As Hanson (2015) has noted, democracy and state capacity are two different concepts with considerable overlaps in practice because a majority (though not all) democracies in the world score high on state capacity, and many (but not all) dictatorships score low on state capacity (in this paper, the overall correlation was .56). Even when the democracy dummy variable was found to be significant, the magnitude of the effect paled by comparison with that of state capacity.

Thus, this paper indicates that the public debate about the comparative ability of democracies and dictatorships to cope with a pandemic such as COVID-19 is misplaced. Rather than focusing on the nature of the political regime (e.g. Frey, Chen, and Presidente 2020), it makes more sense to shift the attention towards state capacity and economic inequality. It is also worth noting that consolidated democracies tend to be richer countries with higher levels of state

capacity and lower degrees of economic inequality. Having said that, being a democracy in and of itself does not guarantee success when it comes to epidemic outbreaks and preventing them from becoming a widespread pandemic through measures such as lockdowns.

Future research can explore if more specific characteristics of the party or person in power (e.g. ideology, background) matter more than the type of political regime (democracy versus dictatorship). For instance, both Taiwan (a democracy) and Vietnam (a dictatorship) managed to keep the number of COVID-19 cases below 500 and the number of deaths below 10 during the first wave (as of July 2020). By contrast, among the European democracies, Italy and

Spain have recorded cases measured in the hundreds of thousands and deaths in the tens of thousands. Among the Western European democracies with more extensive welfare states and better-equipped healthcare systems than in Southern Europe, Austria and Germany have managed to minimize cases and deaths whereas Sweden and the UK are among the worst hit countries in the world on a per capita basis (ECDPC 2020). Intriguingly, Greece, a country whose social protection system has suffered from a decade of austerity and retrenchment, the numbers of cases and deaths are 90 percent lower than in Italy or Spain, adjusting for population size.

Therefore, a key limitation of the analysis in this paper is to ignore that which party or individual gets elected in a democracy may be more consequential than the nature of the political regime itself. For instance, democracies with a populist head of the executive branch (e.g. Brazil, Mexico, Peru, Ecuador, Italy, the U.S., etc.) have tended to do worse in terms of both reported cases and deaths, mainly because they distrust the expertise of the technocracy (including public health authorities), and they instill such distrust among the population. These issues should be addressed with in-depth comparative case studies as opposed to large-sample research such as the one reported in this paper.

More broadly, the theoretical and empirical analysis in this paper opens up new avenues for future research that may address some of its shortcomings. In the age of populism and political strongmen, it is worth investigating if it is precisely in countries with a high degree of state capacity (e.g. the U.S.) where the effect of an elected president who disregards the advice of the technocracy has the largest negative impact during emergencies of all sorts, including pandemics and natural disasters. Similarly, it is worth investigating if the effect of elected populist leaders is larger when economic inequality is high. Another intriguing possibility for

future research is the extent to which enhancing state capacity and reducing inequality can compensate for the erosion of democratic institutions and practices during intense periods of crisis triggered by health and economic troubles.

Beyond such emergencies, this paper's analysis of the interplay among political regime, state capacity, and economic inequality can be extended to other outcomes related to the wellbeing of the population, in the areas of education, health, and immigration, among others. Such an array of studies would help provide a more complete answer to the perennial question of how exactly political variables shape people's quality of life.

Finally, the evidence on the primacy of state capacity over political regime type invites a reflection on priorities for future sociological research. The analysis of the Weberian state (Evans and Rauch 1999; Chibber 2002; McDonnell 2017) should be placed at the top of a sociological agenda aimed at addressing pressing problems, including those related to crises and emergencies. This will require the study of not just of the extent to which rationalized state structures are adopted around the world (Meyer et al. 1997), but also their effectiveness when it comes to helping countries cope with major catastrophes. Such research would help guide future decisions as to the allocation of societal resources in ways that benefit a majority of the population.

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Table 1: Descriptive Statistics and Correlations for Epidemic Outbreaks, 1995-2019

	Min	Max	Mean	SD	1	2	3	4	5	6	7
1. Number of epidemics	0	8	.54	1.15							
2. Democracy score	-10	10	4.26	5.77	-.08						
3. Democracy dummy	0	1	.57	.50	-.20	.84					
4. State capacity	-24	0	-9.58	6.66	-.42	.54	.60				
5. Income inequality	16.23	73.9	40.68	10.00	.14	-.09	-.11	-.33			
6. GDP per capita	508	124,025	13,103	15,120	-.27	.34	.36	.71	-.37		
7. Population density	1.48	7915.73	154.72	551.96	-.02	-.06	-.05	.11	.01	.29	
8. Cumulative epidemics	0	67	5.94	8.87	.52	-.07	-.20	-.49	.17	-.34	-.01

N = 3,485 country-years

Table 2: Predictors of the Number of Epidemics, 1995-2019

	Random-Effects Negative Binomial			Fixed Effects Negative Binomial
Variable [predicted sign]	A	B	C	D
Democracy score [-]		.0119 (.0103)		.0020 (.0110)
Democracy dummy [-]			-.2511** (.0952)	
State capacity [-]		-.1482*** (.0142)	-.1335*** (.0144)	-.1258*** (.0171)
Income inequality [+]		.0144* (.0057)	.0149** (.0057)	.0087 (.0065)
GDP per capita[a]	-.1033*** (.0087)	-.0314** (.0096)	0.0320** (.0097)	-.0839*** (.0150)
Population density	.0006** (.0002)	.0003* (.0001)	.0003 (.0002)	.0005* (.0002)
Cumulative number of epidemics	-.0074* (.0035)	.0016 (.0036)	.0035 (.0035)	-.0030 (.0038)
Constant	1.7375*** (.2019)	-1.5962*** (.4051)	-1.2527** (.4116)	-.3070 (.5213)
Log likelihood	-2623.72	-2569.18	-2566.33	-2142.40
Wald chi-sq	144.09	291.79	285.78	199.40
N observations	3,485	3,485	3,485	2,813
N countries	146	146	146	111

Standard errors beneath parameter estimates.

[a]Parameter estimates and standard errors multiplied by 1,000. *p < .05 **p < .01 ***p < .001 (two-tailed tests)

Table 3: Descriptive Statistics and Correlations for National Lockdowns during COVID-19

	Min	Max	Mean	SD	1	2	3	4	5
1. Democracy score	-10	10	4.60	5.51					
2. Democracy dummy	0	1	.60	.49	.83				
3. State capacity	-24	0	-8.26	6.17	.46	.46			
4. Income inequality	23.7	73.9	39.46	9.35	-.07	-.05	-.25		
5. GDP per capita	671	113,262	16,405	18,164	.16	.22	.64	-.25	
6. Cumulative cases	0	1,158,041	2,868	36,849	-.00	.02	.04	.03	.11

N = 14,365 country-days

Table 4: Predictors of National Lockdowns during COVID-19

	Cox Proportional Hazards Regressions	
Variable [predicted sign]	A	B
Democracy score [+]	.0373 (.0225)	
Democracy dummy [+]		.2615 (.2562)
State capacity [+]	.0749** (.0279)	.0851** (.0277)
Income inequality [-]	.0091 (.0106)	.0084 (.0108)
GDP per capita[a]	-.0001 (.0007)	-.0002 (.0007)
Cumulative number of cases[a]	-.0003 (.0006)	-.0003 (.0007)
Log pseudolikelihood	-400.26	-400.97
Wald chi-sq	26.18***	24.26***
N country-days	14,365	14,365
N countries	144	144
N lockdowns	90	90

Standard errors beneath parameter estimates.
[a]Parameter estimates and standard errors multiplied by 1,000. *p < .05 **p < .01 ***p < .001 (two-tailed tests)