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RESEARCH ARTICLE

Falling Flat? The Impact of State Legitimacy, Capacity, and Political Trust on Flattening the Curve of COVID-19

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ABSTRACT

As countries worldwide struggled to contain the COVID-19 pandemic in March and April of 2020, observers often remarked that countries with higher levels of regime legitimacy, state capacity, and political trust were more likely to curtail the spread of the virus. Remarkably, using quantitative data from 10 different sources, this article finds that this generalizable theory runs counter to expectations. Countries with higher levels of political legitimacy, trust, and capacity experienced *greater* increases in COVID cases during the onset of the pandemic, albeit the strength of these relationships is modest. To develop generalizable theories predicting virus containment, researchers should turn their attention to unique factors characterizing industrialized democracies that make a virus much harder to contain and expand their scope by using transdisciplinary approaches to understanding the pandemic

Key Words: COVID-19, pandemic, political trust, legitimacy, state capacity, Belgium, the United States, Ireland, Switzerland.

Introduction

Authoritarian and democratic regimes gained harsh criticisms mid-April for their response to COVID-19 as cases across the world reached the 2 million mark with about 120,000 related deaths.¹ United States' President Donald Trump blamed China for the disease, labeling it a pandemic that was "made in China" while China's government touted to the public that the virus was caused by American-led military bioterrorism.² However, it is hard to discern which model of government is actually "better equipped" to handle such a crisis.

On one hand, China's swift, disciplined, and authoritarian approach to handling the outbreak helped the country flatten the COVID-19 curve. However, promoters of the democratic model of governance argue that handling this pandemic successfully not only comes from powerful control but also requires strong social capital between the government and its citizens. Factors that weaken a country's social capital, such as fear and mistrust, may stonewall attempts made by public health workers to flatten the curve of the virus. This was the case in the Democratic Republic of Congo where improvements to the Ebola crisis progressed only after health officials established bonds of trust between the government and its people.³

In this view, democracies possess advantages at effectively responding to the COVID-19 crisis given their likelihood of adopting greater measures of transparency that foster a sense of public trust.⁴ The Carnegie Endowment for Democracy echoed this theory in a commentary, but argued that legitimacy, capacity, and trust are not directly correlated with regime type.⁵ Democracies such as the United States have seen a decrease in political trust by 75 percent since the 1960s.⁶ Conversely, China's high levels of political trust (80 percent trust the government) led to their success in curbing the virus given that quarantining and restrictions on movement were related more to voluntary compliance than enforcement.

Instead of regime type dictating a country's ability to effectively respond, factors associated with legitimacy, capacity, and trust more likely dictate the success rate of countries combatting this global pandemic. However, despite the increased rhetoric surrounding the importance of these political indicators, there are currently no existing studies investigating the relationship between these factors and ability to curb the virus on a global scale. Research on legitimacy, trust, and capacity

has also limited their analysis to one country such as Hong Kong,⁷ Norway,⁸ Singapore,⁹ and Europe.¹⁰

This article represents an initial step towards filling this gap. First, a brief discussion on how state legitimacy, capacity, and political trust are theorized to predict a country's ability to handle the COVID-19 pandemic is provided. Then, by combining 10 different data sources, the relationship between state legitimacy, capacity, and trust on COVID-19 curtailment from March 19 – April 19, 2020, across 100 countries is analyzed. This analysis finds that countries with higher levels of legitimacy, capacity, and trust were performing worse at containing the virus during the initial onset. This quantitative analysis is followed by a discussion on the policy responses coupled with a conclusion positing that generalizable theories focused on political indicators likely "fall flat" when explaining worldwide trends in containing the virus, while also presenting new directions for research.

Legitimacy, capacity, trust, and COVID-19

As the COVID-19 crisis swept across the world, it became clear that the dividing line between countries equipped to effectively handle the crisis and those ill-equipped is not determined by regime type. Instead, the popular theory spouted by journalists, think tanks, and international observers reported that a state's legitimacy and capacity will serve as deciding factors. For example, the illegitimacy of Iran's government stonewalled efforts to close holy pilgrimage sites and to keep Iranians home.¹¹ In the United States, polarization served as a major barrier in communication between the government, experts, and the people in relaying the seriousness of the virus. Corruption has led the pro-government urban middle class in Thailand to lose trust in their government, which has hampered efforts to contain the virus.¹² Furthermore, Iran and China were both critiqued regarding level of transparency as both failed to divulge the extent of the crisis within their respective countries.¹³ Conversely, increased transparency in Singapore decreased levels of widespread panic, enabling the government more effective at containing the virus.¹⁴

But state legitimacy on its own is not enough to combat the virus; it must also be bulwarked by capacity. Capacity is a country's ability to "intervene competently in arenas from communication and health provision to quarantine maintenance and equipment manufacturing."¹⁵ A state's capacity is only loosely connected to a

country's overall GDP given that some wealthy countries have been underperforming during this crisis, notably the United States.¹⁶ However, capacity is measured in a variety of ways. For example, factors such as quality of infrastructure and a government's ability to enforce policy may determine a country's ability to combat the virus. For example, after the SARS epidemic in 2003, Canada implemented a decentralized testing approach that gave health officials the authority to force people to accept medical treatment and gave the health minister the authority to declare any private or public building in Canada, a quarantine Zone.¹⁷ Decentralization and the government's ability to enforce policy expanded Canada's capacity to contain the virus.

Canada showcases the importance of decentralization when it comes to capacity. Decentralized decision-making eliminates extraneous layers of authority¹⁸ making governments more efficient, accountable, collaborative, and more likely to understand the concerns of local residents.^{19, 20, 21} A more decentralized government is also theorized to create more opportunities for new ideas to be tested and for more information from citizens and civil society to be gathered.²² Thus, a more decentralized state might remain more efficient, responsive, and accountable during a pandemic.

State legitimacy and capacity are both heavily rooted in political trust. Francis Fukuyama from the *The Atlantic* stated, "...trust is the single most important commodity that will determine the fate of a society. In a democracy no less than a dictatorship, citizens have to believe that the executive knows what it is doing."²³ Citizens base their political trust on their beliefs that their government is effective, transparent, and is free from corruption, thus enabling powerful executives at the top to make the "right" decisions, especially during crisis. Trust also signals a country's ability to enforce rules and restrictions on people's movement within the country. Low levels of trust in government may lead citizens to believe that the government lacks competence, leading citizens to ignore government enforced regulations.

The importance of trust throughout the COVID-19 pandemic is captured in journalistic headlines that read "Trust Is the Key to Fighting the Pandemic,"²⁴ "The Secret to Coronavirus Success is Trust,"²⁵ and "Public Trust in Health Authorities is Key to Fighting Coronavirus – Is It at Risk?"²⁶ Countries with high levels of trust have seemingly responded effectively to the pandemic. For

example, Singapore and Taiwan's effective curtailment of the virus is linked with increased trust in authorities, whereas the fear and panic symbolized by the stockpiling of toilet paper and guns in the United States reflects lower levels of trust leading to a major increase in COVID-19 cases.²⁷ As of March 23, countries with high levels of political trust such as Norway, Sweden, and Finland effectively contained the virus with fewer than 25 fatalities per country.²⁸ In contrast, Italy, which suffers from low levels of trust in their political institutions (21 percent) has experienced dramatic growth of COVID-19 cases.²⁹

The literature discussing the impacts of trust, legitimacy, and capacity on virus containment leads to the following hypotheses tested in the remainder of this article:

H1: Countries with higher levels of political trust are less likely to see an increase in COVID-19 cases from March to April.

H2: Countries with higher levels of political legitimacy are less likely to see an increase in COVID-19 cases from March to April.

H3: Countries with higher levels of state capacity are less likely to see an increase in COVID-19 cases from March to April.

Data and methods

To analyze the impact of legitimacy, capacity, and trust on a global scale, I gathered data from 10 different sources: the BTI Transformation Index,³⁰ the Institutional Profiles Dataset,³¹ the International Foundation for Electoral Systems,³² the Global State of Democracy Indices,³³ the Ivanyna, and Shah (2014) dataset,³⁴ the Worldwide Governance Indicators dataset,³⁵ the National Democratic Institute,³⁶ Transparency International,³⁷ the World Economic Forum,^{38,39} and the Worldometer.^{40, 41} In this analysis there are 100 countries that span Asia, Europe, the Middle East and North Africa, and North America. Countries in these regions were chosen given that by March 19, 2020, they had reached a threshold of more than 100,000 COVID-19 cases. South America, Oceania, Africa, and Australia are excluded because they had not yet reached a threshold of 100,000 cases, inferring those countries in this region were not experiencing the same level of threat as countries located in regions with more cases and would thus not serve as an effective global baseline.

Dependent variable

The main dependent variable in this analysis is ability to curb the COVID-19 virus. This is measured via the change in the total number of COVID-19 cases occurring from March 19, 2020, to April 19, 2020 per one million people. This data is taken from the Worldometer COVID-19 tracker. The decision to look at the number of COVID-19 cases per one million people as opposed to absolute values is to make the countries more comparable across population size. A full list of the countries and their corresponding number of COVID-19 cases on March 19, 2020, April 19, 2020, and the change in the number of cases is in the appendix. I should note that a country's ability to curb cases as opposed to deaths might offer a different picture in terms of assessing "success." COVID-19 fatalities were not used in this analysis due to inconsistencies in reporting across countries due to underreporting and delayed confirmation responses.⁴² Analyzing deaths as opposed to cases is a crucial direction for future research.

There is also the possibility that countries chose to report biased estimates of COVID-19 cases. Although "bias" is not directly controlled for in this analysis, other variables such as regime transparency and corruption serve as indirect proxies, and no systematic trend emerges when exploring the relationship between corruption and transparency and the rise in COVID-19 cases. If regime bias played a significant role in analyzing this relationship, one would expect to see a strong and significant negative relationship between corruption and transparency and COVID-19 cases. This is not found in the data.

Independent variables

State legitimacy is measured using five different variables: corruption, level of transparency, government effectiveness, trust in politicians, and election year. Election year is included as a proxy for political polarization between parties, given that parties are more likely to be competitive with one another during an election year as demonstrated in the United States. The corruption perceptions index is pulled from Transparency International's ranking of countries by perceived levels of public sector corruption in the year 2020. This variable is measured on a scale of 0 – 100 with 0 denoting highly corrupt and 100 denoting very clean. The level of transparency is pulled from the Institutional Profiles Database and

is measured from responses to the question "In your country, how easy is it for businesses to obtain information about changes in government policies and regulations affecting their activities? [1 = extremely difficult; 7 = extremely easy]. This measure is updated to the year 2017.

Government effectiveness is pulled from the Worldwide Governance Indicators dataset and is measured by respondents' perceptions of the quality of public services, civil services, quality of policy formulation and implementation, and government's commitment to policies. The scale ranges from -2.5 to 2.5 with higher values denoting better governance. This measure is updated to the year 2018. Trust in politicians is measured using data from the World Economic Forum that asks respondents "In your country, how do you rate the ethical standards of politicians? [1 = extremely low; 7 = extremely high]. This scale is updated to the year 2018. Election year is measured dichotomously with 1 denoting that a country is having national level elections in 2020 and 0 denoting that a country is not. Election data is compiled from the National Democratic Institute and the International Foundation for Electoral Systems. Each state legitimacy variable is then combined to create an overall additive index measuring overall state legitimacy as a continuous variable.

State capacity is measured using four variables: decentralization, GDP output, quality of infrastructure, and government's ability to enforce policy. Decentralization is measured by using Ivanyna and Shah's government closeness index that measures government decision-making at the local level. Each country is ranked on various dimensions of decentralization in administration, political, and fiscal areas of policy. These dimensions are aggregated to develop an overall ranking of how close a government is to its people. Higher values denote increased decentralization and lower values denote high centralization. This scale adjusts for heterogeneity by considering age, residency, income, ethnic, religious, linguistic structure of population, area, relief heterogeneity, and climate heterogeneity.⁴³ State legitimacy's composite score ranges from 20.69 (weak legitimacy) to 100.93 (strong legitimacy). State capacity's composite score ranges from 768.26 (weakest capacity) to 80,333.32 (strongest capacity).

GDP per capita is measured as a continuous variable using data from the Worldometer. Quality of infrastructure is measured using data from the World Economic Forum that

asks respondents “How do you assess the general state of infrastructure (e.g., transport, communications, and energy) in your country? [1 = extremely underdeveloped; 7 = extensive and efficient]. This data is updated for the year 2018. The government’s ability to enforce policy is measured by aggregating three expert coded indicators that measure the executives respect for the constitution, transparent laws with predictable enforcement, and the rule-abidingness in the public sector. The scale ranges from 0 to 1 with 0 denoting least predictable enforcement and 1 denoting highest predictable enforcement. This data is taken from the Global State of Democracy Indices for 2018. Each state capacity variable is then combined to create an additive index measuring overall state capacity as a continuous variable. I also include measures for a country’s level of democracy, called its polity score. This data is taken from <http://www.systemicpeace.org/inscrdata.html> for the year 2018.

Model

To test the impact of legitimacy, capacity, and political trust on COVID-19 containment, a series of bivariate regressions is run between the independent variables and COVID-19 containment. This provides a first cut indication as to whether any of the factors associated with regime legitimacy and capacity have a strong and significant relationship on a country’s ability to lessen the impact of the pandemic. These relationships are displayed in a series of two-way scatter plots that include the regression line predicting the linear

change in the number of COVID-19 cases on each independent variable. The correlations between each independent variable and change in COVID-19 cases is also discussed to denote the strength of these associations with a correlation of 1 signaling a perfect linear relationship, -1 signaling a perfect negative linear relationship, and 0 denoting no relationship.

Results

First, the data shows no support for the argument that regime type provides a good indicator for which countries will succeed or fail in curbing the COVID-19 virus by looking at the relationship between polity scores and change in COVID-19 cases. The polity score measures a country’s regime type that ranges from -10 to -6 (autocracies), -5 to 5 (anocracies), and 6 to 10 (democracies). Figure 1 shows that the linear relationship between polity scores and change in COVID-19 cases is positive and significant (p -value $< .05$), but the slope of the line shows a medium (at best) correlation. Despite the visual that many authoritarian countries are experiencing lower increases in COVID-19 cases, the results among democracies are mixed. There are many democracies with lower increases in COVID-19 cases such as Poland, Albania, and Tunisia, but there are many democracies that suffer from greater increases in COVID-19 cases such as Luxembourg, Spain, Belgium, Ireland, Switzerland, the United States, Italy, and France.

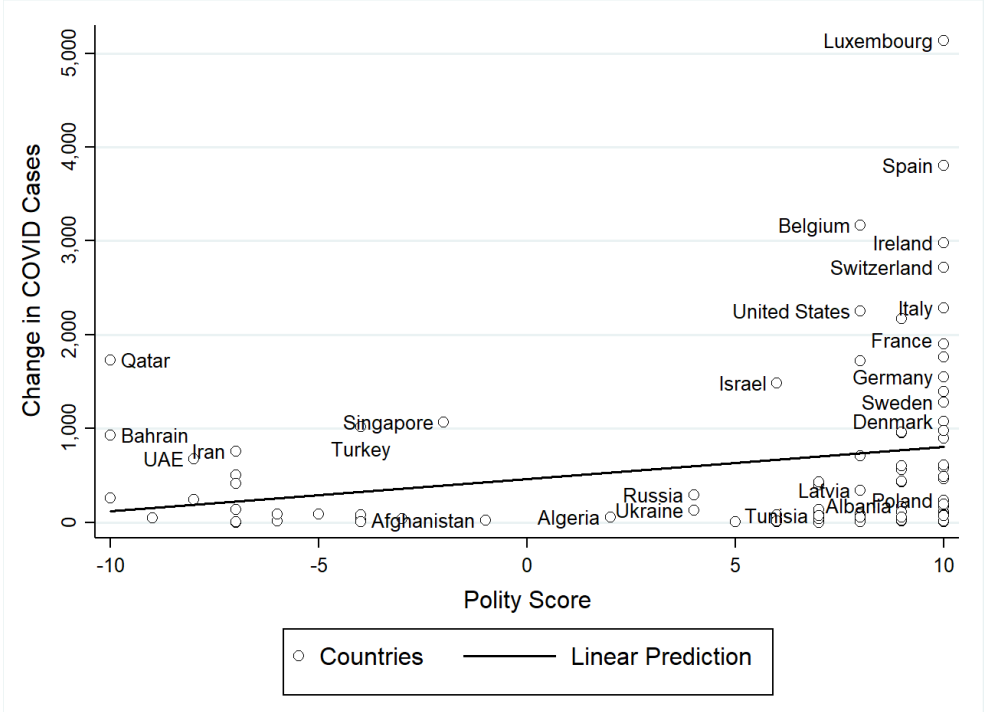


Fig. 1. Linear prediction between change in COVID-19 cases per 1 million people and polity score (N = 93)

Next, the analysis shows evidence countering the theoretical expectations regarding the impact of state legitimacy and capacity on virus containment. Figure 2 displays the relationship between state legitimacy and change in COVID-19 cases and the relationship between state capacity and change in COVID-19 cases. Both state legitimacy and capacity have a positive and significant relationship with change in COVID-19 cases (p – value = 0.000

in both models). State legitimacy possesses a correlation of .57 with change in COVID-19 cases, and state capacity possesses a correlation of .72. State legitimacy possesses a more modest relationship with change in COVID-19 cases given that there are many countries with higher levels of legitimacy that experienced low levels of change such as Finland, Norway, Hong Kong, and Sweden.

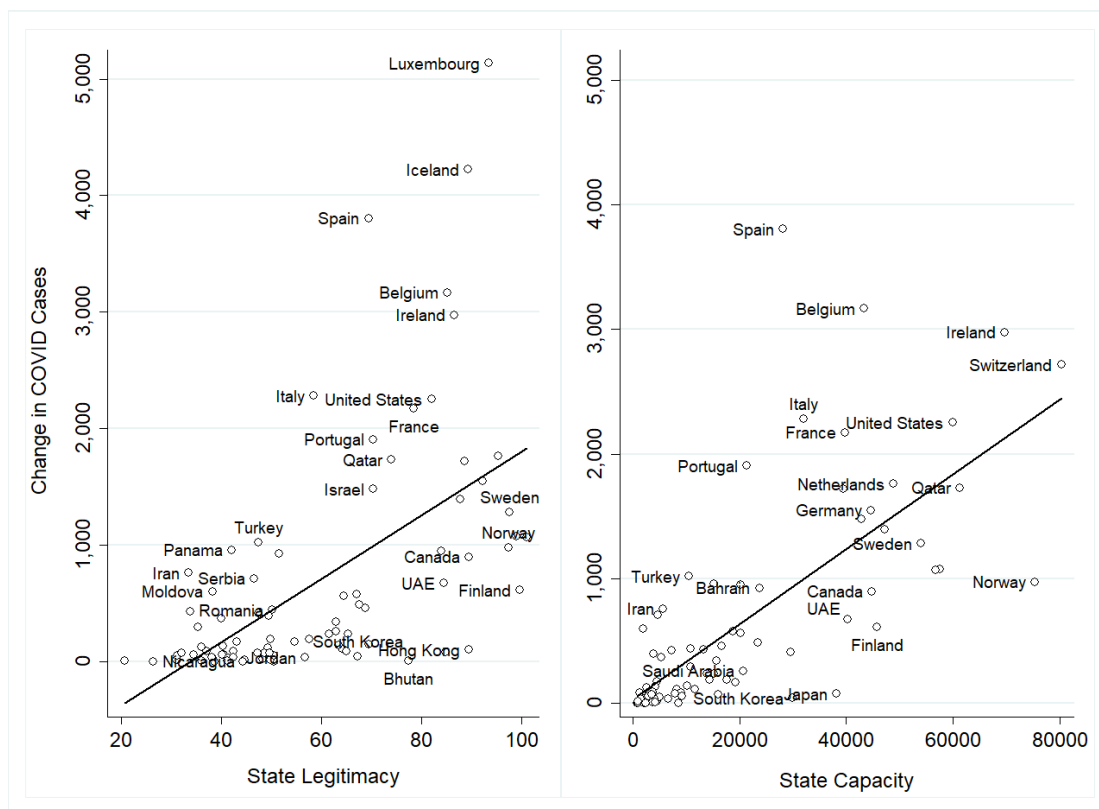


Fig. 2. Linear prediction between change in COVID-19 cases per 1 million people and state legitimacy and capacity (state legitimacy, N = 86; state capacity, N = 84)

Finally, the analysis shows modest and inconsistent support for the theory that countries with higher levels of political trust are more likely to contain the virus. Figure 3 shows the relationship between trust in politicians and change in COVID-19 cases. The relationship between political trust and change in COVID-19 cases is positive and significant (p -value < .05), but the strength of the relationship is

moderate (correlation = .37.) There are many countries with low levels of political trust that also had a very small change in the number of COVID-19 cases from March to April. However, there are also many cases with high levels of political trust that also had a small change in the number of COVID-19 cases, such as Finland and the United Arab Emirates.

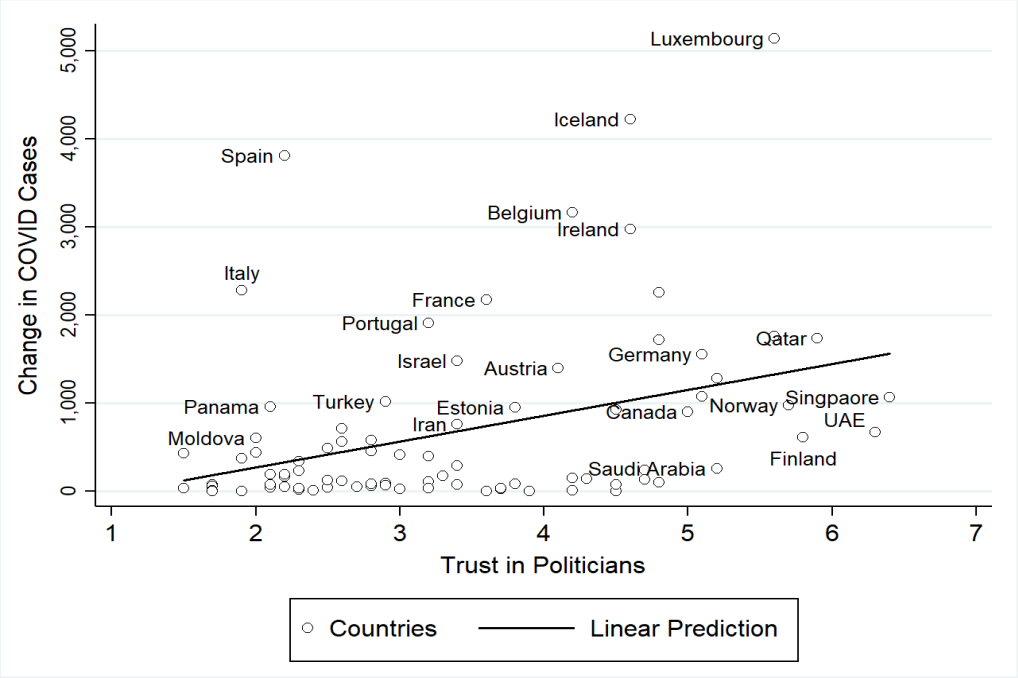


Fig. 3. Linear prediction between change in COVID-19 cases per 1 million people and trust in politicians (N = 86)

Overall, state capacity is the strongest predictor of a country's ability to curb the virus, whereas state legitimacy and political trust serve as modest predictors of a country's ability to curb the virus. When state capacity is broken down by each variable individually, GDP per capita emerges as the only variable that possesses a strong relationship with change in COVID-19 cases (correlation = .79). Whereas the correlation between decentralization = .36, government's ability to enforce laws = .58, and quality of infrastructure = .51.

Discussion

These results counter theoretical expectations regarding the role of certain political indicators on virus containment. Not only do the relationships between state legitimacy, capacity, and political trust run in the opposite direction of the theoretical expectations, but their level of association is moderate at best except for state capacity. However, state capacity is largely dependent on GDP output with wealthier countries being less likely to curb the virus. These trends signal a need to seriously critique the claim that low levels of political legitimacy, trust, and capacity are to blame for a country's inability to handle the virus.

This unexpected, albeit modest, positive relationship between legitimacy, capacity, trust, and ability to curb the virus potentially sheds light on some correlated factors. Why were countries with higher levels of legitimacy, capacity, and trust, less likely to curb the virus? In Belgium, the complex structure of Belgium's federalist government led to coordination issues across the different levels of government.⁴⁴ Belgium's dual federalism system, where federal and regional levels of government operate in isolation from one another, negatively impacted authorities' abilities to effectively respond to the pandemic.⁴⁵ For example, all levels of government procured medical supplies during the onset of the pandemic, but only the federal government regulated the quality of medical supplies - resulting in quality issues of materials and testing kits across municipalities.⁴⁶ Similar to Belgium, in the United States, the often confusing structure of overlapping authority created an institutionalized structure ill-equipped to swiftly respond to the crisis.⁴⁷ Furthermore, the lack of commitment to curtailing the virus was largely rooted in the government's "America First" doctrine and its propensity to frame COVID-19 as the "China Virus" - and thus a foreign problem.⁴⁸

In contrast to Belgium and the United States, in Ireland the government's response to the

pandemic was deemed comprehensive and prompt. The government demonstrated openness, transparency, and used conventional forms of communication along with social media to update its citizenry. Ireland also heavily relied on technology for swift diagnostic research, clinical trials, medical devices, and eHealth systems - including an app that citizens could download to report symptoms and track COVID-19.^{49,50} Switzerland is another country that experienced a high rise in COVID cases, despite the Swiss government achieving the noteworthy status of handling the onset of the pandemic effectively. Communication was one of the government's strongest assets, where they were able to maintain a good amount of public trust.⁵¹ Where Switzerland struggled was in delays regarding technology development in contract tracing and the use of outdated management systems.⁵²

Overall, countries with high levels of trust, capacity, and legitimacy struggled in curtailing the virus at the onset for various reasons. The media's reliance on historical experiences led to the creation of a narrative that democracies with low levels of trust were likely to face retribution for their lack of legitimacy among the public during the pandemic. For example, in the past, a lack of trust and legitimacy have led parents to ignore government information regarding vaccines, which led to a rise in measles, as well as ignoring the risks associated with genetically modified food.^{53,54} Governments were heeded to consider how public trust might play a role in shaping the receptiveness and compliance to COVID-19 containment policies.⁵⁵ Yet, high levels of political trust have done little to aid a government's ability to curb the virus. Media framing gauging leaders across the world for their lack of trust leading up to this crisis is limited in its applicability as a generalizable theory.

Towards a generalizable theory of pandemic containment

What can be gleaned from the quantitative data is that painting the rise of COVID-19 cases across the world as a reflection of growing governmental illegitimacy, lack of capacity, and mistrust is misguided, and potentially undermines our understanding of the impact of public opinion on governmental success in handling a pandemic. First, data across 100 countries shows the depiction that countries with high trust, legitimacy, and capacity as the most equipped to handle the onset

of a pandemic is faulty and likely a mischaracterization of what places a country as "most equipped" to "least equipped." GDP emerges as the "best" predictor of virus containment given that countries with higher levels of GDP output were less likely to contain the virus. More indicators associated with GDP output and industrialization represents a direction for future research.

Second, developing a global generalizable theory for virus containment through a strictly political lens is difficult to achieve. The cases of Belgium, Ireland, Switzerland, and the United States showed how unique each country's political context was, despite having high levels of trust, legitimacy, and capacity. Belgium and the United States suffered from polarization among political parties and disjointed communication and coordination between national and sub-regional levels of government. Both Belgium and the United States are criticized for their slow ability to react at the onset of the pandemic. However, it was only in the United States where the government was initially "in-denial" of the virus, labeling it as a foreign issue. Ireland and Switzerland were both praised for their effectiveness and response to the pandemic - especially regarding their innovative use of technology. However, Switzerland did make mistakes during the onset that caused various setbacks in testing and containment measures.

Overall, the political reasons explaining the high rise of cases at the onset of the pandemic are varied across these four cases. A strong generalizable political theory that explains why countries suffered from a high rise in cases in March and April fails to emerge. Future research should steer away from using stereotypical heuristics commonly employed to assess the efficacy of a regime - such as trust, legitimacy, and capacity. This article shows that combatting a global pandemic cannot be just about politics, institutions, or even demographics. Countries that are vulnerable during the onset of a pandemic are not easily identified by one analytical lens. To develop generalizable theories predicting virus containment, researchers should turn their attention to unique factors characterizing industrialized countries that make a virus much harder to contain and expand their scope by using transdisciplinary approaches to understanding the pandemic.⁵⁶

Conflict of interest statement

The author has no conflicts of interest to declare.

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Appendix

Table A.1. COVID cases per 1 mill. population

country	Total Cases / 1 mill. (March 19, 2020)	Total cases / 1 mill. (April 19, 2020)	Change in # of cases from March to April
Afghanistan	1	26	25
Albania	22	195	173
Algeria	2	60	58
Armenia	41	436	395
Austria	242	1638	1396
Azerbaijan	4	138	134
Bahrain	178	1105	927
Bangladesh	0	15	15
Belarus	5	506	501
Belgium	155	3322	3167
Bhutan	1	6	5
Bosnia and Herzegovina	20	392	372
Brunei	167	315	148
Bulgaria	15	129	114
Cambodia	2	7	5
Canada	23	922	899
China	56	57	1
Costa Rica	17	130	113
Croatia	27	456	429
Cuba	1	91	90
Cyprus	55	635	580
Czechia	65	626	561
Denmark	199	1274	1075
Dominican Republic	3	431	428
Egypt	3	31	28
El Salvador	0	31	31
Estonia	201	1152	951
Finland	72	683	611
France	168	2342	2174
Georgia	10	99	89
Germany	183	1733	1550
Greece	45	214	169
Guatemala	1	14	13
Haiti	0	4	4
Honduras	1	48	47
Hong Kong	36	137	101

Hungary	8	198	190
Iceland	967	5190	4223
India	0	13	13
Indonesia	1	24	23
Iran	219	979	760
Iraq	5	38	33
Ireland	113	3089	2976
Israel	78	1559	1481
Italy	679	2960	2281
Jamaica	5	58	53
Japan	7	85	78
Jordan	7	41	34
Kazakhstan	2	89	87
Kuwait	35	448	413
Kyrgyz Republic	0	85	85
Laos	0	3	3
Latvia	46	385	339
Lebanon	23	99	76
Libya	0	7	7
Lithuania	18	477	459
Luxembourg	535	5671	5136
Malaysia	28	167	139
Mexico	1	58	57
Moldova	12	613	601
Mongolia	2	10	8
Morocco	2	77	75
Myanmar	0	2	2
Nepal	0	1	1
Netherlands	144	1906	1762
Nicaragua	0	2	2
North Macedonia	24	579	555
Norway	330	1306	976
Oman	9	248	239
Pakistan	2	38	36
Panama	32	990	958
Philippines	2	57	55
Poland	9	245	236
Portugal	77	1982	1905
Qatar	160	1891	1731
Romania	14	455	441
Russia	1	294	293

Saudi Arabia	8	269	261
Serbia	12	723	711
Singapore	59	1126	1067
Slovakia	23	213	190
Slovenia	153	640	487
South Korea	167	208	41
Spain	387	4191	3804
Sri Lanka	3	13	10
Sudan	0	2	2
Sweden	142	1424	1282
Switzerland	488	3205	2717
Taiwan	5	18	13
Thailand	4	40	36
Trinidad and Tobago	6	81	75
Tunisia	3	73	70
Turkey	4	1023	1019
UAE	14	686	672
Ukraine	1	125	124
United Kingdom	48	1769	1721
United States	42	2293	2251
Uzbekistan	1	47	46
Vietnam	1	3	2