ORIGINAL ARTICLE

Partisanship, elections and lockdowns: Evidence from US states

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Abstract

In this article, we use state-level variation in Senate elections and partisanship to understand the variation in lockdown characteristics in the US. We argue that the state-level decision makers and their parties weigh off the perceived political costs in an election year of a depressed economy against risks to public health. Democrats and Republicans, and their voters, vary in the weights they attach to these costs and benefits. We are thus exploring the marginal effect of the party–election interaction after accounting for other likely drivers of variations in lockdown characteristics. We find that Republican states with an election have less strict and shorter lockdowns compared to Democratic states with an election. Our results have implications for the communication of pandemic policies, including vaccination strategies.

KEYWORDS
COVID-19, elections, lockdowns, political economy

JEL CLASSIFICATION
D72, H12, I18

1 | INTRODUCTION

In late 2019, the COVID-19 outbreak originated in Wuhan, China, rapidly transcending borders to become a global crisis. Faced with the absence of a vaccine, governments resorted primarily to implementing non-pharmaceutical interventions, so-called "lockdowns," to curb the virus's spread, a strategy aimed at preventing overwhelming pressures on healthcare systems and minimizing loss of life.
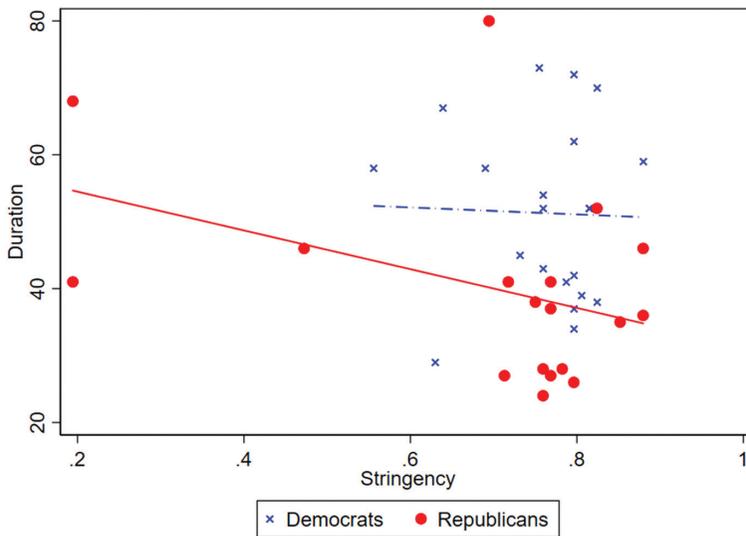
The efficacy of these lockdowns has spurred a continuous discourse regarding their cost–benefit dynamics (e.g., Allen, 2022; Gibson, 2020). Despite the ongoing deliberation, lockdowns became an unavoidable reality for the majority of the world's population in 2020. According to the Stringency Index developed by the Blavatnik School of Government at the University of Oxford, by May 2020, most nations scored well above 50 on a scale of 0–100, indicating stringent measures were widely enforced.

In the United States, there has not been a federal lockdown policy and lockdown decisions were left to state Governors (Cui et al., 2021). This resulted in heterogenous responses across states with respect to measures such as school and/or workplace closure, and travel bans. Figure 1 presents the variation in lockdown characteristics across states by partisanship.

At the same time, the 2020 Presidential and Senate elections have been more competitive and referred to as potentially the most important is US history (Hirsh, 2020) and the Senate race has seen record levels of election spending (Gillespie et al., 2020).

Every decision regarding a lockdown entails weighing its costs and benefits. On one hand, the benefits are clear: lockdowns are implemented to curtail the spread of the virus, ultimately safeguarding lives (Hall et al., 2020). However, the costs are multifaceted, predominantly argued to be socio-economic. Democrats and Republicans, as well as their voters, vary in the weights they attach to the perceived benefits and costs of lockdowns (Barrios & Hochberg, 2020; Pew Research Center, 2020, 2021). Green et al. (2020) monitored COVID-19-related tweets from all members of the 116th U.S. Congress and found that Democrats discussed the crisis more often and threats to public health; while Republican tweets placed a greater emphasis on China and businesses.

In this study, we delve into the disparities in lockdown policies across various U.S. states and analyse how elections and political affiliations influence these decisions. We posit that state-level decision-makers and

FIGURE 1 Scatter Plot of Strictness vs. Duration of Lockdowns across U.S. States. Democratic states marked by blue X and blue dash-dotted regression line. Republican states marked with red circles and red solid regression line.

their respective parties balance the perceived political ramifications of an economic downturn in an election year against the imperative to protect public health. This argument stems directly from existing literature highlighting the correlation between economic conditions, voting patterns and the electoral fortunes of incumbents (Dutch & Stevenson, 2008; Healy & Lenz, 2014). Moreover, insights from the literature on political business cycles suggest that incumbents endeavour to bolster economic conditions as elections draw nearer (Drazen, 2000).

Our article is closely related to others studying the drivers of lockdown decisions. However, we present novel evidence about the effect of the interaction between partisanship and elections on pandemic policies. At the country-level, Ferraresi et al. (2020) study the drivers of lockdown decisions in a sample of 132 countries using an event study design. They find that political stability, digitalisation, decentralisation and openness are factors that influence the strictness of a country's lockdown. Pulejo and Querubín (2020) also use a cross-country approach and find that countries with elections have less strict lockdowns. Relatedly, Sebhatu et al. (2020) show that OECD regions were faster to adopt policy and if a country was an early adopter of restrictions, countries in the same region were more likely to follow. At the state-level, Cui et al. (2021) show that policy choices across U.S. states is affected by the choices of other states following a game-theoretical model. Finally, Adolph et al. (2021) find that Republican states are less likely to have social distancing measures in place.

2 | DATA

Data is taken at the US State-level for 2020 from several sources: Centers for Disease Control and Prevention (CDC), the Bureau of Labor Statistics (BLS), HealthData.gov, Bureau of Economic Analysis (BEA) and the Blavatnik School of Government at Oxford University. Table 1 presents the summary statistics of our sample.

We collect four variables measuring the characteristics of lockdowns at the state level. The strictness of the lockdown (by which we mean the first lockdown at the state-level) measured by the OxCGRT, the average strictness of lockdown measures (including, explicitly, the time after the initial "lockdown"), the duration of the lockdown (in days) and the number of days above a lockdown strictness of 50 (the midpoint of the Stringency Index).[1] The average stringency of lockdowns was 0.62 with a standard deviation of 0.3. The average stringency over time was 0.54, with a standard deviation of 0.24. Lockdowns lasted 38 days on average, with the longest lasting 80 days.

In our sample, two-thirds of states had a Senate election in 2020 (held at the same time as the Presidential election on November 3). Furthermore, the sample is split about 50–50 with Democratic and Republican states. Notice that states are coded as Democratic or Republican by the party affiliation of the Senator. Of the Republican states, 68 percent have an election and of Democratic states, 65 per cent have an election.[2]

We collect various potentially confounding variables which could affect the lockdown decisions. These include urbanization (the share of people living in urban areas from the total population), the share of the population older than 62 years, and the number of ICU beds before the lockdown. These three variables capture how easily the virus could spread (higher density implies easier transmission), the share of the most vulnerable population groups (as COVID-19 mainly affects older people) and a proxy for hospital capacity. We also include the deaths at the time of the initial lockdown to proxy for the state of the pandemic rather than cases because cases are a very noisy measure of true infections due to the high share of asymptomatic cases. We

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[1]We only consider the first lockdown at the state level, because the choice of a second lockdown is a function of past policies introducing endogeneity problems.

[2]We also perform *t*-tests and find significant differences in all lockdown characteristics between Republican and Democratic states with a Senate election.

TABLE 1 Descriptive statistics.

Variable	Obs.	Mean	Std. dev.	Min	Max
Stringency	51	0.62	0.30	0	0.88
Avg. stringency	51	0.54	0.24	0	0.79
Days above 50	51	252.55	126.73	0	344
Duration	47	38.26	22.10	0	80
Election	51	0.67	0.48	0	1
Republican	51	0.49	0.50	0	1
Republican×Election	25	0.68	0.48	0	1
Democratic×Election	26	0.65	0.49	0	1
State controls					
Urbanization	51	74.10	14.89	38.66	100
Population above 62	51	20.80	2.40	14.2	26.2
ICU beds	51	0.01	0.007	0.003	0.05
Deaths at lockdown	43	81.93	387.89	0	2556
Log GDP	51	12.24	1.06	10.26	14.82
Governor controls					
Age	51	60.25	8.93	42	76
Male	51	0.80	0.40	0	1
Time in office	51	3	2.35	0	11

then include GDP per capita (Q3 2020) to proxy for income levels and the level of economic activity. Finally, we include governor characteristics: age, male and time in office to control for the potential impact of these on lockdown decisions.

We have tested other potentially confounding variables (incl. population density, minority share, or the share of people working from home in the previous year, which controls for structural differences in the economies of US states) but decided to have a parsimonious model with a limited set of variables given the small number of observations. Including these variables did not change our results.

3 | ESTIMATION RESULTS

We run a linear model at the state level, i, for four different lockdown characteristics:

$$\text{Lockdown Characteristic}_i = \alpha + \beta \text{Election}_i \times \text{Party}_i + \gamma X_i + \varepsilon_i, \tag{1}$$

where α is a constant and ε_i is the error term.

We are interested in the coefficient, β, on the interaction between states that have a Senate election and an incumbent Republican or Democratic Senator. We expect that Republican states with an election have shorter and less strict lockdowns. Further, the model controls for various confounding factors, X_i, as defined in the previous section.

To estimate equation (1) with stringency as dependent variable, we use a fractional regression model, as stringency is bounded on the [0,1] interval. To estimate the model with duration as dependent variable, we use a negative binomial model as the data is count data and we find evidence of overdispersion.

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TABLE 2 Regression results.

	(1)	(2)	(3)	(4)
	Stringency	**Avg. stringency**	**Days above 50**	**Duration**
Election				
No×Democrats	0.05 (0.15)	0.05 (0.07)	−0.05 (0.09)	0.13 (0.14)
No×Republican	−0.25 (0.20)	−0.12 (0.07)	−0.24* (0.13)	−0.17 (0.17)
Yes×Republican	−0.26* (0.15)	−0.15*** (0.05)	−0.24 (0.15)	−0.22 (0.15)
State controls				
Urbanization	−0.007** (0.004)	0.001 (0.002)	−0.002 (0.004)	−0.0002 (0.003)
Population above 62	0.03 (0.04)	0.002 (0.008)	−0.03* (0.02)	0.03 (0.02)
ICU beds	−9.53 (10.28)	0.28 (2.40)	1.13 (3.57)	3.54 (5.84)
Log deaths at lockdown	0.12** (0.06)	−0.01 (0.02)	−0.03 (0.03)	−0.08*** (0.02)
Log GDP	0.02 (0.07)	−0.02 (0.03)	0.01 (0.05)	0.06 (0.05)
Governor controls				
Age	−0.001 (0.01)	−0.001 (0.002)	0.002 (0.006)	−0.01 (0.01)
Male	−0.11 (0.13)	−0.03 (0.07)	0.12 (0.18)	0.06 (0.15)
Time in office	−0.03 (0.02)	0.01 (0.01)	0.01 (0.01)	−0.02 (0.02)
Obs.	43	43	43	39
R^2	0.03	0.004	0.02	0.07
Estimator	Fractional Regression (probit)	Fractional Regression (probit)	Neg. Binomial	Neg. Binomial

Note: Robust standard errors in parenthesis. Constant not shown. Significance levels: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

We are thus exploring the marginal effect of the party-election interaction after accounting for other likely drivers of variations in lockdown characteristics.[3] In Table 2, we present our estimation results. In column (1), we find that Republican states with an election have less strict lockdowns compared to Democratic states with an election (the omitted category). The effect is almost equal to the standard deviation of the stringency variable. Further, Republican states with an election also have less strict lockdown measures over time relative to Democratic states with an election (column 2). Again, the effect is large, with an estimate of 0.15 relative to the standard deviation of the variable (0.24).

When we turn to the duration of lockdowns in columns (3) and (4), we do not find a significant effect of Republican states with an election relative to Democratic states with an election. However, this might be due to the low number of observations as the point estimates are large and our estimates are likely noisy.

Of our control variables, we only find that the (log) deaths at the time of lockdown matters. More deaths increase the strictness of the lockdown but reduce the duration. More deaths imply even more cases and a more severe pandemic in each state. Therefore, it is not surprising that this leads to stricter lockdowns to "flatten the curve". With more deaths at the time of lockdown, this could imply that the peak of the crisis has been reached earlier and before lockdowns have been introduced. Therefore, states can exit earlier.

We next estimate the Kaplan–Meier survival estimates of the duration of lockdowns (Figure 2) and find clear evidence that Republican states with an election are exiting lockdowns earlier compared to Democratic states

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[3]We also test the marginal effect of an election, when not accounting for partisanship and find no impact (Table A1). We then test the marginal effect of being in a Republican state (without a Senate election) and find these states had significantly less strict and shorter lockdowns (Table A2).
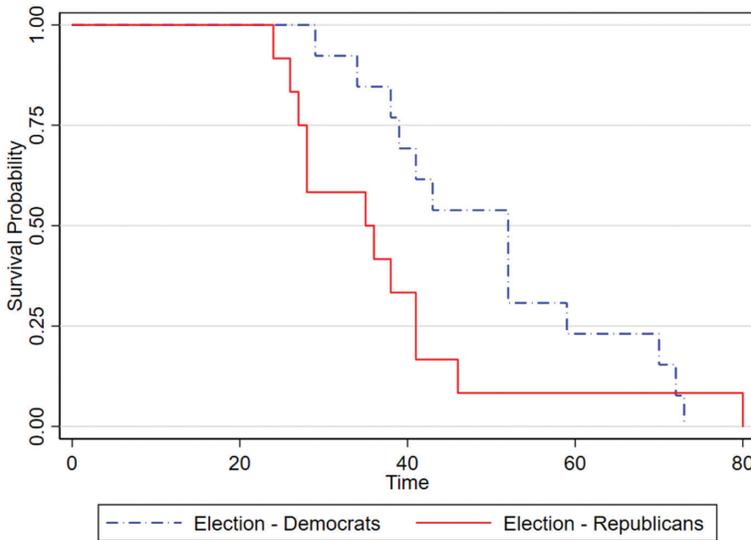
FIGURE 2 The Kaplan–Meier Survival Functions of Lockdown Duration by Partisanship. Blue dash-dotted line shows Democratic states with a Senate election and red, solid line shows Republican states with a Senate election. Time on horizontal axis measured in days.

with an election. The probability that a Republican state with an election has a lockdown longer than 40 days is roughly 30 per cent, while it is about 70 per cent for Democratic states with an election. A similar pattern is found for states without an election (see Figure A1 in the Appendix A).

4 | CONCLUSION

In conclusion, the COVID-19 pandemic, originating in late 2019, rapidly escalated into a global crisis, prompting governments worldwide to implement non-pharmaceutical interventions, notably lockdowns, to mitigate the virus's spread and alleviate strain on healthcare systems. Despite their effectiveness in reducing transmission, lockdowns have sparked ongoing debates regarding their cost–benefit trade-offs. While the primary aim is to save lives, the socio-economic repercussions have been significant.

In the United States, the absence of a federal lockdown policy led to a patchwork of measures enacted by individual states, resulting in varying responses influenced by factors such as partisanship and electoral considerations. Our analysis reveals a nuanced interplay between political affiliations, elections and pandemic policies, with Republican-led states, especially those with upcoming elections, exhibiting less stringent lockdown measures compared to their Democratic counterparts.

Overall, our results extend the literature studying what drives government's lockdowns characteristics. Pulejo and Querubín (2020) show that time to election and whether the incumbent can run matters for country-level variation in lockdown. Ferraresi et al. (2020) find that an election year affects country-level policies. Adolph et al. (2021) show that Republican states are less likely to have measures in place. Our paper extends these findings and presents novel evidence that while Republican states have less strict and shorter lockdowns, the interaction between partisanship and elections matters as well.

These findings have implications for communication regarding future lockdowns, as well as for the drive to increase vaccination uptake. Strategies used need to take into account the different groups of voters and their perceived weights attached to the trade-off between economic and public health risk.

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APPENDIX A

TABLE A1 The effect of elections.

	Stringency	Avg. stringency	Days above 50	Duration
Election	−0.037 (0.12)	−0.04 (0.06)	0.02 (0.09)	−0.10 (0.10)
State controls				
Urbanization	−0.004 (0.004)	0.002 (0.002)	−0.0003 (0.004)	0.003 (0.003)
Population above 62	0.04 (0.05)	0.004 (0.01)	−0.02* (0.02)	0.04 (0.02)
ICU beds	−11.58 (9.27)	−0.93 (2.83)	−0.91 (3.93)	0.85 (6.05)
Log deaths at lockdown	0.10 (0.07)	−0.02 (0.02)	−0.04 (0.02)	−0.09*** (0.02)
Log GDP	0.03 (0.09)	−0.01 (0.03)	0.03 (0.04)	0.06 (0.05)
Governor controls				
Age	−0.001 (0.007)	−0.001 (0.003)	0.001 (0.007)	−0.01 (0.01)
Male	−0.22 (0.14)	−0.08 (0.08)	0.06 (0.15)	0.05 (0.14)
Time in office	−0.02 (0.02)	0.01 (0.01)	0.01 (0.01)	−0.02 (0.02)
Obs.	43	43	43	39
R^2	0.02	0.002	0.01	0.05
Estimator	Fractional regression (probit)	Fractional regression (probit)	Neg. binomial	Neg. binomial

Note: Robust standard errors in parenthesis. Significance levels: *$p<0.1$, **$p<0.05$, ***$p<0.01$.

TABLE A2 The effect of republican states.

	Stringency	Avg. stringency	Days above 50	Duration
Republican	−0.28** (0.14)	−0.15*** (0.04)	−0.22** (0.09)	−0.26*** (0.10)
State controls				
Urbanization	−0.007** (0.003)	0.001 (0.002)	−0.002 (0.003)	0.001 (0.004)
Population above 62	0.03 (0.04)	0.003 (0.007)	−0.03** (0.01)	0.04* (0.02)
ICU beds	−8.44 (8.57)	1.27 (2.06)	0.10 (3.51)	7.08 (4.87)
Log deaths at lockdown	0.12* (0.06)	−0.01 (0.02)	−0.03 (0.02)	−0.08*** (0.02)
Log GDP	0.02 (0.08)	−0.02 (0.03)	0.02 (0.05)	0.06 (0.05)
Governor controls				
Age	−0.0002 (0.006)	−0.0004 (0.002)	0.002 (0.006)	−0.01 (0.01)
Male	−0.10 (0.12)	−0.01 (0.08)	0.10 (0.16)	0.11 (0.12)
Time in office	−0.02 (0.02)	0.01 (0.01)	0.01 (0.01)	−0.02 (0.02)
Obs.	43	43	43	39
R^2	0.03	0.004	0.02	0.07
Estimator	Fractional regression (probit)	Fractional regression (probit)	Neg. binomial	Neg. binomial

Note: Robust standard errors in parenthesis. Significance levels: *$p<0.1$, **$p<0.05$, ***$p<0.01$.
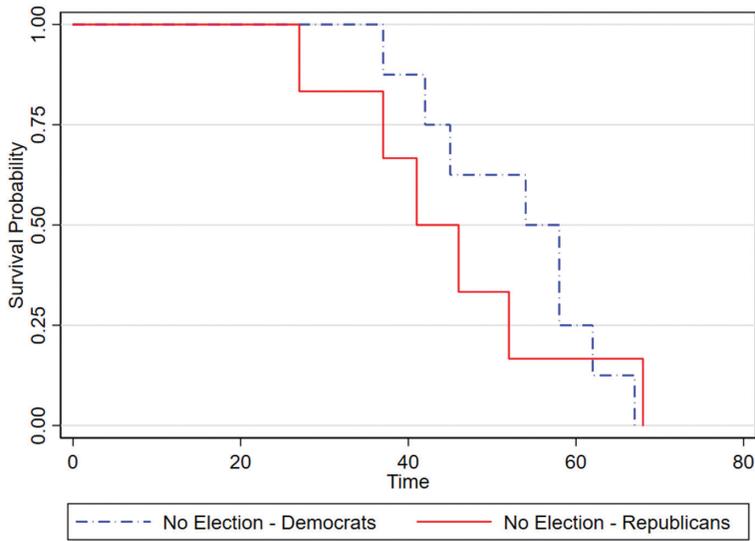
FIGURE A1 Kaplan–Meier Survival Functions of Lockdown Duration by Partisanship for States without an Election. Blue dash-dotted line shows Democratic states without a Senate election and red, solid line shows Republican states without a Senate election. Time on horizontal axis measured in days.