


ORIGINAL ARTICLE

Politically connected companies are less likely to shutdown due to COVID-19 restrictions

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Abstract

Objective: While the aim of COVID-19 policies is to suppress the pandemic, many fear that the burden of the restrictions will fall more heavily on less privileged groups. We show one potential mechanism for COVID-19 responses to increase inequality by examining the intersection of business restrictions and business political connections.

Methods: We fielded an online survey of 2735 business employees and managers in Ukraine, Egypt, and Venezuela over the summer of 2020 to collect data on companies' closures due to COVID-19 and nuanced information about their political connections.

Findings: We show that businesses with political connections to government officials were significantly less likely to shut down as a result of COVID-19 policies. This finding suggests that measures designed to mitigate COVID-19 are ineffective in countries with a weak rule of law if politically connected firms are able to circumvent restrictions by leveraging political connections to receive preferential treatment. In addition, politically connected firms are no more likely—and sometimes even less likely—to engage in social-distancing policies to mitigate the pandemic despite the fact that they are more likely to remain open.

While public health experts have called for restrictive measures to combat COVID-19, as is so often the case, government leaders have chosen to interpret these restrictions as best fits their interests. While an increasing amount of research has shown how COVID-19's economic effects have fallen more harshly on lower-income individuals (Bonaccorsi et al. 2020; Adams-Prassl et al. 2020), relatively little is known about whether similar distortions exist among companies. From an efficiency standpoint, the companies that should bear the burden of COVID-19 restrictions are those with extra cash on hand and stable lines of credit to withstand the disruption to their basis. However, we contend in this article that companies without political connections can employ political connections to circumvent COVID-19 restrictions so that businesses without such connections bear the brunt of policies designed to fight the pandemic.

To establish how politically connected companies have been differentially affected by COVID-19, we implemented an online survey of 2735 business employees and managers in Ukraine, Venezuela, and Egypt during the late spring and summer of 2020. Our rich data set includes multiple measures for corporate political connections, the history of company interaction with bureaucrats (negative and positive), as well

as patterns of political activity such as funding campaigns, ordering employees to vote for candidates and holding rallies on behalf of political parties. By combining this historical data on companies with questions about their compliance with COVID-19 directives, we are able to understand with considerable precision to what extent political connections enable companies to avoid pandemic-related business restrictions.

The results are not encouraging in terms of the fairness of COVID-19 policy implementation. We show that the political connections of companies, measured either via self-reported scales or in terms of observed linkages between politicians and the company, are highly correlated with companies staying open during the pandemic. These companies also tend to be larger on average. However, while it might be expected that these companies would be more likely to implement social-distancing and other measures for employees considering that they remained open, we find that this is not the case, and for some types of social distancing measures, politically connected firms' employees are less likely to comply. For this reason, we argue that companies are employing political connections to insulate themselves from COVID-19 restrictions, potentially increasing infections in their countries and passing the burden of business restrictions to less-connected, smaller and more vulnerable businesses. As we study these issues in countries known to have high levels of corruption and relatively weak state institutions, we believe that these same issues are likely occurring in other countries that lack strong and autonomous states. This outcome has both equity and welfare consequences as politically connected firms are not necessarily those which should remain open from an efficiency standpoint.

This research also makes contributions to research on disaster response in governments with extensive corruption (Atkinson, Hicken & Ravanilla 2014; Anbarci, Escaleras & Register 2005; Escaleras, Anbarci & Register 2007). Our results speak to a growing literature on the relationship between politics, corruption, and disaster response. This study suggests that governments with weak rule of law where state-business relations are driven by informal ties may be ineffective in implementing public policy responses to disruptive natural events such as the COVID-19 pandemic. Our findings also contribute to the literature on politically connected firms; we show that political connected firms can capture a larger market share through preferential access to club goods, such as exemptions from public health restrictions (Fisman 2001; Faccio, Masulis & McConnell 2006). Firms' heterogeneous experiences in accessing such club goods raise questions concerning the relationship between state-business ties and inequality in high-corruption states.

PANDEMICS AND POLITICAL CONNECTIONS

Relatively soon after the pandemic started, a massive scholarly enterprise to measure the economic consequences of COVID-19 restrictions put out a steady stream of studies. While many if not most of these articles remain unpublished, and the ever-expanding literature is difficult to characterize, we can already make some summary statements about how and to what extent COVID-19 restrictions affected businesses. Brodeur et al. (2020) offer the most rigorous overview of this research, revealing that business restrictions have had profound negative consequences for companies and their employees. At one point early in the pandemic, each additional 10 days of lockdown restrictions was associated with a 1.7 percent increase in unemployment in the United States (Brodeur et al. 2020, 28). These numbers are unheard of outside of massive natural disasters like tsunamis and earthquakes. In addition to the direct effect of policies, there are also indirect effects as consumers fear becoming infected with the virus, choosing on their own to avoid retail establishments and restaurants. Long-term, uncertainty over the state of the economy and the pandemic can depress investment and lead to chronic unemployment. (Brodeur et al. 2020, 27).

For these reasons, the pandemic poses a mortal threat to many companies, though some will be much more affected than others in the immediate aftermath of the pandemic. For example, Bartik et al. (2020) revealed that as many as 53 percent of U.S. retail and 70 percent of arts and entertainment businesses were closed as of the first week of April 2020. However, only 19 percent of financial firms and 21 percent of professional services firms reported closing. That is, the impacts of the early restrictions on COVID-19 were highly heterogeneous and very detrimental to certain industries, though over time we expect the macroeconomic shockwaves to hurt the performance of companies originally left unscathed.

This heterogeneity in the effect of COVID-19 on companies parallels the unequal effects of the pandemic on workers. While there has been an overall deterioration in labor market, lockdown policies have hurt the working poor more severely (Adams-Prassl et al. 2020). Workers who rely on daily wages and in-person work have been more severely affected by travel restrictions. On the other hand, workers who are able to work remotely from home, in many cases high-income earners, have been affected in a more limited manner by the pandemic (Bonaccorsi et al. 2020).

Given the severity of the effects of COVID-19 restrictions on business, it makes sense that these businesses would seek loopholes and other ways of circumventing restrictions. At present, however, we have only informative yet isolated examples of businesses taking advantage of COVID-19. In one case, a former U.S. political fundraiser reached deals to sell roughly \$630 million in COVID-19 medical supplies to government entities after using Republican political connections to facilitate business, according to emails and contract documents.¹ During summer 2020, Congressional Democrats sent a letter to the Trump administration complaining about other contracts, including mask production and test tubes, which were allegedly made to well-connected business people.² In a different vein, Brazilian President Bolsonaro has spared evangelical churches from COVID-19 restrictions, which many believe is due to the political connections of this group.³ These data points, while individually isolated, at least demonstrate the ease with which COVID-19 policies can be manipulated to the benefit of well-connected allies.

We can expect that the ability of businesses to circumvent restrictions is a function of state capabilities, potential customer blowback and business' beliefs about what their competitors might be doing. Customer preferences are often indeterminate as some customers would prefer more social distancing while others prefer less, rendering the market an ineffective check on business behavior. Knowledge of what other businesses are doing undoubtedly plays a role in business compliance via coordination games and strategic complements, but it is relatively difficult to know exactly how these beliefs change. Ultimately, the variable with the clearest positive or negative effect on business behavior are state policies mandating compliance.

While the COVID-19 pandemic is a new phenomenon, business attempts to circumvent state policies designed to counteract natural and other disasters are certainly not. To the extent that COVID-19 restrictions impose costs on businesses, firms have an interest in minimizing the negative impact of these policies. Firms' degree of success in escaping the costs of restrictions depends to a large extent on state-business relations. In governments with weak institutions, weak traditions of the rule of law and high levels of corruption, state-business relations are characterized by a high degree of informality (Fisman 2001; Faccio, Masulis & McConnell 2006; Shleifer & Vishny 1993). Interactions between firms and government agents are affected by informal connections, such as family, clan, or geographical ties, professional and political histories of its owners and board members, or ongoing informal/extralegal financial exchanges between the firm and government agents. Research shows that firms' experiences in high-corruption states vary as a function of the strength and effectiveness of their political connections (Claessens, Feijen & Laeven 2008; Khwaja & Mian 2005). This is reflected not only in preferential access to private goods such as government loans, but also in access to club goods, such as exemptions from government regulations.

Research shows that the existence of these types of politically connected club goods directly affects disaster response in high-corruption states (Atkinson, Hicken & Ravanilla 2014; Anbarci, Escaleras & Register 2005; Escaleras, Anbarci & Register 2007; Whittaker et al. 2018; Ambraseys & Bilham 2011). Since politically connected firms can evade enforcement of government standards, corrupt governments are associated with high earthquake fatalities due to widespread substandard construction practices. Political connections and informal relationships also play a role in the distribution of disaster aid. With respect to COVID-19 restrictions, it is reasonable to expect that a similar pattern will hold, and there is some evidence suggesting that informality and cronyism has worsened as a result of overwhelmed bureaucracies (Gallego, Prem & Vargas 2020).

¹ See <https://www.wsj.com/articles/coronavirus-gear-broker-used-political-ties-to-sell-goods-to-states-data-show-11594807200>

² See <https://thehill.com/policy/healthcare/507471-house-panel-probes-problematic-government-contracts-covid-19-supplies>

³ See <https://www.ft.com/content/7c3a17c6-f130-4659-972f-0fe9ebc7102b>

Based on this research, we believe that politically connected firms should be able to leverage their political connections to bypass lockdown restrictions and remain open. Connected firms may benefit from connections in two ways. First, firms may receive preferential treatment from government officials by receiving official exemptions from lockdown requirements. In Egypt, for example, the government exempted large sectors of the economy from lockdown restrictions, including sectors such as construction, film production, and manufacturing.⁴ These are concentrated sectors involving mostly large firms, as well as firms with close ownership ties to the Egyptian military. Since larger firms are more likely to be connected in high-corruption countries, this suggests that politically connected firms benefit by receiving official exemptions from government restrictions. Second, connected firms that are not exempt from restrictions may nevertheless remain open since such firms are less likely to be sanctioned by the government. Although it is possible that connected firms may be more visible to the government, existing research on politically connected firms suggests that this is unlikely. Connected firms are more likely to receive preferential treatment, assuming that connections are to officials presently in power, and are less likely to be punished for non-conformance with government standards and regulations. This is likely to be case with respect to lockdown restrictions as well, since government authorities are more likely to ignore violations by connected firms.

Politically connected firms may also be less likely to comply with less stringent restrictions, such as limited customer/employee capacity. Since politically unconnected firms are more likely to comply with restrictions and shut down or reduce their capacity and output, connected firms are then positioned to capture a larger share of the market. Given that political connections often derive from social relations stratified by resource inequalities, we believe that it is more likely that re-distribution of market opportunities to these companies will exacerbate existing wealth and income inequalities.

Based on this prior research, we propose two hypotheses that reflect how political connections may enable companies to evade COVID-19 restrictions:

H1: Companies with more political connections are less likely to shut down due to COVID-19 restrictions than non-connected businesses.

H2: Companies with more political connections are less likely to implement internal policies mandating social distancing than non-connected businesses.

DATA

Our data come from an online survey conducted in Egypt, Ukraine, and Venezuela during the summer of 2020. We selected these three countries as part of a most-different-systems design in which the three countries are similar on an important scope condition—weak state institutions with known issues with corruption—but differ on many other contextual factors. Egypt and Venezuela are authoritarian regimes while Ukraine is a democracy, and the countries are located in distinct regions of the world, which helps us incorporate cultural diversity and regional-level differences. As a result, we believe that findings that hold across these three countries have greater external validity than if we performed this analysis in one country or in countries with similar contextual factors. Figure 1 shows the distribution of respondents by sector.

All three countries implemented wide-reaching lockdown measures in March and April 2020 to combat the spread of COVID-19. From mid-March to the end of April, Ukraine and Egypt required all non-essential business to shut down. In Ukraine, only grocery stores, pharmacies, banks, and gas stations were permitted to remain open. Egypt similarly required businesses in the entertainment, retail, hospitality, and other service industries to shut down. Venezuela implemented a more restrictive lockdown, regulating the

⁴ <https://www.washingtoninstitute.org/policy-analysis/egypts-bitter-options-face-coronavirus>

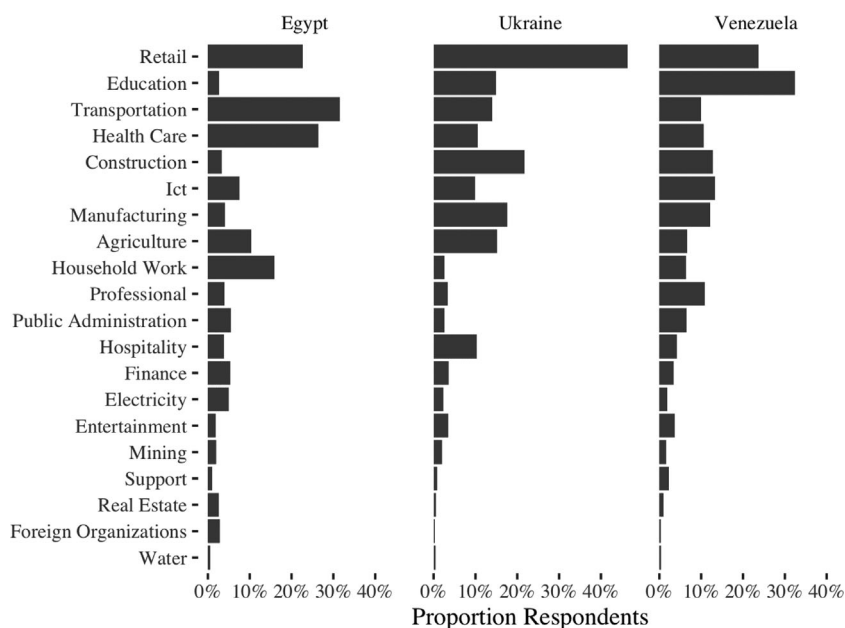


FIGURE 1 Distribution of respondents by sector

movement of individuals as well as mandating the shutdown of all non-essential businesses. Elements of these lockdown policies remained in place until July 2020 (Cheng et al. 2020).

Egypt, Ukraine, and Venezuela are useful cases for this type of analysis since these are high-corruption countries where firms face incentives to develop connections to government agents as protection from government predation (Diwan, Keefer & Schiffbauer 2015). There is also some institutional variance since Ukraine is a weak democracy, and Egypt and Venezuela are authoritarian regimes. To recruit respondents, we employed Facebook ad targeting at business managers and employees (Boas, Christenson & Glick 2020; Sances 2021; Zhang et al. 2020). This targeting method is quite similar to business-to-business marketing strategies and is seen as an excellent way to reach managers directly rather than have to use phone or email methods that are prone to being ignored by businesses. Furthermore, Facebook ads allow managers to access the survey apart from their work, permitting plausible anonymity that conventional firm surveys cannot provide.

In total, we recruited 2735 respondents who answered at least one of our COVID-19 related questions. A plot showing the distribution of responses by country and industry is shown in Figure 7. This figure shows that there is heterogeneity across countries, although pronounced concentrations in retail, transportation, health care, and education. This is not surprising as these sectors tend to absorb a lot of labor and firms. Manufacturing is relatively low in Egypt and Venezuela but much higher in Ukraine. Given this heterogeneity in sector, we think it is important to control for sector in all analyses as it represents potential sample selection bias.

Figure 2 shows the distribution of the Ukrainian sample to population-level sectoral proportions from a Ukrainian firm census. As can be seen, the proportions do not line up exactly as we would expect given random variation in sampling, but we also do not observe any sectors which have no representation or other concerning patterns which might suggest a break-down in sampling. While the online nature of the sample always needs to be taken into account, we believe that the social media recruiting strategy produced a reasonably diverse sample of company employees in these three countries.

We show the proportion of managers versus employees in the different samples in Figure 2 of the Appendix. As can be seen, these values are quite similar across countries. Managers represent 30 to 40 percent of individual samples, reflecting the survey targeting toward higher-ups in companies. At the same

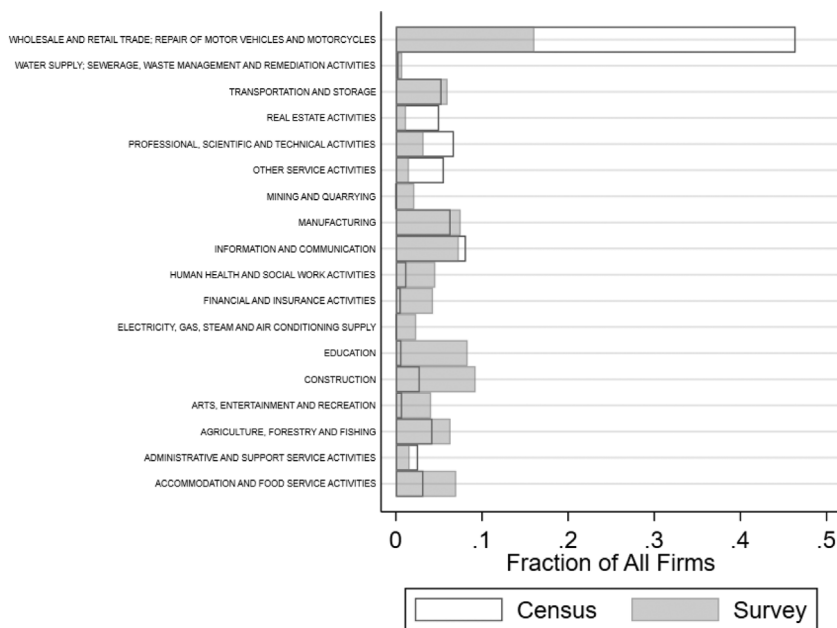


FIGURE 2 Ukraine sample and census sector distribution

time, it should be noted that the majority of the sample are employees. For the purposes of this study, both employees and managers should have access to relevant information, such as whether their firm implements social distancing and whether the firm shut down due to the COVID-19 pandemic.

In this survey, our main information about a company's response to COVID-19 comes from a series of questions on whether the company shut down *due to* COVID-19 restrictions and internal company enforcement of prudent social-distancing and mask-wearing policies.⁵ The modal responses for these questions communicate some of the staggering effects of these policies on businesses: The majority of the sample reports that their company had to shut down due to COVID-19 restrictions at some point. At the same time, a plurality of respondents still maintain that the government could do more to combat COVID-19 in their country.

To measure political connections, we use both a self-assessment scale for connections in addition to more objective linkages between the company and the state. The self-assessed scale is a 0 to 10 slider that respondents place their company on, where 0 equals no known political connections and 10 equals as connected as possible. The observed or objective linkages are answers to a range of questions that asked respondents whether their company had managers, board members or owners had specific types of relationship to the state. The question can be seen in Figure 6 in the appendix, revealing the wide array of options presented to the respondent.

Because this question produced a large number of indicators, aggregation is necessary to use it as a predictor variable. To do so, we constructed a one-dimensional scale by employing an item-response theory model and aggregating the data to the sum of the number of connections for each type of officer in the company (see Figure 6 in the Appendix). Correlation between this constructed measure and the self-reported score is reasonably high at 0.47, indicating both measures are likely tapping into the same concept although there are still clear differences between them.

This produced a single-dimensional score for each company. Histograms for the self-reported political connections score and the IRT-produced observed political connections score are shown in Figures 3 and 4. As can be seen, the distributions are relatively similar across countries, with pronounced modes at

⁵ See Table 1 in the appendix for the full list of questions.

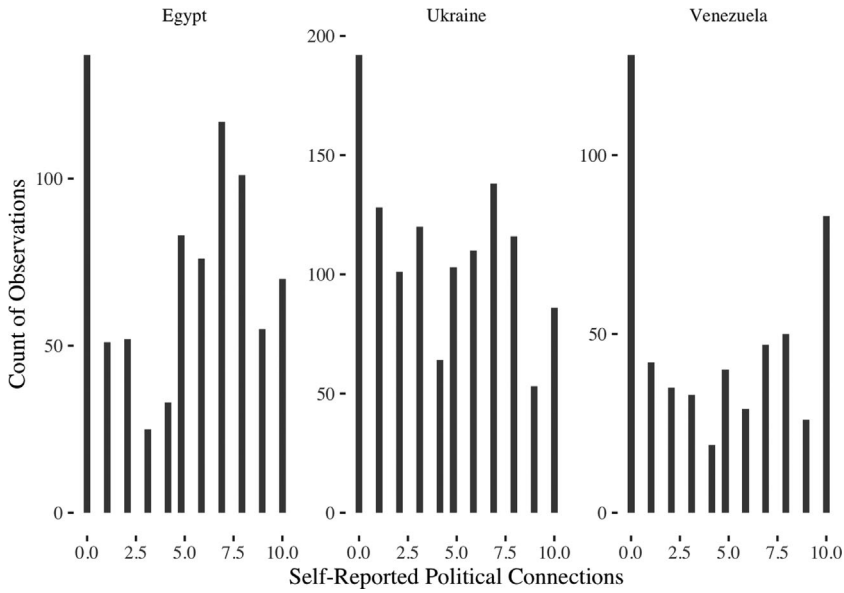


FIGURE 3 Histogram by country for self-reported political connections score

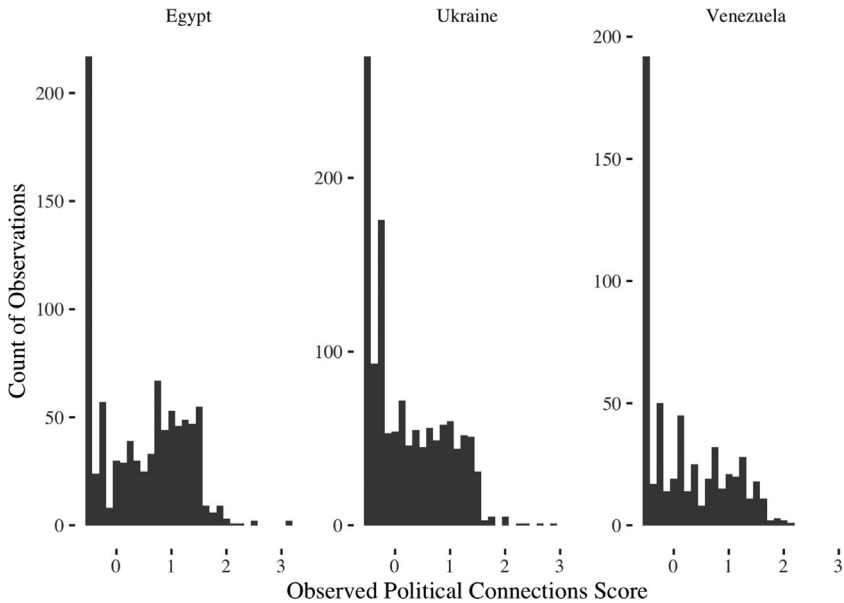


FIGURE 4 Histogram by country for IRT observed political connections score

0 for companies without any self-reported or observed political connections. One interesting empirical fact is that the Venezuela distribution for self-reported connections has a pronounced bi-modal distribution, while the Egyptian and Ukrainian distributions show more variation in the middle of the political connection categories.

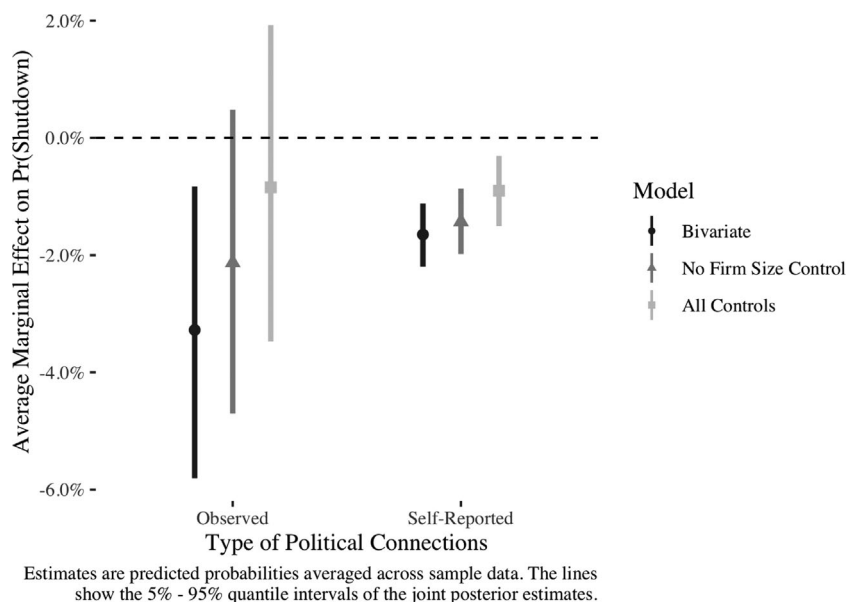


FIGURE 5 Average marginal effects for political connection scores

RESULTS AND DISCUSSION

Main results

Our main specification is a Bayesian logit model for the outcome of whether a company shut down due to COVID-19-related issues. We fit the model with the R package *brms* using default weakly informative priors (Bürkner 2017; Carpenter et al. 2017). The primary advantage of using a Bayesian logit model as opposed to a more conventional estimator is the ability to avoid issues of perfect separation and to permit more straightforward derivation of marginal effects with uncertainty.

We fit three separate models with varying numbers of controls, one set for each type of measurement of political connections: the self-reported 1 to 10 scale and the IRT scale based on observed company-state linkages. In the first model, we only include country and sector (2-digit NACE codes) fixed effects along with these predictors to estimate a straightforward bivariate (or nearly so) regression model. We then also fit a model with a number of control variables, including firm profit margin in the prior year, whether the company belonged to a conglomerate, and the type of company (domestic, foreign, unregistered domestic, etc). Finally, we also fit a model adding firm size proxied by the number of employees as a control.

We report the effects of the two political connections variables across the three different models in Figure 5. The effects are reported as sample-average marginal effects and so the results can be interpreted as the percent marginal increase in probability of a company shutting down due to COVID-19 given a one-unit increase in the political connections scores. In general, both observed and self-reported political connections tend to reduce the probability of a company shutting down. For a 1-unit increase in the observed political connections score (equivalent to a 1-SD change as the score is standardized), a company is about 4 percent less likely to shut down due to COVID-19 in the bivariate model with fixed effects. For a 1-unit increase in the self-reported connections score, a company is 2 percent less likely to shut down due to COVID-19. It should be noted that though the absolute size of the effect for the observed political connections variable is larger, this is partly a scaling effect as the observed connections score runs from approximately -2 to +2 while the self-reported political connections score can take on a value from 0 to 10. As such, a company with a 0 self-reported score would be about 20 percent less likely than a company with a 10 self-reported score to shut down due to COVID-19 in the bivariate model. Figure 6, which

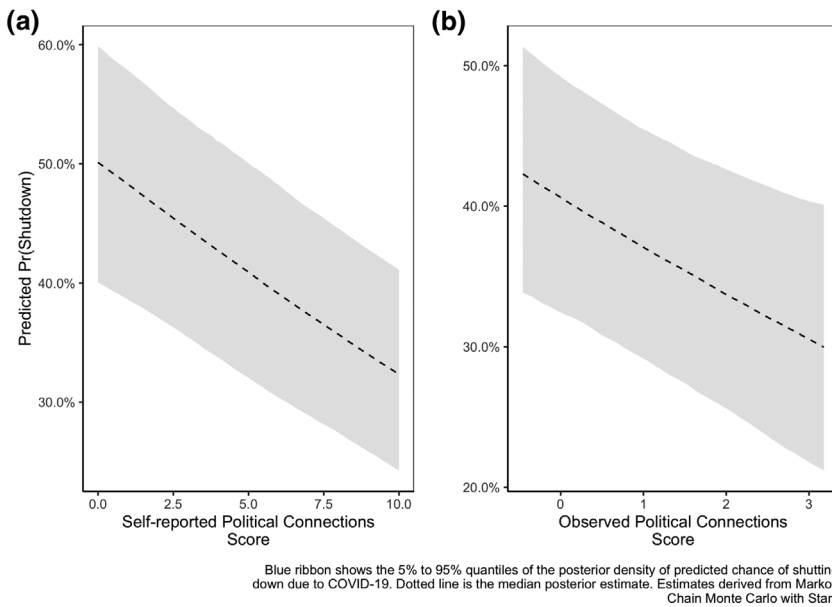


FIGURE 6 Predicted probability of shutting down for political connections (bivariate models)

shows predicted COVID-19 shutdown rates given values of the two political connection scores, makes the strength of the relationship clearer between the two variables.⁶

A similar pattern can be observed across the two types of measurements for political connections: The effect is the strongest in the bivariate model, and is smaller in the models with all controls and without firm size as a control. Furthermore, the uncertainty intervals indicate that the observed political connections variable is significantly noisier than the self-reported political connection variable. In the specifications with controls, the observed connections variable does not have a clear relationship with the outcome for this reason—that is, the point estimate is a null effect, but the wide uncertainty interval suggests the true effect could be zero, positive, or negative. Yet compared to the bivariate model, the observed political connections variable clearly has a weaker effect on company shutdowns in models with controls. While the self-reported variable shows a negative relationship with shutdowns in the models with controls, the effect size is noticeably smaller. We probe this empirical pattern later in this section to understand how the controls affect the relationship between connections and shutdowns.

We report sample-average marginal effects for firm sector in Figure 7 and for firm profit margin in Figure 8 in the Appendix. The reference sector for Figure 7 is agriculture, and as such companies in most other sectors were more likely to shut down with the exception of people working in water (i.e., utilities) and transportation, both essential sectors. By comparison, respondents in education and entertainment were nearly 40 percent more likely to shut down even when accounting for political connections and other controls. This finding corresponds to our expectation that high-contact sectors like education and entertainment were more vulnerable to COVID-19 restrictions and thus more likely to shut down.

Figure 7 also makes it clear that it is very possible that some sectors were deemed essential and thus more likely to stay open. The fact that we include sector as a control variable in our main specifications helps ensure that politically connected firms are not simply more likely to be in sectors that were later deemed essential. Even within sectors, politically connected companies are more likely to stay open, suggesting that the causal work is coming from these connections and not some other mechanism.

⁶ We present additional analyses in the Appendix with the two variables rescaled to z-scores to further illustrate this relationship.

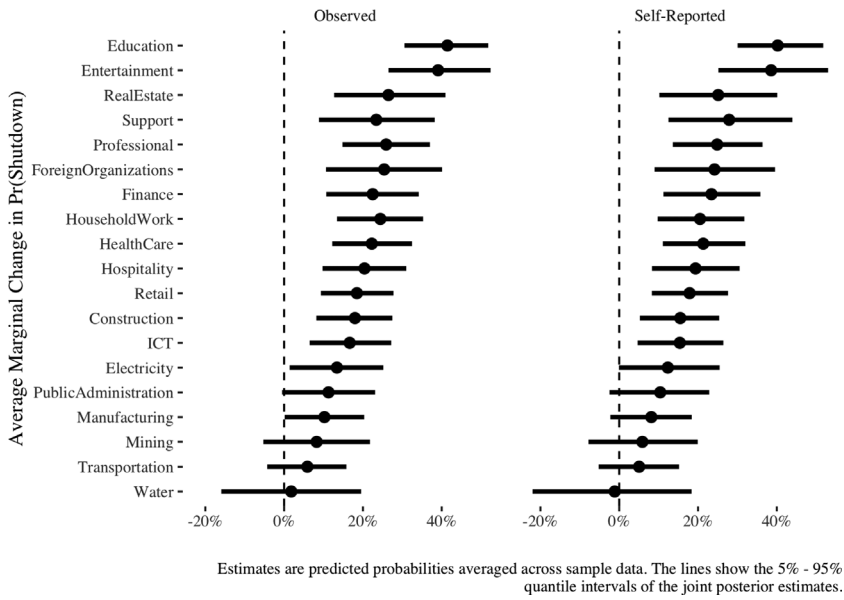


FIGURE 7 Average marginal effects on shutting down for firm sector (agriculture as reference category)

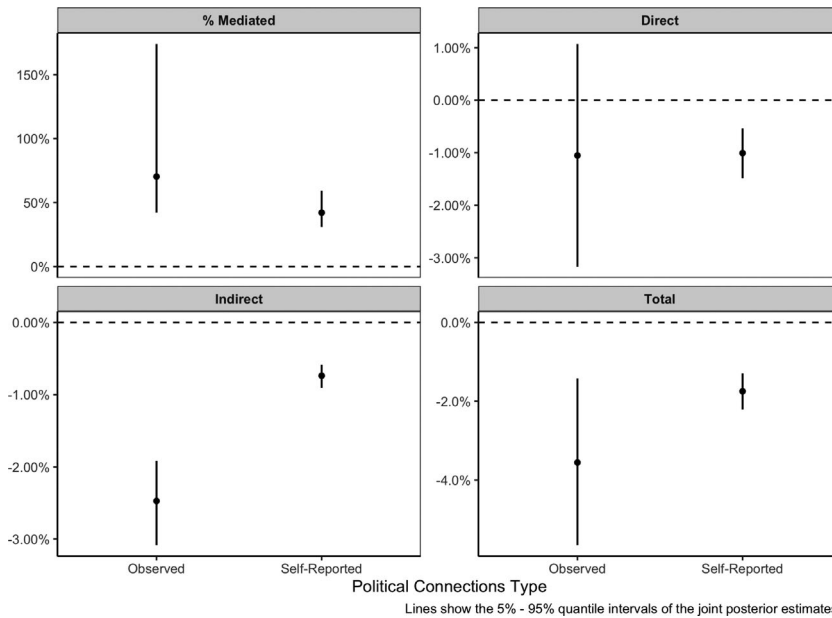


FIGURE 8 Mediation analysis for political connections via firm size

Mediation analysis

We now return to the finding reported earlier about the dilution of the effect of political connections with controls. As can be seen by comparing the models without controls versus all controls, the dilution in the effect of political connections is primarily due to the inclusion of firm size as a control. We believe this is due to the fact that larger firms tend to be both more politically connected in our data and are also more

likely to stay open during the pandemic. Figure 7 in the appendix shows predicted COVID-19 shutdown rates by firm size taken from the model with all controls. As can be seen, there is a very robust relationship with larger firms more likely to stay open than smaller firms.

The question in interpreting this finding is whether firm size is here a confounding variable—it can explain both political connections and resistance to COVID-19 shutdown rates—or whether it is a so-called post-treatment variable, that is, it is an effect of political connections. We adopt the second interpretation based on prior research about politically connected firms and knowledge about the countries in which we did this study (Saeed, Belghitar & Clark 2015; Kang 2002; Faccio 2010; Khwaja & Mian 2005). Due to issues with corruption, poor governance, and the difficulty companies have in obtaining necessary permits to operate, it is very unlikely that companies in Ukraine, Egypt, or Venezuela could grow to a very large size without having political connections. The problem can be described as a threshold effect: Once companies become large enough, it is difficult for them to continue to grow without maintaining connections with government officials to secure market access, and even more importantly, fend off attacks from corporate rivals who also have political connections (Markus 2015). This type of selection process is likely to result in a distribution of a large number of small companies without political connections, a reasonable number of large companies with political connections and relatively few medium-sized firms (Birdsall 2007).

As such, when we are comparing across large firms, we are very unlikely to observe any large firms without political connections due to this selection effect. Large companies without any kind of political connections would be cut apart by rivals competing for their market share and willing to exploit their own relationships to bureaucrats to throw up obstacles to competitors.

In addition, firm size independent of political connections does not appear to be a very good explanation for why a company might not shut down. The effect on aggregate employment is largely the same for whether large or small companies are forced to close, and large companies may have more resources to weather a shutdown than small businesses. Absent any other reason to distinguish these companies, a policy maker would arguably prefer to pass the burden of COVID-19 restrictions onto larger established companies and spare smaller, more vulnerable companies. This is indeed the approach taken in the United States in its Paycheck Protection Program (PPP) loans for small businesses.⁷ For this reason, we believe that firm size is mediating the relationship between political connections and COVID-19 shutdown rates due to long-term selection effects in the distribution of companies.

To examine this proposed mediation relationship, we implement a mediation analysis by fitting a model where we predict firm size with political connection scores and jointly fit a model with firm size and political connection scores together predicting shutdown rates. We can then use path analysis to calculate indirect, direct and total effects for political connections given the values of coefficients in both models (Yuan & MacKinnon 2009). We show these effects in addition to the proportion mediated, which is the ratio of indirect to total effects, in Figure 8. The direct effect in this figure is the same as the marginal effect from the model with firms controls reported in Figure 5. The indirect effect is the effect of political connections mediated through firm size. As can be seen, the indirect effects are quite substantial and large. They are as large as the direct effect for the self-reported score, and even larger than the direct effect for the observed score. As a result, the total effects are quite large for both the observed and self-reported scores. We note that the proportion mediated for both variables is around 50 percent, though it is even higher for the observed political connection score. It appears that firm size plays an important role in the relationship between corporate political connections and the state. Political connections facilitate company growth and consequently influence.

These also results suggest that the self-reported score is ultimately a better way to measure political connections of firms. Our aggregation of observed firm-state linkages is liable to missing relationships between companies and state officials that do not fit into one of our categories despite our efforts to capture a wide range of possibilities. The fact that the score shows so much smaller variance suggests that it better encapsulates respondents' knowledge of their companies' political connections, permitting better

⁷ See <https://www.nytimes.com/2020/07/06/us/ppp-small-business-loans.html>.

TABLE 1 Effect of political connections on company's internal social distancing policies

Self-reported connections									
	Face mask		2 Meters		Work from home		No group meetings		
	estimates	CI (95%)	estimates	CI (95%)	estimates	CI (95%)	estimates	CI (95%)	
Intercept	2.65	2.59 – 2.70	2.37	2.30 – 2.44	1.89	1.82 – 1.96	2.31	2.24 – 2.39	
Political Connection (Self-Reported)	0	-0.00 – 0.01	-0.01	-0.01 – 0.00	-0.01	-0.02 – 0.00	-0.02	-0.03 – -0.01	
Ukraine	-0.11	-0.16 – -0.05	-0.01	-0.08 – 0.05	0.03	-0.04 – 0.09	-0.01	-0.09 – 0.07	
Venezuela	0.19	0.13 – 0.26	0.22	0.14 – 0.30	0.38	0.30 – 0.46	0.16	0.07 – 0.25	
Observations	2497		2389		2401		2408		
R ²	0.036		0.017		0.042		0.013		
Observed connections									
	Face mask		2 Meters		Work from home		No group meeting		
	estimates	CI (95%)	estimates	CI (95%)	estimates	CI (95%)	estimates	CI (95%)	
Intercept	2.66	2.62 – 2.70	2.38	2.33 – 2.43	1.86	1.81 – 1.91	2.27	2.21 – 2.33	
Political Connections (IRT)	0.01	-0.02 – 0.05	-0.05	-0.09 – -0.01	-0.01	-0.05 – 0.03	-0.1	-0.14 – -0.05	
Ukraine	-0.1	-0.15 – -0.05	-0.03	-0.10 – 0.03	0.02	-0.05 – 0.08	-0.01	-0.09 – 0.06	
Venezuela	0.19	0.13 – 0.26	0.19	0.11 – 0.27	0.39	0.31 – 0.47	0.15	0.05 – 0.24	
Observations	2682		2566		2566		2566		
R ²	0.035		0.018		0.018		0.018		

inferences. However, once mediation analysis is taken into account, it is very clear that both variables have a strong association with reduced COVID-19 shutdown rates.

Social distancing measures

These results provide broad support for our hypotheses. We now turn to test Hypothesis 2: Companies with more political connections are less likely to implement internal policies mandating social distancing. We use a Bayesian linear model (OLS) with weakly informative priors via the `brms` package. Table 1 presents our results. As described in the data section, we use four different variables to capture companies' internal social distancing policies – namely, whether employees wear face masks, maintain 2 m distance in the workplace, work from home, and hold no group meetings. All social distancing variables are in 3-point Likert scale, with 3 indicating that “all employees do this,” 2 indicating that “some employees do this,” and 1 indicating that “no one does this.”

Tables 1 uses the self-reported measure “political connections” and the IRT scale based on observed company-state linkages, respectively. We present simpler models just with country fixed effects in the table but we get similar results when we include controls used to test Hypothesis 1 such as firm profit margin, firm size, firm sector, a conglomerate dummy, and the type of company. Overall, results from both tables show that there is often no meaningful association between a company's political connections and its internal social distancing policies. While substantively there is a negative association between a company's political connections and four measures of internal social distancing policies, these associations are statistically significant at 95 percent level for no group meeting policies and maintaining a distance of 2 m. In the latter case, the effect is only substantial for observed rather than self-reported connections scores. In any case, the results are either negative or insubstantial.

Results from Table 1 suggest that while politically connected firms are less likely to comply with COVID-19 shutdown restrictions, there is no meaningful correlation between a company's political connections and its internal social distancing policies. When such a relationship does exist, politically connected companies are less likely to practice prudent social distancing measures such as banning in-person meetings and maintaining a distance of two meters between employees. Although connected firms are more likely than unconnected firms to stay open and thus give workers opportunities to violate social distancing measures, connected firms are not necessarily more likely to strictly enforce social distancing measures.⁸ This finding rules out an alternative explanation to our findings that politically connected companies are better compliers and thus it would be more prudent for policy-makers to let them remain open.

CONCLUSION

We find that politically connected firms are significantly less likely to comply with COVID-19 shutdown restrictions. As political connections are associated with firm size, we find that the effect of connections is mediated through firm size for both of our political connections measures. These findings imply that, first, governments with weak institutions and high levels of corruption may be ineffective at carrying out public health measures in response to the COVID-19 pandemic. Since politically connected firms leverage their connections to escape public health restrictions, compliance with business-related measures is likely to be low in states with corruption levels similar to that of Ukraine, Egypt, and Venezuela. Distortions and inefficiencies associated with corruption and weak institutions thus affect the severity of natural disasters and public health crises not only by weakening disaster-mitigation standards, but also by undermining disaster response policies.

⁸ We conduct additional analyses and exclude all firms that had to shut down due to COVID-19 restrictions. These results are presented in the Appendix, and are substantively identical to estimates in Table 1.

Second, our findings suggest that COVID-19 restriction loopholes associated with political connections are likely to contribute to market concentration in sectors with large numbers of politically connected firms, increasing inequality more generally. Since larger firms are more likely to be politically connected, our results show that large firms are less likely to comply with business restrictions. If large, connected firms evade restrictions and stay open while smaller, unconnected firms shut down, large firms may thus capture a larger share of the market. Small and unconnected firms are more likely to be driven out of business as they weather the costs of forced shutdown, in addition to the already existing problems of government predation. This type of uneven enforcement of shutdown restrictions is likely to contribute to increased inequality as small firms go out of business and large firms grow larger.

These results are relevant for research on corruption, political connections, public health, and disaster response. While most of the research on corruption and natural disasters focuses on factors that increase the destructiveness of disasters involving physical forces, such as earthquakes or hurricanes, our findings show that corruption and weak institutions affect response to events like pandemics that do not involve direct physical destruction. More firm-level research is needed to understand how corruption and political connections impact government disaster response. How do politically connected firms benefit from disaster recovery assistance? Do connection types matter? How do these relations vary across types of natural events? Answers to these questions would be highly useful in understanding government-business interactions during and in the wake of natural disasters.

Our research suggests some additional avenues for future work. Our findings imply that inconsistencies in lockdown enforcement may lead to increased inequality and market concentration. While we are unable to test this hypothesis directly, future work ought to more closely examine the relationship between inequality, politically connected firms and market structure. If politically connected firms capture larger market shares through access to a club good, such as lax enforcement of public health measures, high prevalence of politically connected firms is likely to be associated with more monopoly and oligopoly. More research is needed to more fully understand if and how corruption affects inequality and the concentration of capital in high-corruption states.

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