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MIDDLE EAST LAW AND GOVERNANCE 14 (2022) 5-25

MIDDLE EAST AN LAW AND INTERDISCIPLINARY GOVERNANCE JOURNAL
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Governing the COVID-19 Pandemic in the Middle East and North Africa: Containment Measures as a Public Good

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Abstract

What determined how governments in the Middle East and North Africa reacted to the global COVID-19 pandemic? We develop a theoretical argument based on the political costs of different policy options and assess its empirical relevance. Distinguishing between the immediate costs associated with decisive action and the potential costs of uncontrolled spread that are likely to accrue over the long term, we argue that leaders who have fewer incentives to provide public goods to stay in power will lock down later than their more constrained counterparts. We find empirical support for this argument in statistical analyses covering the 1 January – 30 November 2020 period using the Oxford COVID-19 Government Response Tracker (OxCGRT) and our own original data on the timing of mosque closures and strict lockdowns across the region. We also illustrate our argument with a description of the response to the pandemic in Egypt.

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Keywords

COVID-19 – coronavirus – public health – non-pharmaceutical interventions – containment – lockdowns – leader survival – political regime type – winning coalition size – MENA

Are autocracies better able to contain the COVID-19 pandemic than democracies? China's relatively successful early containment efforts are sometimes taken as evidence that autocracies face fewer political constraints and are therefore better able to take decisive early action.[1] Indeed, research has found that the pandemic seems to have resulted in an increase in public support for 'strong leaders.'[2] Furthermore, public discourse in democracies has emphasized a trade-off between effective counter-COVID policies and the protection of civil liberties.[3] At the same time, scholars have found that autocracies are less effective at regulating behavior[4] and that containment efforts in Muslim-majority countries were significantly more successful in functioning democracies than non-democracies.[5] Initial evidence on the relative merits of democratic or autocratic executives is thus mixed at best.

We address this issue by theorizing governments' decision-calculus for policy on the pandemic and examining evidence from the Middle East and North Africa (MENA). We argue that while autocratic executives possess the power necessary to impose restrictions swiftly, not all have the incentive to do so. Autocratic leaders, in contrast to politicians in democracies, likely prioritize short-term cost avoidance, rather than their populations' health, a longer-term public good. Furthermore, this effect likely varies for autocracies: the smaller the coalition to which an autocratic leader is responsible, the less likely is that

1 Kai Kupferschmidt and Jon Cohen, 'Can China's COVID-19 Strategy Work Elsewhere?,' *Science* 367 (2020): 1061–62.

2 Francesc Amat et al., 'Pandemics Meet Democracy: Experimental Evidence from the COVID-19 Crisis in Spain,' (University of Barcelona, 2020); Damian R. Murray, Mark Schaller, and Peter Suedfeld, 'Pathogens and Politics: Further Evidence That Parasite Prevalence Predicts Authoritarianism,' *PLoS ONE* 8 (2013): e62275.

3 David M. Studdert and Mark A. Hall, 'Disease Control, Civil Liberties, and Mass Testing — Calibrating Restrictions during the Covid-19 Pandemic,' *New England Journal of Medicine* 383 (2020): 102–4.

4 Carl Benedikt Frey, Chinchih Chen, and Giorgio Presidente, 'Democracy, Culture, and Contagion: Political Regimes and Countries' Responsiveness to Covid-19,' *Covid Economics* 18, (2020): 222–38.

5 Rachel Jardine et al., 'Analysis of COVID-19 Burden, Epidemiology and Mitigation Strategies in Muslim Majority Countries,' *Eastern Mediterranean Health Journal* 26 (2020): 1173–83.

leader to prioritize public health. The empirical evidence is consistent with this argument. When it comes to containment measures to tackle COVID, we find no autocratic advantage in MENA. In addition, MENA governments with smaller winning coalitions act more slowly to implement public health measures to combat the pandemic.

We proceed as follows. The next section develops our theoretical argument, explaining why we would expect some Middle Eastern governments to act more swiftly than others. Two subsequent sections lay out the empirical evidence. We outline the course of the COVID-19 pandemic in the MENA region and provide a statistical analysis to test our theoretical claims. We then illustrate our argument in greater detail with Egypt's response. We conclude by considering implications for further research.

Autocratic Advantage?

Do autocrats' iron fists imply a free hand in responding to COVID? The centralized nature of decision-making in autocracies should enable their leaders to react swiftly;[6] but distorted information flows, lacking state capacity, and tendencies to ignore problems might limit potential for decisive action.[7] Early studies find support for both perspectives: during the pandemic's first wave, democracies experienced more per-capita deaths than autocracies,[8] reacted more slowly, and their policies had limited effects.[9] Other research, by contrast, suggests that containment measures have been more effective in democracies[10] and that among Muslim majority countries, democracies were better at flattening the curve of infections.[11]

Our analysis of pandemic responses in MENA builds on these early discussions. In particular, we argue that a blunt, binary autocracy-democracy distinction cannot account for the diversity of pandemic responses. The current

6 Gabriel Cepaluni, Michael Dorsch, and Reka Branyiczki, 'Political Regimes and Deaths in the Early Stages of the COVID-19 Pandemic,' (Central European University, 2020); Kupferschmidt and Cohen, 'China's COVID-19 Strategy'; David Stasavage, 'Democracy, Autocracy, and Emergency Threats: Lessons for COVID-19 From the Last Thousand Years,' *International Organization* 74 (2020): E1–17.

7 Stasavage, 'Democracy, Autocracy, and Emergency Threats.'

8 This might to some extent be driven by different age compositions, a dimension which the authors do not control for.

9 Cepaluni, Dorsch, and Branyiczki, 'Political Regimes.'

10 Amat et al., 'Pandemics Meet Democracy.'

11 Jardine et al., 'Analysis of COVID-19 Burden.'

emphasis on regime type misses a key feature of autocratic politics and governance – the role played by winning coalitions in determining autocratic responses to crises. COVID-19 containment measures should be understood as a public good. Accordingly, we expect regimes to respond more swiftly to the pandemic challenge the larger is the winning coalition supporting them in power.

Leader Survival, Winning Coalitions, and Public Goods Provision

The prospect of an autocratic advantage in pandemic response relies on the notion that democratic executives are too constrained to react quickly and decisively. Some suggest, for example, that the "same features of democracy that are thought to yield better public policies also work to constrain the speed and incisiveness of democratic decision-making."[12] The rule of law and constitutional guarantees of civil rights constrain democratic executives. Thus, "policy responses that impinge on personal liberties and privacy that could have contained the spread of the virus were not pursued in the early stages of the crisis."[13] The underlying assumption is that a country's speed in implementing containment measures is primarily determined by the extent to which the executive is subject to constraints.

The lens of interests, rather than capacity, offers an alternative perspective on pandemic containment. While constraints on executive power might have delayed intrusive containment measures in democracies, it does not follow that the absence of such constraints will necessarily produce containment efforts. In fact, there are good reasons to assume that autocracies should see less, rather than more restrictions; autocracies should be more concerned with the welfare of a small set of key supporters than with that of the public as a whole.

We favor this interest-based perspective and suggest that COVID-19 containment can be seen as an example of public good provision. If effective, the benefits of restrictions cannot be targeted. Flattening the curve of infections is a public good; everyone benefits, irrespective of who bears the costs. But to impose strict measures is costly, economically and in terms of political capital. Worse, the benefits of lockdown measures are both uncertain and diffuse. In the best-case scenario, effects of restrictions only become visible about two weeks following their imposition, while costs must be borne immediately. Crucially, those costs are even higher because the effectiveness of containment

12 Cepaluni, Dorsch, and Branyiczki, 'Political Regimes,' 4.

13 ibid., 4.

measures depends on popular compliance; lockdown measures that aim to reduce the spread of the virus require significant up-front investments.

How do political regimes differ in their incentives to provide public goods? The literature on leader survival (often referred to as 'selectorate theory') provides useful insights. As Bueno de Mesquita et al. explain,[14] one key characteristic of political regimes in setting incentives for leaders is the size of the winning coalition. For any regime, there is a selectorate, "the set of people with a say in choosing leaders and with a prospect of gaining access to special privileges" that leaders can provide. The winning coalition is defined as "the subgroup of the selectorate who maintain incumbents in office and in exchange receive special privileges."[15] The larger a regime's winning coalition, the more likely it will invest in public goods in order to secure its survival in power. This occurs due to the effect on the marginal cost of private goods. Regimes will want to reward members of the winning coalition in order to maintain power. As the winning coalition becomes large, regimes find it too costly to reward these supporters with targeted, private goods. Instead, public goods are a more efficient way to maintain support, even though these public goods are enjoyed by the entire society and not just members of the winning coalition.[16] A swift response to COVID constitutes a public good. We therefore expect MENA governments' responses to the pandemic to vary according to the size of their winning coalition.

Our expectations coincide in important ways with the literature on elite pacts[17] in autocracies and on 'political settlements' in MENA.[18] Scholarship on elite pacts emphasizes the extent to which ruling elites exclude potential rival elites, and the consequences for policy, including public goods provision. Political settlements scholarship emphasizes the extent to which ruling elites have incentives to distribute resources broadly versus narrowly. Both, then, instruct us to examine incentives for ruling elites to exclude potential rival elites and the population as a whole from benefits as key. This is a feature they share with leader survival theory: All are concerned with the extent to which the structural characteristics of a polity's ruling bargain generate incentives to

14 Bruce Bueno de Mesquita et al., *The Logic of Political Survival* (Cambridge, MA: MIT Press, 2003).

15 ibid., xi.

16 ibid.; James D. Morrow et al., "Retesting Selectorate Theory: Separating the Effects of *W* from Other Elements of Democracy," *American Political Science Review* 102 (2008): 393–400.

17 Dan Slater, *Ordering Power: Contentious Politics and Authoritarian Leviathans in Southeast Asia* (Cambridge: Cambridge University Press, 2010), 15.

18 Melani Cammett et al., *A Political Economy of the Middle East* (Boulder: Westview Press, 2015).

distribute benefits beyond the inner circle to a winning coalition, which may be slightly larger than that inner circle or much, much broader.

Hypotheses

We expect pandemic responses to vary systematically according to the size of winning coalitions. The larger the winning coalition, the more likely is a swift pandemic response. Or, in the language of the elite pacts and political settlements literatures, the larger the group of people who are routinely included either economically or politically, the more likely is a swift pandemic response.

This leads to an observational implication, which we will investigate in MENA. We expect regimes with small winning coalitions to institute containment measures later. Since the benefits of pandemic containment cannot be effectively targeted, smaller winning coalitions are associated with higher relative costs of containment. Regimes with larger winning coalitions should lock down earlier. Not only will they be better able to bear the costs of containment measures, but the larger size of their winning coalitions relative to the overall population means that fewer resources are 'wasted' on politically insignificant constituencies.

It is important to note that we refer to a range of measures under the general term "lockdown" – school closures, work-at-home orders, cancellation of events, restriction of gatherings, closure of public transport, stay-at-home orders, movement restrictions, and mosque closures. We base our hypothesis on the understanding that lockdowns are an important public health tool. Critics argue that lockdowns, particularly national lockdowns and stay-at-home orders, have a range of undesirable consequences – including limiting the provision of medical care, increasing social isolation, and damaging the economy – which diminish or even outweigh the public health benefits.[19] However, scientific research that has been interpreted as supporting public criticism of lockdowns in fact addresses the relative effectiveness of national lockdowns and stay-at-home orders, and still finds other containment measures – ones that we analyze in this article under the broad category of lockdowns – to be effective.[20] There is an ongoing debate on the desirability of lockdown measures,[21] particularly regarding how extensive they should be

19 M.B. Pell and Benjamin Lesser, "Special Report: How the COVID-19 lockdown will take its own toll on health," *Reuters*, 3 April 2020, https://reut.rs/34ZEp2O.

20 Nils Haug et al., "Ranking the Effectiveness of Worldwide COVID-19 Government Interventions," *Nature Human Behaviour* 4 (2020): 1303–12; see also Kristian Soltesz et al., 'The Effect of Interventions on COVID-19,' *Nature* 588 (2020): E26–28.

21 E.g. Edward R Melnick and John P A Ioannidis, 'Should Governments Continue Lockdown to Slow the Spread of Covid-19?' *BMJ*, 369 (2020): m1924.

and how long they should last. Nevertheless, a clear scientific consensus exists, and was already present at the outset of the pandemic,[22] that early adoption of lockdowns was essential to limit the spread of the disease and to buy time for the medical and public health preparedness needed to get the pandemic under control.[23] In addition, economic harm due to the continuing spread of the disease has meant that lockdown measures may be an effective means to limit the pandemic's economic fallout. This contrasts with the criticism that lockdowns created a trade-off between "saving lives and protecting livelihoods."[24] All in all, while public health scholars and clinicians debate the relative merits and costs of different containment measures, the effectiveness of containment as such is not in dispute.

The next sections turn to the empirical analysis. We first describe the course of the pandemic in MENA. We then employ statistical analysis to test our expectations. We close with a brief illustration drawing on evidence from Egypt.

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22 For example, the open letter of the American Hospital Association, the American Medical Association, and the American Nurses Association, "Open Letter to the American Public: #StayHome to Confront COVID-19," 24 March 2020.

23 Kate Kelland, "Lockdowns Saved Many Lives and Easing Them is Risky, Say Scientists," *Reuters*, 8 June 2020, https://reut.rs/2BCYpfZ; "Fact check: Studies show COVID lockdowns have saved lives," 24 November 2020, https://reut.rs/33gklIZ; Nisreen A Alwan et al., 'Scientific Consensus on the COVID-19 Pandemic: We Need to Act Now,' *The Lancet* 396 (2020): e71–72.; Thomas V Inglesby, 'Public Health Measures and the Reproduction Number of SARS-CoV-2,' *JAMA* 323 (2020): 2186. Key studies include An Pan et al., 'Association of Public Health Interventions With the Epidemiology of the COVID-19 Outbreak in Wuhan, China,' *JAMA* 323 (2020): 1915–23; Seth Flaxman et al., 'Estimating the Effects of Non-Pharmaceutical Interventions on COVID-19 in Europe,' *Nature* 584 (2020): 257–61; Solomon Hsiang et al., 'The Effect of Large-Scale Anti-Contagion Policies on the COVID-19 Pandemic,' *Nature* 584 (2020): 262–67; Marco Vinceti et al., "Lockdown Timing and Efficacy in Controlling COVID-19 Using Mobile Phone Tracking,' *EClinicalMedicine* 25 (2020): 100457; Nazrul Islam et al. 'Physical Distancing Interventions and Incidence of Coronavirus Disease 2019: Natural Experiment in 149 countries,' *BMJ* 370 (2020): m2743; Camila Alves dos Santos Siqueira et al., 'The Effect of Lockdown on the Outcomes of COVID-19 in Spain: An Ecological study,' *PLoS ONE* 15 (2020): e0236779; Mark N Lurie et al. 'Coronavirus Disease 2019 Epidemic Doubling Time in the United States Before and During Stay-at-Home Restrictions,' *Journal of Infectious Diseases* 222 (2020): 1601–6; Antonio Guirao, 'The Covid-19 outbreak in Spain. A simple dynamics model, some lessons, and a theoretical framework for control response,' *Infectious Disease Modelling* 5 (2020): 652–69; Haug et al., 'Ranking the Effectiveness'; Catalina Amuedo-Dorantes et al. 'Early Adoption of Non-Pharmaceutical Interventions and COVID-19 Mortality,' *Economics and Human Biology* 42 (2021): 101003; Surya Singh et al. 'Impacts of Introducing and Lifting Nonpharmaceutical Interventions on COVID-19 Daily Growth Rate and Compliance in the United States,' *PNAS* 118 (2021): e2021359118.

24 IMF, 'World Economic Outlook: A Long and Difficult Ascent' (IMF, 2020), 74.

COVID-19 in MENA

The first cases of infection with COVID-19 in MENA were detected in the United Arab Emirates in late January 2020 in a family that had arrived from Wuhan, China.[25] On 14 February, Egypt reported the first case outside the UAE. Less than a week later, the first deaths from COVID-19 in MENA occurred, in Iran.[26] The virus spread rapidly throughout the region. Iraq reported its first deaths from COVID on 6 March. On 9 March, a tourist in Egypt died from the virus.[27] By early March, all MENA countries except Yemen reported cases. Figure 1 displays the region's confirmed COVID-19 cases until late November 2020.

These figures notwithstanding, MENA has fared relatively well in global perspective. By late November 2020, it had roughly 4.4 million cases of COVID-19

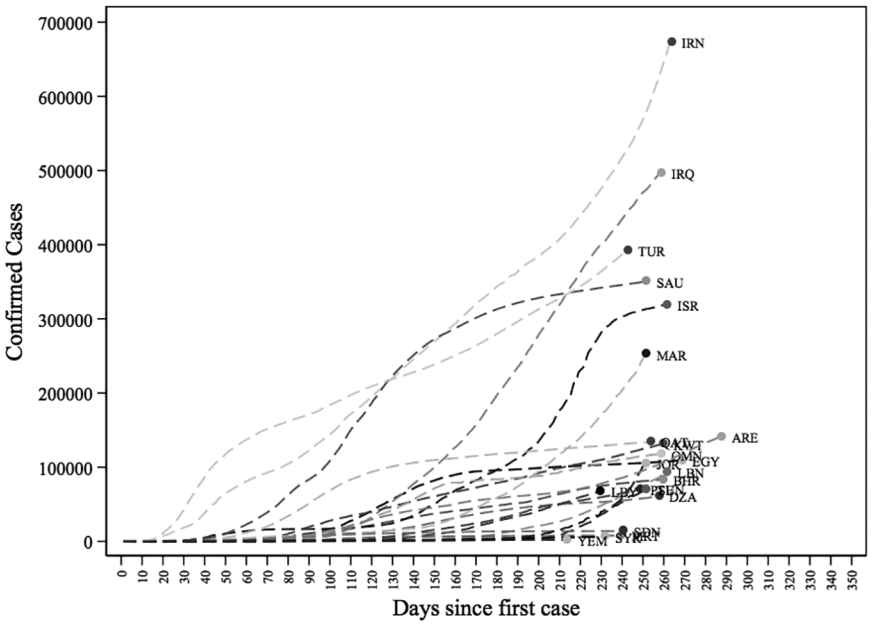

FIGURE 1 Confirmed Cases of COVID-19 in MENA

25 Farah Elbahrawy, 'U.A.E. Reports First Middle East Cases of Novel Coronavirus,' *Bloomberg*, 29 January 2020, https://bloom.bg/2Jq4ikE.

26 BBC News, 'Coronavirus: Iran reports two suspected fatal cases at Qom hospital,' 19 February 2020, https://bbc.in/3fRPG9G.

27 Sudardsan Raghavan and Heba Farouk Mahfouz, 'As more virus cases trace their origins to Egypt, questions rise over government measures,' *Washington Post*, 9 March 2020, https://wapo.st/2HPLMSf.

infections and 108,000 deaths from the virus, both representing about 7 percent of global figures. With the worst outbreak in the region, Iran alone accounted for 20 percent of this total (900,000 cases), followed by Iraq with 12 percent (540,000 cases), and Turkey with 10 percent (470,000 cases). Nevertheless, the pandemic's human, social, and economic costs have been considerable. In addition to the loss of human life, the OECD estimated that the region could lose as much as 42 billion USD of GDP in 2020[28] and the United Nations Economic and Social Commission for Western Asia warned that an additional 8.3 million people could fall into poverty.[29]

How have MENA governments reacted to this unprecedented public health challenge? To begin with, most countries introduced containment measures relatively early—some before experiencing their first case. As was the case globally, initial restrictions tended to target international travel; several countries banned incoming travel from specific world regions, or entirely closed international travel. The picture is mixed for more intrusive measures, however. Of the region's 21 countries (including Iran, Israel, and Turkey), only 9 introduced strict lockdown measures that went beyond nighttime curfews or recommendations to stay at home; 16 ordered the closure of mosques and other religious sites, while 20 introduced restrictions on gatherings, and all except Bahrain restricted internal movement.

Moreover, the timing of policy responses varied widely. Kuwait, for example, ordered restaurants closed and requested people to stay at home on 10 March 2020, 16 days after its first recorded case and before registering a single COVID-related death;[30] the UAE, on the other hand, introduced similar measures only about three weeks later, on 4 April 2020, 69 days after its first case and two weeks after its first COVID-related death.[31] Iraq and Iran present a similar study in contrasts. While mosques and religious shrines in Najaf, Iraq, were closed on 6 March 2020,[32] the day after Iraq's first recorded COVID-related death, neighboring Iran did not take similar measures until mid-March.[33] Figure 2 displays the stringency of restrictions over time.

28 OECD, 'COVID-19 Crisis Response in MENA Countries' (OECD, 2020), 3.

29 UNESCWA, 'Poverty and Food Insecurity in the Arab Region,' Policy Brief (UNESCWA, 2020), 2.

30 Alaa Swilam and Lisa Barrington, 'Qatar and Bahrain record jump in coronavirus cases, Kuwait bans flights,' *Reuters*, 11 March 2020, https://reut.rs/2VgD9DB.

31 Reuters, 'Dubai imposes two-week lockdown as Gulf states step up coronavirus fight,' 4 April 2020, https://reut.rs/33tWHso.

32 Shafaqna, 'Iraq: Closure of Shrines and Religious Places in Karbala and Najaf to Prevent Coronavirus Outbreak,' 6 March 2020, https://bit.ly/2JcbVeY.

33 Sune Engel Rasmussen and Aresu Eqbal, 'Iranians Defy Authorities in Bid to Access Holy Sites Closed Amid Coronavirus,' *Wall Street Journal*, 17 March 2020, https://on.wsj.com/3noZcqY.

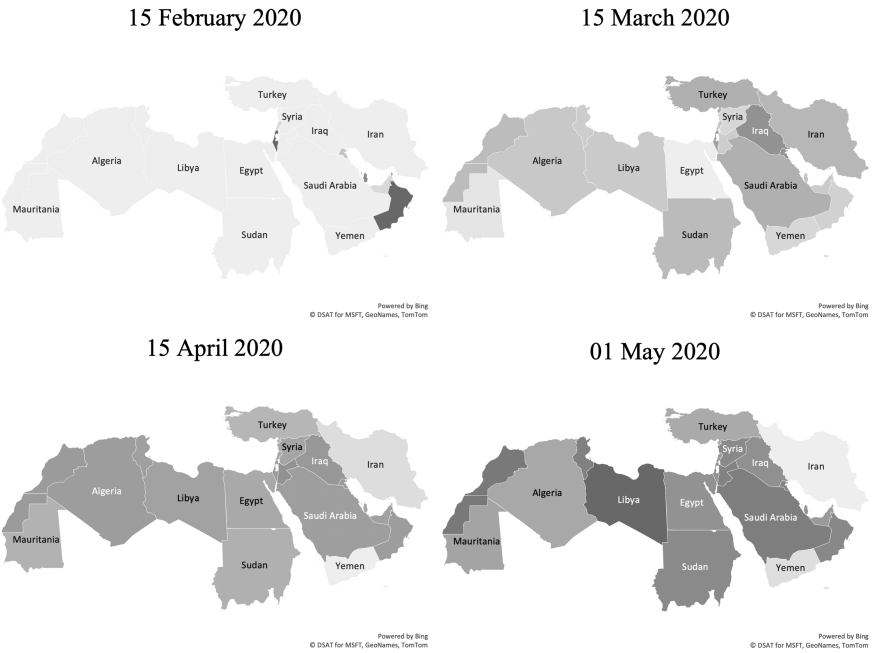

FIGURE 2 Stringency of Restrictions by Date

The Drivers of Lockdown

We test our theoretical argument using empirical evidence about the timing of COVID containment measures in MENA. We use the Oxford COVID-19 Government Response Tracker (OxCGRT) for information on containment measures. OxCGRT is one of the most reliable sources of information on government responses to the COVID-19 pandemic worldwide. The data is collected by over 100 researchers based on public information[34] and differentiate between eight different types of containment policies: closing of schools and universities, closing of workplaces, cancelling of public events, limits on private gatherings, closing of public transport, stay-at-home orders, as well as restrictions on internal and international travel. The variables are measured on different scales recording the severity of each restriction.[35] OxCGRT captures only the imposition of restrictions, not enforcement. Since we are interested in explaining variation in government responses, this limitation is not problematic. We supplement OxCGRT with new data we collected on mosque closures

34 See https://bit.ly/3w2y9mP.

35 OxCGRT codebook, https://bit.ly/3lhNPw1.

and full-blown stay-at-home orders as a strict form of lockdown, beyond limited measures like nighttime curfews.

To study the timing of lockdown decisions, we use survival analysis, modeling the risk of new restrictions. We record duration in days since 1 January 2020; the observation period ends on 30 November 2020. We specify Cox proportional hazards models to test the effect of a variety of country-level factors and time-varying measures of the virus' spread (cases and deaths).

As a first step, we test all restrictions in OxCGRT except on international travel.[36] The main variable of theoretical interest is the size of each country's winning coalition,[37] operationalized according to whether a regime has a base in the military, competitiveness and openness of executive recruitment, and competitiveness of political participation in general.[38] Our hypothesis suggests that the size of a regime's winning coalition will increase the likelihood that restrictions will be introduced early. To capture the alternative account of the autocratic advantage, we use Polity's executive constraints variable.[39] If unconstrained executives are more likely to lock down, we expect this variable to have a negative effect.

Our models also include a range of control variables to account for other plausible explanations. Moving averages of new cases and deaths over the prior week account for the pandemic's development. Hospital beds per 1,000 inhabitants measure health care system capacity.[40] Tax income as a percentage of GDP serves as an indicator of general state capacity. An index of ethnic, religious and linguistic fractionalization,[41] a measure of repression,[42] as well as a civil war dummy variable[43] help us capture important elements of the socio-political context. Population density, population size, GDP per capita, and oil rents as a percentage of GDP help control for demographic and economic differences.[44]

36 We are interested in policy measures that affect the population within countries.

37 Morrow et al., 'Retesting Selectorate Theory,' 395.

38 See Appendix Table A1.

39 This variable ranges from 0 to 7; higher values represent stronger constraints on the executive.

40 Cases, deaths, and hospital beds from Our World in Data, https://ourworldindata.org/covid-cases.

41 Alberto Alesina et al., 'Fractionalization,' *Journal of Economic Growth* 8 (2003): 155–94.

42 Peter Haschke, 'The Political Terror Scale (PTS) Codebook, Version 1.30' (University of North Carolina, 2020).

43 Coded 1 for Iraq, Libya, Syria, and Yemen.

44 In systematic tests, we did not detect problematic forms of multicollinearity in any of our models.

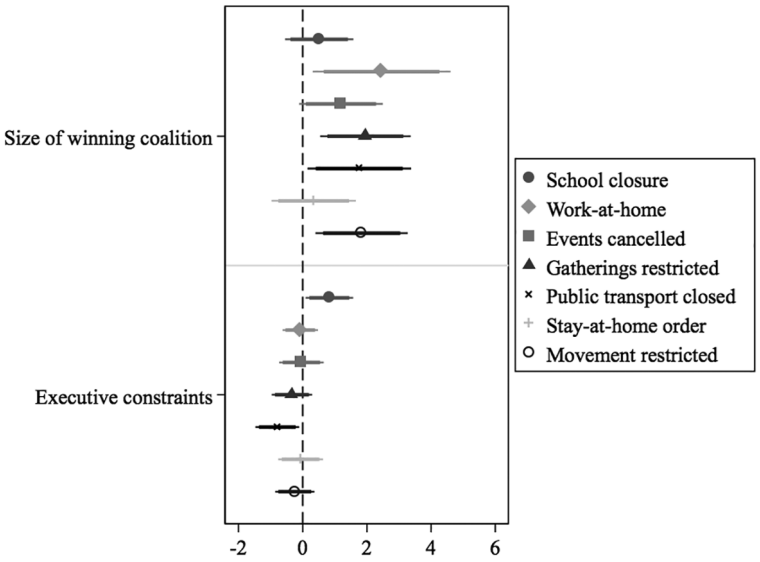

FIGURE 3 Effects of Winning Coalition Size and Executive Constraints on Containment Measures

Figure 3 plots estimated coefficients with confidence intervals (95 percent, thin lines; 90 percent, thick lines) from the seven models (Appendix, Table A2). Estimated coefficients for five of seven containment measures are consistent with our argument: The larger their winning coalition, the more likely regimes are to issue work at home orders, cancel events, restrict gatherings, close public transport, and restrict internal movement. Winning coalition size is statistically significant at the 95 percent level for all measures except event cancellation, for which it is statistically significant at the 90 percent level. School closures and stay-at-home orders are the only measures for which the winning coalition variable does not behave as predicted by our theory.

In contrast, there is little evidence of an authoritarian advantage. Executive constraints are significant only for two types of containment measures—school closures and public transport restrictions. For public transport, the estimated effect is negative, consistent with the autocratic advantage argument. For school closures, however, we find that more constrained executives are more likely to introduce this specific measure, contradicting the autocratic advantage account's expectations.

We collected additional data to complement policy measures covered by OxCGRT. First, we were interested in whether governments ordered the closure of mosques. Closing down religious sites can be politically costly. When Moroccan *'ulama'* issued a fatwa to temporarily close mosques upon request of King Muhammad VI, this triggered protests by the religious right. Although

critics were quickly arrested, the episode illustrates the political costs associated with the closure of mosques.[45] Similarly, the closure of two shrines in Mashhad and Qom in Iran triggered protests and clashes with the police.[46] Given the sensitive nature of this measure, we expect the potential effects of winning coalition size on its use to be particularly pronounced.

Second, strict lockdowns can be expected to be highly politically costly. However, OxCGRT does not differentiate between full stay-at-home orders and curfews restricted to specific times of the day. The importance of the distinction can be seen in countries across the region. When the UAE tightened containment measures on 4 April 2020, it did so by extending a nighttime curfew that had been in place since 26 March to daytime hours.[47] Egypt imposed a nighttime curfew on 24 March 2020 which required people to stay at home between 7 pm and 6 am. For OxCGRT, this put Egypt two days ahead of the UAE in implementing a stay-at-home order.[48] However, Egypt did not go to a full lockdown in day-time hours; OxCGRT elides the difference between more politically costly strict lockdowns and less politically costly curfews. We therefore coded a new variable for strict lockdowns, capturing full stay-at-home orders that applied for the entire day and excluding stay-at-home orders that consisted only of curfews.

Figure 4 below plots estimated coefficients for four models examining the effects of winning coalition size on mosque closure and strict lockdowns (Appendix, Table A3). The first two consider days since 1 January 2020 until the measure in question is implemented. The last two use duration since each country's first recorded COVID case. Model specifications are the same described above. The figure shows 95 and 90 percent confidence intervals.

These results constitute further evidence for our argument. Across all four specifications, the likelihood of the policy intervention is increasing in winning coalition size, although the effect on strict lockdowns is only significant at the 90 percent level. The larger a regime's winning coalition, the earlier mosques will be closed and strict lockdowns imposed.

45 Geneive Abdo and Anna L. Jacobs, 'Are COVID-19 Restrictions Inflaming Religious Tensions?' (Brookings Institution, 2020).

46 Harriet Sherwood, 'Iranian police disperse crowds from shrines after Covid-19 closures,' *Guardian*, 17 March 2020, https://bit.ly/2JozC3v.

47 Reuters, 'Dubai imposes two-week lockdown as Gulf states step up coronavirus fight,' 4 April 2020, https://reut.rs/2VveM5f.

48 Mahmoud Mourad and Aidan Lewis, 'Egypt declares two-week curfew to counter coronavirus,' 24 March 2020, https://reut.rs/2HX2UWs.

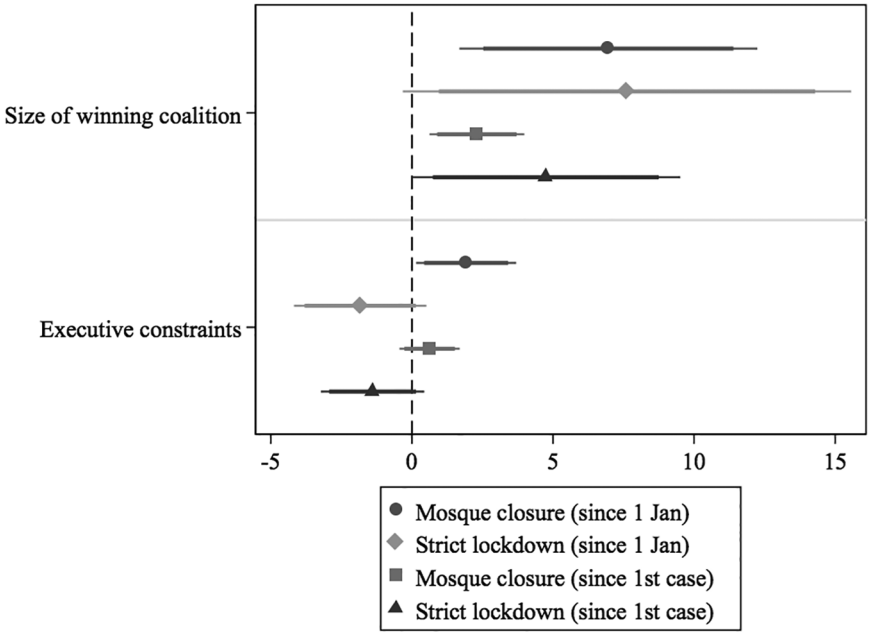

FIGURE 4 Effects of Winning Coalition Size and Executive Constraints on Mosque Closure and Strict Lockdowns

An Illustration: COVID in Egypt, March-November 2020

We illustrate how winning coalition size relates to specific pandemic responses through an account of Egypt's pandemic response. Egypt's regime has a small winning coalition based in the armed forces and maintained primarily by political exclusion. Based on our theoretical argument, we expect costly containment measures to be delayed or not implemented at all.

As mentioned above, Egypt was among the first MENA countries to experience a COVID-related fatality, on 9 March 2020;[49] on 14 March, the country closed schools and universities for two weeks;[50] from 19 March, international travel was restricted; and from 25 March, a night-time curfew was imposed–complete with penalties of EGP 4,000 for those violating new restrictions.[51] Still, Egypt never imposed a full lockdown; instead, the security

49 Reuters, 'Egypt reports death of German national, its first from coronavirus,' 8 March 2020, https://reut.rs/3707chY.

50 Reuters, 'Egypt shuts schools, universities for two weeks as virus cases increase,' 14 March 2020, https://reut.rs/3mlDsc9.

51 Mourad and Lewis, 'Egypt declares two-week curfew.

apparatus worked to contain reporting about the pandemic's spread and protests by medical personnel.

The government's response reflected its narrow political base. Following the highly scripted 2014 election, President Abdel Fattah el-Sisi paid lip service to establishing a new ruling bargain with the Egyptian people. In his inaugural speech, Sisi announced that health care would be "at the heart" of comprehensive development efforts promoted by his administration.[52] The new constitution promulgated in 2014 contained a commitment to increase government health care spending to 3 percent of GDP.[53] As the COVID-19 crisis revealed, however, actual provision of public health was more limited than these promises suggested. Government health expenditure increased only marginally since 2014, standing at 1.42 percent of GDP in 2018,[54] while the number of doctors employed in Egypt's public health system decreased, from 113,100 in 2014 to 75,700 in 2018,[55] with doctors continuing to move abroad for employment.[56]

Limited health care system capacity affected Egypt's response to COVID. By early November 2020, Egypt had conducted a total of 1,000,000 PCR tests; the 60 labs providing PCR tests were completing 10,000 tests per day, but, according to the Ministry of Health, could increase capacity to 30,000 tests if necessary.[57] By comparison, Morocco had performed more than 3.5 million tests over this period, despite having about a third of Egypt's population and a comparable level of development.[58] Egypt thus recorded one of the region's lowest per-capita testing rates.[59]

Instead of providing public goods in the form of health care, the Egyptian regime fell back on its organizational core in the military and security services. In a symbolic move, the army deployed to 'disinfect' the streets, schools, and universities of the capital;[60] at the same time, the security services sprang into action, cracking down on critical reporting on the pandemic and protests by

52 'Statement by President Abdel Fattah El Sisi at ceremony marking his inauguration,' https://bit.ly/303CPUM.

53 Article 18, https://bit.ly/3cq28NC.

54 World Health Organization's Global Health Expenditure Database, https://bit.ly/2TGpJmy.

55 Central Agency for Popular Mobilization and Statistics (CAPMAS), https://bit.ly/3z9tzoG.

56 Over half the doctors registered with Egypt's professional syndicate work abroad. Declan Walsh, 'Sisi Promised Egypt Better Health Care. Virus Exposed His True Priority,' *New York Times*, 11 November 2020, https://nyti.ms/3A6tRN3.

57 Munā Zīdān, 'Al-ṣiḥa: ajraynā milyūn taḥlīl PCR li-l-kashaf 'an kūrūnā… wa 10 alāf faḥṣ yawmiyyan,' *al-Shurūq*, 7 November 2020, https://bit.ly/3pvuHhO.

58 For testing data on Morocco, https://bit.ly/3zax3Y8.

59 Walsh, 'Sisi Promised Egypt Better Health Care.'

60 Egypt Today, 'Egyptian Army disinfects Cairo's schools and universities,' 18 March 2020, https://bit.ly/2JcOKBf.

medical personnel. In mid-March 2020, when the official case count stood at around 90, *The Guardian* reported on a simulation–later published in *The Lancet*[61]–which estimated actual cases to be between 6,000 and 19,000.[62] Egyptian authorities rejected these figures and revoked the press license of *The Guardian*'s correspondent, Ruth Michaelson, who subsequently left the country.[63] Similarly, when doctors and healthcare workers started to protest inadequate working conditions and a lack of personal protective equipment in June, the National Security Agency (*Qitā' al-amn al-watanī*, NSA) intervened and arrested several doctors. Between March and June, more than 60 medical personnel were arrested in connection with COVID,[64] prompting the Egyptian Medical Syndicate to warn against frustrations among Egyptian doctors in an open letter to the Prosecutor General.[65] The Corona Crisis Committees that the Prime Minister set up in early June for each of Egypt's governorates reflected the security-driven approach to dealing with the pandemic; these had a heavy presence of NSA personnel.[66]

This brief illustration highlights two important elements. Even though improving the health care system had been one of President el-Sisi's core 'populist' promises, actual progress was limited at best, reflecting the Egyptian regime's narrow political base. In responding to the COVID crisis, Egypt's government fell back on tried-and-tested routines, using the armed forces in a symbolic display of control and cracking down on information flows and expressions of dissent.

Conclusion

The enormity of the public health challenge posed by the COVID-19 pandemic means that governments around the world face significant political challenges in addressing it. We studied the time it took governments in MENA to impose measures to prevent the spread of the virus as a window into cross-country

61 Ashleigh R Tuite et al., 'Estimation of the COVID-19 Burden in Egypt through Exported Case Detection,' *The Lancet Infectious Diseases* 20 (2020): 894.

62 Ruth Michaelson, 'Egypt: rate of coronavirus cases' likely to be higher than figures suggest,' *Guardian*, 15 March 2020, https://bit.ly/3lmkocf.

63 Michael Safi, 'Egypt forces Guardian journalist to leave after coronavirus story,' *Guardian*, 26 March 2020, https://bit.ly/3mruFWo.

64 Sharmila Devi, 'Egyptian Health Workers Arrested after COVID-19 Comments,' *The Lancet* 396 (2020): 369.

65 Syndicate statement, https://bit.ly/2VhuH6T.

66 Muḥammad Majdī, 'Al-hukūma taḍamu al-amn al-watanī wa-l-raqāba al-idāriyya li-lajān azmat kūrūnā,' *al-Waṭan*, 1 June 2020, https://bit.ly/2VjkQgQ.

differences in policies to combat the virus. We argued that strict containment measures are a form of public good. Based on theories of leader survival, we hypothesized that the size of the winning coalitions that support regimes' hold on power would affect the speed with which they responded to the pandemic. Our statistical analysis showed that, indeed, smaller winning coalitions were associated with more delayed responses.

Early discussions of governance and COVID-19 suggested a potential autocratic advantage. Analysts focused on broad differences in the ability of autocracies versus democracies to implement the public health measures necessary to control the pandemic. Our argument and results suggest that it is necessary to instead examine governments' political incentives and to understand how these intersect with potential policy measures to combat the pandemic. In other words, abilities and capabilities matter less than political reasons to deploy them or hold back. The more governments had political incentives to provide public goods to their populations rather than private goods to a small group of key supporters, the more likely they were to act quickly to prevent COVID from spreading within their borders.

Our analysis has two important limitations. First, we examine containment measures' imposition, not their enforcement or effectiveness. The degree to which countries enforce containment measures can vary significantly, presumably driven by differences in capacity and political will. While beyond the scope of our analysis, any assessment of the effectiveness of different containment measures in MENA and beyond would need to account for this variation. Second, while we studied the dynamics of government responses within MENA, it would be interesting to test whether our argument holds in a broader set of cases as well. Our focus on MENA meant that we considered principally how winning coalition size varies across autocracies. Winning coalitions in democracies, though large compared to autocracies, might be similar across democratic countries. But other dimensions of political survival may have impacted democracies' policy choices related to the pandemic. The stability and size of parliamentary coalitions, and perhaps the size of electoral margins of victory, could influence the extent to which democratic governments are sensitive to the demands of specific constituencies or interest groups, and therefore whether they are willing to incur the short-term political costs of measures to combat the pandemic.

Acknowledgments

We thank Sahal Hadi for valuable research assistance.

Appendix

TABLE A1 Coding of the Winning Coalition Size Variable

Country	Military regime?	xrcomp	xropen	parcomp	Winning coalition size
Algeria	Yes	0	0	3	0
Bahrain	No	1	1	1	1
Egypt	Yes	0	0	2	0
Iran	No	0	1	4	2
Iraq	No	2	4	3	3
Israel	No	2	4	3	3
Jordan	No	1	2	4	2
Kuwait	No	1	2	2	2
Lebanon	No	2	4	3	3
Libya	No	-77	-77	-77	1
Morocco	No	1	2	2	2
Mauritania	Yes	0	0	0	0
Oman	No	1	1	2	1
Qatar	No	1	1	1	1
Saudi Arabia	No	1	1	1	1
Sudan	Yes	0	0	2	0
Syria	No	1	4	1	2
Tunisia	No	2	4	4	3
Turkey	No	0	0	2	1
UAE	No	1	2	1	2
Yemen	No	-77	-77	-77	1

Winning coalition size is coded following Morrow et al. (2008: 395):

1) Non-military regimes are awarded one point;
2) regimes scoring at least 2 on Polity's competitiveness of executive recruitment (xrcomp) variable are awarded another point;
3) regimes scoring at least 2 on Polity's openness of executive recruitment (xropen) variable are awarded one point;
4) regimes scoring 5 on Polity's competitiveness of participation (parcomp) variable are awarded 1 point.

The military regime variable is based on our own assessment; xrcomp, xropen, and parcomp are from the Polity data (https://www.systemicpeace.org/inscrdata.html) for the most recent year (2018). Values of -77 on the Polity
variables represent 'interregnums.'

TABLE A2 OxCGRT measures (Days from 1 January 2020 to restriction)

	(1)	(2)	(3)	(4)
	Schools	Work-at-home	Events	Gatherings
Winning coalition	0.515	2.457**	1.192*	1.953***
	(0.543)	(1.096)	(0.665)	(0.719)
Executive constraints	0.830**	-0.076	-0.041	-0.334
	(0.378)	(0.280)	(0.353)	(0.321)
New cases (moving avrg)	0.051	-0.011	-0.263**	0.006*
	(0.089)	(0.010)	(0.131)	(0.003)
New deaths (moving avrg)	-1.021	0.091	1.584	-0.134**
	(2.856)	(0.096)	(3.531)	(0.057)
Hospital beds (per 1,000)	-1.374*	2.677**	-0.558	-1.793**
	(0.793)	(1.173)	(0.615)	(0.721)
Tax income (% of GDP)	-0.137	-0.255	0.133	0.473***
	(0.124)	(0.185)	(0.132)	(0.177)
Fractionalization	-1.808	1.322	0.304	10.812**
	(2.554)	(2.584)	(2.811)	(4.388)
Repression	0.984	-2.628**	0.420	0.013
	(0.663)	(1.229)	(0.652)	(0.663)
Civil War	-0.407	2.929	-0.061	-0.252
	(1.413)	(2.150)	(1.348)	(1.835)
Population density	0.005**	0.001	0.003**	0.004**
	(0.002)	(0.001)	(0.001)	(0.001)
Oil rents (% of GDP)	0.078	-0.089	0.119*	0.275***
	(0.070)	(0.082)	(0.061)	(0.099)
GDP/capita	0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Population (million)	-0.007	0.117**	0.022	-0.016
	(0.016)	(0.046)	(0.020)	(0.025)
Observations	1454	1977	1518	2495
Countries	21.000	21.000	21.000	21.000
Events	21.000	20.000	21.000	19.000
χ^2	34.97***	27.72**	25.04**	36.90***

STANDARD ERRORS IN PARENTHESES, * P<0.10, ** P<0.05, *** P<0.01

TABLE A2 OxCGRT measures (Days from 1 January 2020 to restriction) (*cont.*)

	(5)	(6)	(7)
	Transport	Stay-at-home	Movement
Winning coalition	1.762**	0.342	1.835**
	(0.823)	(0.669)	(0.732)
Executive constraints	-0.790**	-0.065	-0.245
	(0.346)	(0.355)	(0.310)
New cases (moving avrg)	0.002	0.001	0.022*
	(0.001)	(0.002)	(0.012)
New deaths (moving avrg)	-0.036*	-0.064	-0.286
	(0.019)	(0.086)	(0.526)
Hospital beds (per 1,000)	-0.598	0.226	-0.673
	(0.848)	(0.678)	(0.691)
Tax income (% of GDP)	0.068	0.163	0.221
	(0.150)	(0.169)	(0.141)
Fractionalization	1.043	-0.729	-0.411
	(3.198)	(1.717)	(3.037)
Repression	-2.503**	0.547	-1.304*
	(1.013)	(0.779)	(0.685)
Civil War	2.905	-1.997	3.128*
	(1.839)	(1.267)	(1.817)
Population density	-0.000	0.000	-0.032***
	(0.002)	(0.001)	(0.012)
Oil rents (% of GDP)	0.172**	0.054	0.093
	(0.084)	(0.066)	(0.068)
GDP/capita	-0.000	-0.000	0.000*
	(0.000)	(0.000)	(0.000)
Population (million)	0.066**	-0.026	0.037
	(0.033)	(0.028)	(0.028)
Observations	3660	2973	2149
Countries	21.000	21.000	21.000
Events	15.000	17.000	20.000
χ^2	32.31***	18.31	37.76***

TABLE A3 Mosque closure and strict lockdowns

	Time since 1 January 2020		*Time since First Case*	
	(1)	(2)	(3)	(4)
	Mosque closure	**Strict lockdown**	**Mosque closure**	**Strict lockdown**
Winning coalition	6.963***	7.622*	2.427***	4.743*
size	(2.694)	(4.053)	(0.890)	(2.432)
Executive constraints	1.921**	-1.833	0.567	-1.394
(Polity)	(0.904)	(1.196)	(0.544)	(0.934)
New cases	-0.003	-0.003	0.000	-0.004
(moving avrg)	(0.005)	(0.005)	(0.002)	(0.005)
New deaths	0.002	0.039	0.001	0.046
(moving avrg)	(0.086)	(0.257)	(0.034)	(0.245)
Hospital beds	-4.136	1.369	-2.580	-0.134
(per 1,000)	(2.785)	(1.963)	(1.653)	(1.647)
Tax income	-0.403*	0.074	0.042	0.222
(% of GDP)	(0.233)	(0.280)	(0.142)	(0.243)
Fractionalization	-33.957**	7.127	-19.876***	-2.295
	(13.649)	(4.905)	(7.542)	(4.624)
Repression	-4.127**	-3.327	-2.229*	-1.860
	(1.887)	(2.231)	(1.188)	(1.415)
Civil War	-8.277	0.011	-1.078	-1.432
	(7.364)	(2.792)	(2.530)	(2.460)
Population density	0.008*	-0.000	0.004**	0.000
	(0.005)	(0.004)	(0.002)	(0.005)
Oil rents (% of GDP)	0.404*	0.109	0.193**	0.144
	(0.222)	(0.120)	(0.085)	(0.119)
GDP/capita	0.000	-0.000*	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Population (million)	0.153**	-0.103	0.049	-0.076
	(0.070)	(0.112)	(0.031)	(0.097)
Days at risk	3,286	4,836	2,016	3,566
Countries	21	21	21	21
Events	15	8	15	8
χ^2	49.949***	27.353*	39.116***	24.461**

STANDARD ERRORS IN PARENTHESES, * P<0.10, ** P<0.05, *** P<0.01