## Location and Rebellion: Rethinking the Relationship between Revolution and State Power

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Is revolution the product of state weakness? Much of the scholarly literature on revolutions asserts this, pointing to weak state capacity as a critical condition for the outbreak of revolutionary contention. In these accounts, revolutions occur in states weakened by fiscal crisis or over-commitment in war;<sup>1</sup> states beholden to landed elites, making them incapable of enforcing change and limiting the scope of independent action by leaders;<sup>2</sup> states with weak infrastructural power that are unable to penetrate their territories, leaving zones where rebels can operate freely;<sup>3</sup> states with weak militaries and police that cannot adequately control their territories or their borders;<sup>4</sup> and states with communities that enjoy structural autonomy from the state, providing space for collective action.<sup>5</sup>

In Huntington's account, for instance, revolutions were characteristic of states whose institutions were incoherent and lacked the capacity to channel the increased demands for participation from peasants and intellectuals that resulted from modernization. In Huntington's "Western" revolutions, state institutions first collapsed, leading to a struggle over who would govern, while in "Eastern" revolutions the state was incapable of extending its control over the countryside, providing space for the construction of an alternative revolutionary state that

<sup>1</sup>Brinton 1965; Skocpol 1978; Goldstone 1991.

<sup>3</sup>Goodwin 2001.

<sup>4</sup>Wickham-Crowley 1992, 57.

<sup>5</sup>Skocpol 1994. For a dissenting opinion on the role of state weakness as a condition causing revolution, see Davidheiser 1992.

<sup>&</sup>lt;sup>2</sup>Skocpol 1979.

challenged the political institutions of the old order.<sup>6</sup> For quite different reasons, Skocpol argued that "before social revolutions could occur, the administrative and military power of these states had to break down." As she approvingly quoted Christopher Lasch, "not oppression but weakness breeds revolution." Goodwin similarly maintained that revolutions are most likely to occur in "disorganized states" that "possess geographically and socially limited power," whereas revolutions were unlikely where the state "is organized in a rational-bureaucratic fashion" or "effectively governs throughout the national territory." For him, revolutions are facilitated when "the state's policing capacities and infrastructural power more generally are chronically weak or geographically uneven." In analogous fashion, Fearon and Laitin argued that "financially, organizationally, and politically weak central governments render insurgency more feasible and attractive due to weak local policing or inept and corrupt counterinsurgency practices." They conclude that insurgencies are most likely to occur in "fragile states with limited administrative control of their peripheries."

This paper argues that location matters in revolutionary politics—and specifically with regard to the role played by state capacity in revolution. Where one rebels exercises large effects on the factors affecting rebellion and how one rebels. Cities are places of concentrated state power where the nerve centers of government are located and where the coercive power of the state is strongest. Much of state power diffuses outward from cities, and the further one travels from centers of state power, generally the less capable states are of enforcing their rule. As I will

<sup>&</sup>lt;sup>6</sup>Huntington 1968.

<sup>&</sup>lt;sup>7</sup>Skocpol 1979, 285.

<sup>&</sup>lt;sup>8</sup>Goodwin, 2001, 26-27, 49.

<sup>&</sup>lt;sup>9</sup>Fearon and Laitin 2003, 75-76, 88.

show, rural revolutions (those that take place primarily in the countryside) are strongly influenced by what Michael Mann called the infrastructural power of the state (i.e., the institutional capacity of a central state to penetrate its territories and to implement its decisions). <sup>10</sup> But as I will also show, variations in state penetration, extraction, and legibility are generally not important in conditioning the onset of urban revolutions (i.e., those that take place primarily in cities), as these unfold precisely where the state is strongest, irrespective of the degree to which the state is able to extend its rule across society and territory. Urban revolutions, however, are more closely associated with the despotic and predatory dimensions of state power (repression and corruption) than rural revolutions are and consequently are more influenced by dynamic political opportunities that provide openings for challenging repressive regimes without necessarily affecting state capacity. <sup>11</sup> To paraphrase (and reverse) Skocpol, in cities it is oppression, not state weakness, that breeds revolution.

In the past, revolutionary contention may well have been associated with state weakness, largely because most revolutions took place primarily in the countryside or had significant rural components. But since the end of the Cold War, there has been a marked shift in the location of revolutionary contention, with the majority of revolutions now unfolding primarily in urban areas and in societies that are relatively urbanized. As a result, revolutions today are much less influenced by state capacity and much more influenced by dynamic political opportunities than

<sup>&</sup>lt;sup>10</sup>Mann 1986, 1988. See also Soifer 2008.

<sup>&</sup>lt;sup>11</sup>Mann actually argued that weak infrastructural power was not a necessary condition of revolution but constituted one path toward revolution. See Mann 2012, 246-267.

<sup>&</sup>lt;sup>12</sup>Beissinger 2022, 120-122. The onset of urban revolutions is associated with both Polity scores and with the number of years in which the incumbent leader has been in power. Neither are associated with the onset of urban revolutions.

was true in the past.

## State Capacity, Political Opportunity, and Spatial Location in Revolutionary Collective Action

Two vaguely related but distinct concepts are critical for understanding the spatial dimensions of revolutionary contention: state capacity and political opportunity. To a significant degree, these concepts reference different facets of political power: states and regimes. As political scientists have long realized, states and regimes represent different dimensions of political power. The state is the "more permanent structure of domination and coordination" that includes "a coercive apparatus and the means to administer a society and extract resources from it." A regime, by contrast, is "the formal and informal organization of the center of political power, and of its relations with the broader society," that "determines who has access to political power, and how those who are in power deal with those who are not."13 The two are often related to one another, and they can frequently be difficult to pull apart analytically. In European Leninist systems, for instance, regimes were fused and intertwined with the state, creating the potential for significant state breakdown in the context of regime-change. 14 Nevertheless, states should be understood as the more durable structures through which regimes rule over societies, while regimes represent the organization of those who control the state and who has access to power.

The fundamental goal of all revolutionary movements, of course, is regime-change; they seek to capture the state by overturning the regime that controls it in order to bring about

<sup>&</sup>lt;sup>13</sup>Fishman 1990, 428.

<sup>&</sup>lt;sup>14</sup>Bunce 1999.

substantive political or social change. There are revolutionary movements that seek to create a new state. In these cases, regime-change is a matter not only of rejecting the ruling regime that controls the state, but the institutions of the state itself. But regime-change most often occurs within the framework of an existing state. Moreover, it can even occur without altering the features and operations of the state in significant respects. 16

State capacity closely corresponds to Mann's notion of the infrastructural powers of the state (i.e., the institutional capabilities of the central state to penetrate its territories and to implement its decisions). It refers to "the capacities that exist within the state's organizational structures and the territorial reach of these capacities," as well as the general presence of the state within society, rather than the actual achievement of policy goals.<sup>17</sup> State capacity is multidimensional. It involves the central state's ability to permeate society and function across its territory (expressed, at a minimum, in "the presence of state functionaries and agencies").<sup>18</sup> But it also includes the neo-Weberian features of states such as effective monopoly over

<sup>&</sup>lt;sup>15</sup>Many scholars have noted the fundamental similarities between revolution and secession. For a discussion, see Buchanan 1991. In all, 18 percent of revolutionary episodes form 1900 to 2014 solely articulated demands for independence without articulating other revolutionary goals, while another 17 percent articulated demands for independence alongside other revolutionary goals.

<sup>&</sup>lt;sup>16</sup>This is precisely why Lenin called for the Bolsheviks to "smash" the state that they inherited from the Tsarist regime, since he knew that the state tended to persist through regime-change and required extraordinary measures in order to transform it. In actual fact, Lenin was only partially successful in these efforts.

<sup>&</sup>lt;sup>17</sup>Hanson and Sigman 2021, 1496; Soifer 2008, 2013. Migdal (1988 xiii) defines state capacity as "the abilities of state leaders to use the agencies of the state to get the people in the society to do what they want them to do" (see also Lindvall and Teorell 2016), while Dincecco (2018, 2) defines it as to "the government's ability to accomplish its intended policy goals." Such definitions confuse institutional capacity with the actual achievement of policy goals, and thereby lean toward the circular.

<sup>&</sup>lt;sup>18</sup>Acemoglu, Garcia-Jimeno, and Robinson 2015, 2365

legitimate violence in society, robust and professional bureaucratic institutions,<sup>19</sup> and the ability to extract resources and provide basic public goods.<sup>20</sup> As noted above, revolutionary collective action has often been thought to be a product in part of weak state capacity, with challenging groups gaining greater space for organizing opposition due to lack of penetration and control by the state.

Efforts to operationalize the notion of state capacity have been numerous and varied.<sup>21</sup> Early studies used GDP per capita, mountain cover, or terrain ruggedness (in terms of change in altitude) as proxy variables for state capacity.<sup>22</sup> While often correlated to some degree with state capacity, these proxy measures also capture other factors that are independently associated with conflict. More recent efforts to identify state capacity have focused on fiscal capacity (taxes as a percentage of GDP, revenues and spending as a percentage of GDP, taxes as a proportion of revenue),<sup>23</sup> state penetration (local postal or notary offices per capita, road densities, or political control over territory),<sup>24</sup> the ability of governments to collect information from society (through censuses, statistical agencies or yearbooks, or population registers),<sup>25</sup> coercive capacity (the size of the military or police, military spending per soldier or per capita, violent crime rates),<sup>26</sup> and bureaucratic quality (often measured through qualitative or expert assessments).<sup>27</sup>

<sup>&</sup>lt;sup>19</sup>Hendrix 2010.

<sup>&</sup>lt;sup>20</sup>See, for instance, Besley and Persson 2010.

<sup>&</sup>lt;sup>21</sup>For reviews and attempts at integrative measures, see Hendrix 2010; Cingolani 2013; Savoia and Sen 2015; Hanson and Sigman 2021; O'Reilly and Murphy 2022.

<sup>&</sup>lt;sup>22</sup>Laitin and Fearon 2003; Carter, Shaver, and Wright 2019.

<sup>&</sup>lt;sup>23</sup>For examples, see Cheibub 1998; Besley and Persson 2010; Cao and Ward 2015; Thies, Chyzh, and Nieman 2016; Kasara and Suryanarayan 2020.

<sup>&</sup>lt;sup>24</sup>Herbst 2000; Hanson and Sigman 2011; Müller-Crepon, Hunziker, and Cederman 2021.

<sup>&</sup>lt;sup>25</sup>Brambor et al. 2020; Lee and Zhang 2017.

<sup>&</sup>lt;sup>26</sup>Hendrix 2010; Albertus and Menaldo 2012; Soifer 2012; Fortin-Rittberger 2014.

<sup>&</sup>lt;sup>27</sup>Rauch and Evans. 2000; Grzymala-Busse 2007; Fortin-Rittberger 2014; Centeno et al. 2017.

By contrast, political opportunities refer to conditions that render regimes (rather than states) more vulnerable and are therefore propitious moments or venues for those excluded from a regime for mounting successful collective action. They refer not to the more or less permanent structures of the state, but rather to the organization of power in the political center and the conditions providing access to it and maintaining it. Tarrow defined political opportunities as "consistent-but not necessarily formal or permanent-dimensions of the political environment that provide incentives for collective action by affecting people's expectations for success or failure."28 But political opportunities are not incentives. They provide no direct reward or punishment for specific behavior, and rather affect the likely probability of eventual gain through collective action by rendering regimes more vulnerable to influence. They always involve a substantial risk of failure (which, when it does occur, is usually associated with significant negative consequences). Moreover, unlike an incentive, opportunities must be perceived to be acted upon. Actors may fail to recognize the presence of an opportunity when it is there (so-called missed opportunities) or they may misperceive the presence of an opportunity when it is not there. This, however, does not undermine the fact that certain conditions render the targets of mobilization more vulnerable to influence and therefore make collective action more likely to succeed--whether or not they are acted upon.

Political opportunities can be dynamic or static. Kitschelt elaborated a static understanding of "political opportunity structure," which he defined as "specific configurations of resources, institutional arrangements, and historical precedents for social mobilization which facilitate the development of protest movements in some instances and constrain them in

<sup>&</sup>lt;sup>28</sup>Tarrow 1998, 76.

others."<sup>29</sup> Static political opportunity focuses on the ways in which institutional design channels collective action, and in this way shares some distant affinity with the notion of state capacity. Both are relatively stable conditions that contrast with the change that is central to dynamic political opportunities. But static political opportunity and state capacity capture different dimensions of power. All states—irrespective of capacity—contain institutional venues that are more or less conducive for collective action, and static political opportunities intersect with state capacity in various ways.<sup>30</sup> State capacity may be weak but static political opportunities absent; conversely, static political opportunities may be present even in the presence of significant state capacity. But in contrast to both state capacity and static political opportunity, dynamic political opportunities revolve around change in the vulnerabilities of regimes. The static theory of political opportunity has been most fruitfully applied to explaining movement tactics and the choice of mobilizational targets, whereas dynamic political opportunities are more oriented toward explaining the onset of collective action (and are therefore more relevant to an understanding of the outbreak of revolution).<sup>31</sup>

A number of conditions have been identified as dynamic political opportunities that make collective action more likely to be successful.<sup>32</sup> Periods of political reform open the political system to new actors and create expectations among excluded groups for greater access. Elections in authoritarian regimes are periods in which the regime must reach out to society in

<sup>&</sup>lt;sup>29</sup>Kitschelt 1986, 58.

<sup>&</sup>lt;sup>30</sup>See Kriesi et al. 1995. Dynamic political opportunities can also play into state capacity, magnifying and altering its impact. See Finkel and Gehlbach 2020.

<sup>&</sup>lt;sup>31</sup>Both static and dynamic political opportunities have at times been used to explain the outcomes of collective action. But like state capacity, the theory grows circular when applied to outcomes in this manner. See Goodwin and Jasper 1999.

<sup>&</sup>lt;sup>32</sup>For one list, see Tarrow 1998, 77-80.

order to manufacture its legitimacy, thereby rendering rulers more vulnerable to societal challenge and influence. Political realignments within the polity unsettle business as usual and raise hopes that excluded groups might find a sympathetic ear for their concerns. International wars or natural disasters can stretch the coercive institutions of a regime thin, leaving it more exposed to challenges from within. Financial crises can lead to a sudden explosion in grievances, making regimes more vulnerable to challenge. And splits within a ruling elite can cause government to display indecision toward challengers or politicians to reach out to society in search of support in order to undermine their opponents. As has long been recognized, dynamic political opportunities such as these are neither necessary nor sufficient for collective action.<sup>33</sup> Indeed, revolutions have on many occasions occurred in the absence of political opportunities.<sup>34</sup> Yet, in the absence of conditions that render regimes more vulnerable to challenge, revolutionary collective action is more difficult to mount (and as a result, is often more violent).

Both state capacity and political opportunity contain spatial dimensions that exercise profound effects on revolutionary contention. The spatial unevenness of the state, first noted by Guillermo O'Donnell in the early 1990s,<sup>35</sup> has been widely observed across various parts of the world.<sup>36</sup> Much of the state radiates outward from cities. Cities are where the nerve centers of the state and economy are concentrated, and hence where the presence of the state is more evident. Numerous studies show that the further one travels from city centers, the lower the

<sup>&</sup>lt;sup>33</sup>Goodwin and Jasper 1999.

<sup>&</sup>lt;sup>34</sup>Kurzman 1996. Iran in 1979 and Tunisia in 2010 are two widely-cited examples.

<sup>&</sup>lt;sup>35</sup>O'Donnell 1993.

<sup>&</sup>lt;sup>36</sup>Herbst 2000; Boone 2003, 2012; Soifer 2008, 2012,;Scott 2009; Acemoglu, García-Jimeno, and Robinson 2015; Harbers 2015; Foa and Nemirovskaya 2016; Harbers and Steele 2020.

presence of the state.<sup>37</sup> Indeed, distance and inaccessibility have long been considered factors that facilitate insurgency. They provide a barrier to state penetration and undermine the capacity of incumbent regimes to kill or capture rural-based rebels.<sup>38</sup> Cities can be dangerous places for revolutionaries; indeed, Castro called the city the "graveyard of revolutionaries."<sup>39</sup> Over the course of the twentieth century, revolutionaries migrated from the city to the countryside largely because of these dangers. Rural rebellions rely upon the presence of these "safe zones" of weak state capacity, where rebels are relatively protected from state repression and can develop support networks among local constituencies, allowing them to persist and challenge government.<sup>40</sup>

In sharp contrast to state capacity, political opportunities for revolution are not in themselves spatially distributed: the increased vulnerability of a regime that a political opportunity involves is in theory available for all to take advantage of—irrespective of spatial location or even political orientation. However, what is spatially distributed are two things: 1) knowledge of the presence of political opportunities; and 2) the ability to act upon them.<sup>41</sup> Urban

<sup>&</sup>lt;sup>37</sup>See, for instance, Bates 1981; Mamdani 1996; Soifer 2008, 2012; Boone 2012; Acemoglu, García-Jimeno, and Robinson 2015; Daxecker and Prins 2017; Brinkerhoff, Wetterberg, and Wibbels 2018. There can of course be pockets in cities in which state infrastructural power remains weak. But for a variety of reasons, these generally have not been the sectors from which revolutionary challenges have originated. See Beissinger 2022.

<sup>&</sup>lt;sup>38</sup>Fearon and Laitin 2003; Goodwin 2001; Tollefsen and Buhaug 2015.

<sup>&</sup>lt;sup>39</sup>Quoted in Debray 1968, 67.

<sup>&</sup>lt;sup>40</sup>Bosi 2013.

<sup>&</sup>lt;sup>41</sup>Martin and Miller 2003. In addition, two other factors associated with taking advantage of a political opportunity—a sense of grievance and a willingness and desire to act—are also spatially distributed. These factors vary spatially depending on the nature of a regime (specifically, whom it includes and excludes and the actions it undertakes) and the character of the opposition it generates.

populations are better able to take advantage of political opportunities. They are more literate and more attentive to the political sphere than rural populations. And because cities are globally connected through communication networks, trade, investment, government-to-government relations, and tourism, <sup>42</sup> urban populations are more likely to be aware of events in the external environment that might render their regimes more vulnerable. Moreover, regimes are most vulnerable to overthrow in cities, where their nerve centers of power are located. Given that the goal of revolution is to overthrow a regime (in Fishman's definition, the formal and informal organization of the center of political power and the arrangements defining access to power), this can only be achieved in cities--and most likely, only in capital cities, where the center of political power is situated. Because of their proximity to these nerve centers of power, urban populations are better positioned and more capable of exerting direct influence over a regime in the presence of an opportunity than are rural populations, who are located at a distance from them.<sup>43</sup>

Thus, for a variety of reasons one should expect that state capacity matters more for the onset of rural than urban revolutions,. But state capacity should have a much weaker effect on the onset of revolutionary contention in cities, where the presence of the state (including the state's coercive capacity) is much stronger, and where populations are more directly exposed to the coercive power of the state, which is concentrated in cities. At the same time, because revolutionary oppositions in cities are more knowledgeable and are better positioned to act on the vulnerabilities of a regime, urban revolutionary processes should be more strongly affected

<sup>&</sup>lt;sup>42</sup>Sassen 2001.

<sup>&</sup>lt;sup>43</sup>Beissinger 2022. This is one reason why rural revolutions last substantially longer than urban revolutions: the task, in some ways, is significantly greater for rural populations.

by the presence of political opportunities. As we will see, when put to the test, these expectations do indeed hold true across a wide variety of contexts.

### **Comparing State Capacity in Rural and Urban Revolutionary Episodes**

I begin by comparing levels of state capacity in independent countries that experienced rural revolutionary contention over the 1900-2014 period directly with those independent countries that experienced urban revolutionary contention over the same period, 44 using various measures of state capacity. Revolutionary episodes were classified into four categories based on the location of revolutionary contention: a) primarily urban; b) primarily urban with a secondary rural component; c) primarily rural with a secondary urban component; and d) primarily rural. In the analysis that follows, I begin by comparing revolutionary episodes that occurred primarily in an urban environment (categories a and b) with those that occurred primarily in a rural environment (categories c and d). However, in additional sensitivity tests (The results are available in Appendix 1), I explore whether the definition of a rural or urban episode affected the findings. I tested the same measures of state capacity using different delineations between rural and urban: first, an expansive definition of a rural revolutionary episode using all episodes that had any rural component whatsoever, primary or secondary (i.e., categories b, c, and d), coupled with a narrow definition of an urban revolutionary episode encompassing only those episodes that occurred exclusively in an urban environment (i.e., category a); and 2) an expansive definition of an urban revolutionary episode involving all episodes that had any urban component

<sup>&</sup>lt;sup>44</sup>The data on revolutionary episodes are described in Beissinger 2002 and are available for download at <a href="https://mbeissinger.scholar.princeton.edu/revolutionary-episodes-dataset">https://mbeissinger.scholar.princeton.edu/revolutionary-episodes-dataset</a>.

whatsoever, primary or secondary (i.e., categories a, b, and c), coupled with a narrow definition of a rural revolution involving only those episodes that occurred exclusively in a rural environment—i.e., category d).

I examined a wide variety of measures of state capacity in an attempt to capture the multiple facets of the concept. In addition to testing the Hanson-Sigman integral measure of state capacity, I examined separately a number of measures along four different dimensions: 1) coercive capacity (military personnel per thousand population, police personnel per thousand population, total military and police personnel per thousand population, military expenditures per solider, military expenditures per population, V-Dem's measure of civil society repression, and intentional homicides per 100 thousand population); 2) fiscal capacity (V-Dem's integral measure of fiscal capacity, tax revenue as a percent of GDP, and total government revenue as a percent of GDP); 3) administrative capacity (V-Dem's measure of rigorous and impartial administration, and state informational capacity compiled by Brambor et al.); and 4) state penetration of society (V-Dem's measure of effective territorial control, primary education enrollment rates, post offices per thousand population, and road density).<sup>45</sup> All measurements referred to the year prior to the onset of revolutionary contention. I also tested a number of measures of geography and demography that are often thought to be associated with state capacity: terrain ruggedness, ethnic fractionalization, and population density. As a second step, I compared these same measures with a global sample over the same time period to see whether state capacity along a particular dimension could be considered high or low in a country experiencing a rural or urban revolution relative to most other states around the world. Finally,

<sup>45</sup>See Appendix 2 for a full listing of sources for the data.

using a cross-national time-series sample of 165 independent countries over the period 1900-2014, I tested whether each of these dimensions of state capacity exercised an independent effect on the onset of an urban or rural revolutionary episode, controlling for the effects of time, population size, GDP per capita, and Polity scores (factors that are known to influence the likelihood of revolutionary outbreak).

Table 1 reports means, medians, one-tailed t-tests, and Mann-Whitney tests <sup>46</sup> for various measures of state capacity on the eve of revolutionary contention for states that experienced rural and urban revolutionary episodes. States that experienced rural revolutionary contention systematically exhibited lower state capacity than those that experienced urban revolutionary contention, with the differences statistically significant across *all* measures and dimensions of state capacity that were tested. States that experienced rural revolutionary episodes systematically exhibited lower coercive capacity, lower fiscal capacity, lower administrative capacity, and lower penetration into society than states that experienced urban revolutionary contention. This was reflected in starkly different distributions between rural and urban revolutionary episodes for the Hanson-Sigman integral measure of state capacity as well. Not only are the means different at a statistically significant level in countries experiencing rural revolutionary contention and urban revolutionary contention for all measures, but as the Mann-Whitney tests indicate, the distributions are significantly skewed downward for countries experiencing rural revolutionary contention across almost all variables compared to those

<sup>&</sup>lt;sup>46</sup>While t-tests allow one to make inferences about differences in means between two samples, the Mann-Whitney test draws inferences about the differences in medians and the distributional shapes of two samples. See Hart 2001 for an explanation of what the Mann-Whitney test measures.

countries experiencing urban revolutionary contention. In the case of homicide rates, the distribution is skewed upward in countries experiencing rural revolutionary contention relative to those experiencing urban contention, reflecting a lower capacity to control lethal violence on their territories on the eve of revolution.

### [TABLE 1 ABOUT HERE]

Unlike what much of the literature might suggest, these differences also do not seem to be merely a function of terrain: both rural and urban revolutions broke out in countries with relatively similar degrees of terrain ruggedness (tested using two different measures). There were, however, statistically significant differences in ethnic diversity and population densities across the two samples. As one would expect, countries that experience urban revolutions have significantly more concentrated populations. But they are also less culturally diverse than societies that experience rural revolutions.

The above comparisons do not address whether state capacity in these countries is high or low in a global sense, relative to other countries that did not experience revolutionary contention. Table 2 provides such an assessment using the cross-national time-series sample as a basis for comparison. With only one exception (homicide rates), state capacity in societies experiencing rural revolutionary contention was systematically lower than the global average in two-sample t-tests. Again, this was broadly true across *all* dimensions of state capacity—coercive capacity, fiscal capacity, administrative capacity, and the degree of state penetration in society. Ethnic diversity is also greater in societies experiencing rural revolutions than is true on average elsewhere.

By contrast, societies experiencing urban revolutionary contention were by and large

similar to global averages in most dimensions of state capacity, with a few important exceptions. For one thing, they were more repressive toward their civil societies and more lacking in rigorous and impartial public administration relative to the rest of the world. This administrative disarray is likely due to the pervasive personalism and corruption that often play a significant role in urban revolutions.<sup>47</sup> These states also have lower than average levels of generating tax revenues relative to their economies. Given that there were no differences between societies that experienced urban revolutions and the global sample in terms of total government revenue as proportion of GDP, part of this result may be due to non-tax sources of revenue (such as loans, aid, revenue from state enterprises, or natural resource rents). The collapse of European communism, for instance, occurred largely out of oppositions in cities; but socialist economies generally did not raise revenue through taxes but through states enterprises and natural resource rents. But it also could be due to the role that financial crises play in urban revolutions (explored further below), which could lead to sudden declines in tax revenue on the eve of revolt. Finally, countries that experience urban revolutions have higher numbers of military personnel within their populations than most other countries. They are not lacking in coercive state capacity even as these revolutions occur precisely where that coercive capacity is concentrated.

### [TABLE 2 ABOUT HERE]

Figures 1 and 2 provide a visualization of these patterns. 48 As Figures 1 shows, the Hanson-

<sup>&</sup>lt;sup>47</sup>See Beissinger 2022.

<sup>&</sup>lt;sup>48</sup>To compare levels of state capacity relative to world experience visually, the variables in Figures 1 and 2 were either constructed on a normalized index (ranging from 0 to 1) based on a global sample or on the decile (1-10) of the particular score within the global distribution of scores for all country-years for which information on the variable was available. They thus allow one to gain a visual sense of whether state capacity along a particular dimension was high or low relative to global experience.

Sigman integral index for state capacity in societies experiencing urban revolutions is normally distributed, while the index for rural revolutions skewed downward. Thus, state capacity is lower in countries undergoing rural revolutions than the global average. But when we look underneath the hood at what is going on using the various components of state capacity in Figure 2, the upward skew of state capacity in societies experiencing urban revolutions becomes more apparent. For a number of measures of state capacity (for example, military personnel per thousand population, military spending per soldier, fiscal capacity, information capacity, control over territory, primary school enrollment rates, and post office penetration), societies experiencing urban revolutionary contention appear to be relatively well-endowed in terms of state capacity compared to other states, tilting toward the upper portion of the global distribution. In short, rural revolutions generally occur in countries with weak state capacity but urban revolutions generally occur in countries with average or above-average levels of state capacity, though states that are comparatively repressive and lacking in rigorous and impartial public administration.

### [FIGURES 1 AND 2 ABOUT HERE]

Of course, simply because rural revolutions occur in states with weak state capacity and urban revolutions occur in states with average or above-average state capacity does not tell us whether state capacity or its absence are independently related to the outbreak of rural or urban revolutions. In Table 3, I report the results of a series of independent cross-national time-series regressions on a global sample of 165 independent countries over the period 1900-2014, testing whether each of the measures under investigation exercised an independent effect on the onset of a rural or urban revolutionary episode, controlling for the effects of time, population size, GDP

per capita, and Polity scores.<sup>49</sup> In numerous studies, population size has been shown to be associated to revolutionary onset across a variety of revolution types,<sup>50</sup> and temporal trends and effects on revolutionary activity are well known.<sup>51</sup> As GDP per capita is thought to be related to state capacity (and at times is used as a proxy for it),<sup>52</sup> I control for its effects as well; this should allow one to identify whether a particular dimension of state capacity was related to the outbreak of revolution independent of the level of a country's economic development. Finally, Polity scores control for the general openness or closedness of a regime that affect the onset of revolution (democracies generally do not experience revolutions);<sup>53</sup> this also could potentially intersect with state capacity in ways that could exercise an effect on revolutionary onset.

### [TABLE 3 ABOUT HERE]

The results broadly confirm the general patterns identified early. For example, the Hanson-Sigman integral measure of state capacity is related to the outbreak of rural revolution but has no relationship to the outbreak of urban revolutions. Patterns of statistical significance differ across other variables, but for each dimension of state capacity, at least one variable capturing that dimension is related to the outbreak of a rural revolution. Thus, measures of coercive capacity show no relationship with the outbreak of urban revolutions, but controlling

<sup>&</sup>lt;sup>49</sup>I use a complementary log-log panel model, which shares similar properties as Poisson models and is consistent with the Cox proportional hazards model, as the exponentiated coefficients can be interpreted in terms of hazard ratios. Allison 1982; Jenkins 1995; Beck, Katz, and Tucker 1998; Carter and Signorino 2010.

<sup>&</sup>lt;sup>50</sup>See Beissinger 2022, 121. The reasons for this potentially range from critical mass theory to the correlation between population size and size of territory.

<sup>&</sup>lt;sup>51</sup>Time controls are standard in panel models, and I follow the specification used in Carter and Signorino 2010.

<sup>&</sup>lt;sup>52</sup>Fearon and Laitin 2003.

<sup>&</sup>lt;sup>53</sup>Goodwin 2001; Beissinger 2022.

for the effects of other factors, the number of military personnel per thousand population is negatively related to the outbreak of rural revolutions. Countries experiencing rural revolutions generally have weak militaries relative to their population sizes; the same is not true in urban revolutions. Similarly, measures of fiscal capacity and administrative capacity have no systematic relationships with the outbreak of urban revolutions. But the V-Dem measures of fiscal capacity and rigorous/impartial public administration are both negatively related to the outbreak of rural revolutions. In other words, these dimensions of state capacity do not seem to matter in the outbreak of urban revolutions but do exercise independent effects in rural revolutions.

But the dimension of state capacity that is most closely related to the outbreak of rural revolutions is state penetration. All four measures tested--territorial control, primary education enrollment rates, post office saturation, and road density--are related to the outbreak of rural revolutions. None are related to urban revolutions—with the exception of road density, which is positively related to the outbreak of an urban revolution (Presumably, a more dense a road network facilitates the thicker communications networks that often play a role in urban revolutions). In short, weak state presence plays a role in the outbreak of rural revolutions. It does not in urban revolutions.

As the additional sensitivity tests show, these results hold up remarkably well irrespective of how one draws the line between a rural or urban revolution, lending them strong credence.<sup>56</sup> When one uses an expansive definition of a rural revolution and a narrow definition of an urban

<sup>54</sup>Similarly reflecting weak state penetration, ethnic diversity and low population density are related to the outbreak of rural revolutions, controlling for other factors.

<sup>55</sup> Beissinger 2022.

<sup>&</sup>lt;sup>56</sup>The results are reported in in Appendix 1 in Tables A1-1, A1-2, and A1-3.

revolution, or when one uses a narrow definition of a rural revolution and an expansive definition of an urban revolution, the differences in state capacity between rural and urban revolutions remain. <sup>57</sup> And when one examines the aspects of state capacity associated with onset of rural and urban revolutions in the cross-national time-series framework using different delineations between rural and urban (even controlling for the effects of time, population size, GDP per capita, and Polity scores), state capacity continues to play a more important role for rural revolutions than for urban revolutions. Indeed, it only plays a role in urban revolutions when one defines an urban revolution to include revolutionary episodes that take place primarily in the countryside but contain a secondary urban component. There also remains a positive, statistically significant relationship between road density and the onset of an urban revolution—irrespective of definition—that contrasts sharply with the negative or statistically insignificant relationship between road density and rural revolutions. In sum, there is strong and quite robust evidence that state capacity plays an important role in rural-based revolutions but does not in revolutions primarily located in cities, where state power concentrated and is at its greatest.

### Dynamic Political Opportunities in Rural and Urban Revolutionary Episodes

As noted earlier, due to proximity to government nerve centers of power and access to more robust communications networks, urban challengers should be better situated to take

<sup>&</sup>lt;sup>57</sup>There are only two exceptions. First, using an expansive definition of a rural revolution and a narrow definition of an urban revolution, the difference in means for road density is no longer statistically significant (though the distributions remain different at a statistically significant level). And using a narrow definition of a rural revolution and an expansive definition of an urban revolution, the difference in means for homicides is no longer statistically significant (though again, the distributions remain different at a statistically significant level). In all other respects, the patterns found in Tables 1 and 2 remain the same.

advantage of dynamic political opportunities than rural challengers. Indeed, the evidence indicates that dynamic political opportunities have exercised a much more systematic and palpable presence in urban rather than rural revolutionary contention. Table 4 compares the presence of a variety of dynamic political opportunities for rural and urban revolutionary episodes: whether the episode occurred during a period of political reform, an electoral cycle in an authoritarian regime, an externally-generated transnational revolutionary wave, 58 an external war, a financial crisis, or any of the above conditions. As it demonstrates, with the sole exception of external war (which occurred with equal frequency in urban and rural revolutions), these types of dynamic political opportunities were significantly more associated with urban revolutions than with rural revolutions.<sup>59</sup> Thus, urban revolutionary episodes were significantly more likely to occur within a period of political reform, within an election cycle, within the context of a transnational wave of revolution, or in the context of a financial crisis then rural revolutionary episodes. Moreover, almost three-quarters of urban revolutionary episodes occurred under at least one of these conditions (as opposed to only 44 percent of rural episodes). Almost half of all urban revolutionary episodes occurred within a transnational revolutionary wave, compared to only 14 percent of rural revolutions. Urban populations are significantly better situated in terms of global networks, contacts, and communications networks to be able to learn about the

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<sup>&</sup>lt;sup>58</sup>I excluded the initial "first mover" episodes of a revolutionary wave from the analysis, since these were not influenced by the example of other revolutions and did not enjoy a political opportunity out of the wave.

<sup>&</sup>lt;sup>59</sup>External wars, as Skocpol (1979) pointed out, were a type of political opportunity that overlapped with weakened state capacity, stretching the repressive capacities of states and making them more vulnerable to revolt (rural or urban). However, external war has played a dwindling role in revolutionary contention over time due to the fact that international wars have grown much less frequent since the end of World War II.

occurrence of rebellion in other global locations than are rural populations—and therefore more likely to be influenced by transnational revolutionary waves. The availability of information and proximity to or distance from nerve centers of power structure the different roles played by dynamic political opportunities in rural and urban revolutions.

### [TABLE 4 ABOUT HERE]

Similarly, when one places these factors into a cross-national time-series framework to examine their independent effect on revolutionary onset controlling for the effects of time, population size, GDP per capita, and Polity scores (Table 5), dynamic political opportunities demonstrate no systematic relationship with rural revolutionary contention across the board. Gazin, rural populations appear to be less aware of the factors that render political regimes more vulnerable, and being distant from these nerve centers of government, are less capable of acting upon them even when they are present. By contrast, in urban revolutions two types of dynamic political opportunities exercise an independent effect on the onset of revolutionary contention, controlling for other factors: competed elections in an authoritarian regime, and transnational waves of revolutionary contention. In addition, there is a very strong and consistent relationship between the presence of any of these dynamic political opportunities and the onset of urban revolutionary contention. Controlling for the economic, political, and temporal context, the

<sup>&</sup>lt;sup>60</sup>I used a decline in the level of civil society repression on the eve of revolutionary contention (based on the V-Dem measure of repression of civil society) to capture periods of political reform and the presence of battle deaths in external war as a measure of external wars. Data on war deaths were drawn from Correlates of War (Sarkees and Wayman 2010) through 2007, supplemented by Wikipedia and PRIO (Lacina and Gleditsch 2005). Data on periods of electoral competition in authoritarian regimes come from NELDA at <a href="https://nelda.co/">https://nelda.co/</a> (Hyde and Marinov 2012). Information on financial crises comes from Reinhart and Rogoff 2009 (at <a href="http://www.carmenreinhart.com/data/browse-by-topic/topics/7/">https://www.carmenreinhart.com/data/browse-by-topic/topics/7/</a>). Data on revolutionary waves come from the author.

presence of any one of these dynamic political opportunities more than quadruples the risk of the outbreak of urban revolutionary contention. There is no similar effect on the outbreak of rural revolutions.

### [TABLE 5 ABOUT HERE]

For political opportunities I conducted the same sensitivity tests for whether the delineation between a rural and an urban revolution affected the findings. <sup>61</sup> The lack of association between political opportunities and rural revolutions remains, as does the association of opportunity with urban revolutions. <sup>62</sup> And when one tests the effect of different definitional permutations on the onset of revolutionary contention (controlling for other factors), the effect of occurring within the context of a transnational wave of revolution actually grows for rural revolutions. <sup>63</sup> In general, the association of dynamic political opportunities with urban revolution and the absence of association with rural revolution remains robust to definitional variations of rural and urban revolutions.

### **Conclusion: Beyond the Weak State Paradigm**

As we have seen, location matters tremendously in revolution. The spatial concentration of state power in cities renders much of state capacity immaterial to the calculus of urban rebels.

<sup>62</sup>The sole exception is when one adopts an expansive definition of a rural revolutionary episode that incorporates all episodes that have any significant rural component to them is used; this turns the relationship between urban revolution and the presence of election cycles statistically insignificant.

<sup>&</sup>lt;sup>61</sup>The results are reported in Tables A1-4 and A1-5 in Appendix 1.

<sup>&</sup>lt;sup>63</sup>Moreover, when primarily urban revolutionary episodes with a secondary rural component are included in the definition of a rural episode, there is a relationship between the presence of any of the dynamic political opportunities tested and the outbreak of a rural episode.

But the concentration of regime nerve centers of power in cities also makes cities places where challengers are more likely to take advantage of dynamic political opportunities that signal greater regime vulnerability. In the countryside, however, where the state's presence is thinner, weak state capacity plays a significant role in conditioning rebellion, while dynamic political opportunities hold little significance.

These findings should alter how we think about the outbreak of revolutionary contention in today's world, largely because the practice of revolution has been gradually evolving away from the countryside and toward cities. Prior to 1985, 55 percent of revolutionary episodes occurred predominantly in the countryside. In that world, weak state capacity was more likely to play a role in revolutionary onset than not. By contrast, since 1985 more than two-thirds of revolutionary episodes have occurred predominantly in cities. If state capacity plays a role in revolutionary politics, that role has been gradually diminishing as revolution has relocated to cities. No longer can one say that it is state weakness that spurs rebellion. Urban revolutions take place where the state is strong, but often at moments when the regimes that govern them grow vulnerable.

<sup>64</sup>Beissinger 2022.

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Table 1: Measures of state capacity in states experiencing primarily rural and primarily urban revolutionary episodes

	PRII	MARILY EPISOD	_	PRI	MARILY U		TESTS: RURAL VS. URBAN		
VARIABLE	n	mean	median	n	mean	median	One-tailed t-test	Mann-Whitney test (z-score)	
Integral measures of state capacity									
Hanson/Sigman state capacity index, 0-1	72	0.42	0.43	88	0.56	0.54	-5.11***	-4.71***	
State coercive capacity									
Military personnel per 1000 pop	108	4.79	2.65	142	10.39	5.37	-3.46***	-4.40***	
Police per 100 thousand pop	39	134.63	115.00	91	321.44	215.32	-3.67***	-3.98***	
Total military/police per 100 thous pop	34	462.78	346.82	87	1118.81	858.70	-4.00***	-4.45***	
Military expenditure per soldier	101	4.06	1.72	144	10.99	3.46	-3.99***	-3.77***	
Military expenditure per population	59	11.16	4.91	132	83.69	21.92	-3.45***	-4.73***	
V-Dem repression of civil society index	83	0.45	0.41	150	0.51	0.47	-1.75*	-1.68	
Homicides per 100 thousand population	19	12.33	13.59	87	7.15	4.38	2.41**	3.37***	
State fiscal capacity									
V-Dem fiscal capacity index, 0-1	34	0.51	0.44	70	0.68	0.68	-4.00***	-3.78***	
Tax revenue as percent of GDP, 0-1	42	0.10	0.08	84	0.13	0.13	-3.21***	-3.40***	
Total govt revenue as percent of GDP, 0-1	44	0.16	0.12	84	0.22	0.20	-3.03**	-4.32***	
State administrative capacity									
V-Dem rigorous/impartial public admin index, 0-1	83	0.41	0.39	149	0.50	0.50	-4.15***	-3.97***	
Information capacity index, 0-1	44	0.50	0.55	98	0.67	0.73	-4.23***	-3.11**	
State penetration									
V-Dem state authority over territory index, 0-1	75	0.80	0.81	147	0.90	0.93	-6.09***	-5.31***	
Primary school enrollment rate, 0-1	71	0.53	0.44	144	0.74	0.84	-5.24***	-5.00***	
Post offices per 1000 population	71	0.08	0.04	146	0.21	0.14	-4.65***	-5.43***	
Road density, sq km roads per sq km territory	46	0.12	0.06	81	0.37	0.12	-2.02*	-2.49*	
Geography and demography									
Rough terrain, mean (Carter, Shaver and Wright 2019)	85	132.67	94.74	156	139.04	99.98	-0.41	-0.18	
Rough terrain (Nunn and Puga 2012)	84	1.36	0.99	157	1.43	1.01	-0.50	0.08	
Ethnic fractionalization index (Drazanova)	49	0.58	0.65	109	0.39	0.38	4.11***	4.05***	
Population density (pop per sq kilometer)	84	44.57	20.67	160	109.33	58.20	-3.24***	-3.62***	

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

Table 2: Measures of state capacity in countries experiencing primarily rural and primarily urban revolutionary episodes, comparison with global samples

	PRI	MARILY	-	PR	IMARILY	-			GLOBAL	SAMPLE C	OMPARISONS	
VARIABLE	n	mean	median	n	mean	median	n country- years	n countries	sample mean	sample median	t-test: rural revs	t-test: urban revs vs. global sample <sup>a</sup>
VARIABLE	<del>  "</del>	mean	median	<del>"</del>	mean	median	years		mean	median	vs. global sample	vs. global sample
Integral measures of state capacity												
Hanson/Sigman state capacity index, 0-1	72	0.42	0.43	88	0.56	0.54	6,783	158	0.57	0.56	-6.07***	-1.19
State coercive capacity												
Military personnel per 1000 pop	108	4.79	2.65	142	10.39	5.37	11,235	163	8.14	4.61	-2.52*	2.79**
Police per 100 thousand pop	39	134.63	115.00	91	321.44	215.32	8,139	158	252.17	193.80	-3.15**	1.67
Total military/police per 100 thous pop	34	462.78	346.82		1118.81	858.70	6,639	155	983.53	727.68	-3.37**	0.96
Military expenditure per soldier	101	4.06	1.72	144	10.99	3.46	10,082	163	18.02	3.73	-2.35**	-1.95
Military expenditure per population	59	11.16	4.91	132	83.69	21.92	10,457	163	119.16	14.33	-2.67**	-1.18
V-Dem repression of civil society index	83	0.45	0.41	150	0.51	0.47	15,579	162	0.54	0.51	-3.80***	-4.05***
Homicides per 100 thousand population	19	12.33	13.59	87	7.15	4.38	7,803	161	6.89	3.58	1.61	0.08
State fiscal capacity												
V-Dem fiscal capacity index, 0-1	34	0.51	0.44	70	0.68	0.68	6,444	100	0.60	0.58	-3.93***	1.33
Tax revenue as percent of GDP, 0-1	42	0.10	0.08	84	0.13	0.13	6,867	157	0.16	0.15	-4.58***	-3.12**
Total govt revenue as percent of GDP, 0-1	44	0.16	0.12	84	0.22	0.20	6,927	158	0.24	0.22	-4.97***	-1.95
State administrative capacity	-											
V-Dem rigorous/impartial public admin index, 0-1	83	0.41	0.39	149	0.50	0.50	15,561	162	0.43	0.42	-6.13***	-4.41***
Information capacity index, 0-1	44	0.50	0.55	98	0.67	0.73	7,254	64	0.63	0.73	-3.81***	-2.30*
State penetration												
V-Dem state authority over territory index, 0-1	75	0.80	0.81	147	0.90	0.93	11,549	162	0.91	0.95	-8.42***	-1.12
Primary school enrollment rate, 0-1	71	0.53	0.44	144	0.74	0.84	13,227	160	0.64	0.75	-7.00***	-0.15
Post offices per 1000 population	71	0.08	0.04	146	0.21	0.14	13,674	160	0.21	0.09	-4.04***	-1.03
Road density, sq km roads per sq km territory	46	0.12	0.06	81	0.37	0.12	7,032	145	0.41	0.13	-3.48***	-0.64
Geography and demography				<del>                                     </del>								
Rough terrain, mean (Carter, Shaver and Wright 2019)	85	132.67	94.74	156	139.04	99.98	18,195	160	127.23	72.34	-0.65	0.23
Rough terrain (Nunn and Puga 2012)	84	1.36	0.99	157	1.43	1.01	18,507	165	1.32	0.91	-0.70	0.49
Ethnic fractionalization index (Drazanova)	49	0.58	0.65	109	0.39	0.38	8,431	151	0.43	0.42	5.03***	-1.41
Population density (pop per sq kilometer)	84	44.57	20.67	160		58.20	18,507	165	60.94	24.87	-1.14	3.17**

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Two-tailed test. Colonies excluded from analysis.

Table 3: State capacity and the onset of primarily rural and primarily urban revolutionary episodes, panel analyses<sup>a</sup>

	ONSET OF	ONSET OF
	PRIMARILY RURAL	PRIMARILY URBAN
STATE CAPACITY VARIABLE	EPISODES	EPISODES
Integral measures of state capacity		
Hanson-Sigman state capacity index (t-1)	0.389***	0.741
	(-4.11)	(-1.35)
State coercive capacity		
Ln(Miitary personnel per thousand pop, t-1)	0.703**	1.088
	(-2.82)	(0.79)
Ln(Police per 100 thousand population, t-1)	0.920	0.963
	(-0.48)	(-0.24)
Ln(Total military and police per 100k pop, t-1)	0.725	0.917
	(-1.89)	(-0.64)
Ln(Military expenditures per soldier, t-1)	1.215	0.851
	(0.99)	(-1.15)
Ln(Military expenditures per population, t-1)	0.874	1.031
	(-1.14)	(0.28)
V-Dem repression of civil society measure, t-1	0.842	0.872
	(-1.23)	(-1.20)
Intentional homicides per 100k pop, t-1	1.005	1.001
	(0.53)	(0.07)
State fiscal capacity		
V-Dem state fiscal capacity measure, t-1	0.647*	1.205
	(-2.56)	(1.70)
Tax revenues as percent of GDP, t-1	0.015	0.064
	(-1.61)	(-1.81)
Total govt revenue as percent of GDP, t-1	0.512	0.297
	(-0.29)	(-0.89)
State administrative capacity		
V-Dem rigorous/impartial administration measure, t-1	0.737**	0.862
	(-2.60)	(-1.69)
Information capacity, t-1	0.758	0.588
	(-0.50)	(-1.09)
State penetration		
V-Dem measure of effective territorial control, t-1	0.967***	0.991
	(-4.68)	(-1.15)
Primary education enrollment rate (%), t-1	0.981**	0.992
	(-3.19)	(-1.51)
Post offices per thousand population, t-1	0.157*	1.287
	(-2.33)	(0.67)
Road density (km), t-1	0.195**	1.336**
	(-2.84)	(2.77)
Geography and demography		
Measure of mean ruggedness (Carter et al)	0.999	1.001
	(-0.57)	(1.78)
Ruggedness (Terrain Ruggedness Index)	0.923	1.111
	(-0.87)	(1.45)
Ethnic fractionalization index (Drazanova), t-1	3.196**	0.460
	(2.71)	(-1.72)
Ln (lagged population density + 1)	0.752*	1.087
	(-2.57)	(1.06)

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Coefficients are exponentiated, with z-scores in parentheses. Each result is based on a separate complementary log-log (discrete-time failure) random-effects model, with robust standard errors and controls for time dependence, population size, GDP per capita, and Polity score in the year prior to the onset of rebellion. Colonies excluded from the analysis.

# Table 4: Dynamic political opportunities in primarily rural and primarily urban revolutionary episodes

	PRIMARILY	PRIMARILY		CIII COLIADE
POLITICAL OPPORTUNITY	RURAL	URBAN		CHI-SQUARE
POLITICAL OPPORTUNITY	EPISODES	EPISODES	n	STATISTIC
Occurred during a period of political reform	10	37	293	9.85**
	8.1%	21.8%		
Occurred within the context of an election cycle	10	27	293	3.89*
,	8.1%	15.9%		
Occurred within a transnational revolutionary wave <sup>b</sup>	20	82	293	32.15***
	16.3%	48.2%		
Occurred in the context of an external war	21	34	293	.40
	17.1%	20.0%		
Occurred within the context of a financial crisis	16	44	293	7.26**
	13.0%	25.9%		
Occurred during any of the above	57	129	293	26.86***
, , , , , , , , , , , , , , , , , , ,	46.3%	75.9%		
Total	123	170	293	
Total	42.0%	58.0%	100.0%	

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Colonies excluded from analysis.

<sup>&</sup>lt;sup>b</sup>First movers in wave excluded from the analysis.

Table 5: Dynamic political opportunities and the onset of primarily rural and primarily urban revolutionary episodes, panel analyses<sup>a</sup>

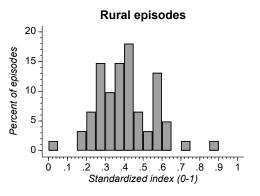
	ONSET OF	ONSET OF
	PRIMARILY	PRIMARILY
POLITICAL OPPORTUNITY VARIABLE	RURAL EPISODES	URBAN EPISODES
Decline in level of civil society repression, t-1	0.810	1.791
	(-0.37)	(1.49)
Competed election in authoritarian regime prior to onset	0.676	1.642*
	(-1.12)	(2.39)
Part of a transnational revolutionary wave <sup>b</sup>	0.497	1.755*
	(-1.95)	(2.02)
Presence of battle deaths from external war, t-1	0.896	1.378
	(-0.34)	(1.01)
Presence of a financial crisis, t-1	1.164	0.979
	(0.47)	(-0.09)
Any of the above political opportunities	1.343	4.590***
	(1.39)	(6.72)

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Coefficients are exponentiated, with z-scores in parentheses. Each result is based on a separate complementary log-log (discrete-time failure) random-effects model, with robust standard errors and controls for time dependence, population size, GDP per capita, and Polity score in the year prior to the onset of rebellion. Colonies excluded from the analysis.

<sup>&</sup>lt;sup>b</sup>First movers in wave excluded from the analysis.

Figure 1. Hanson-Sigman state capacity index



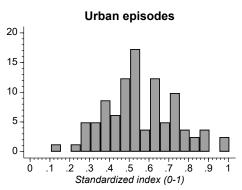
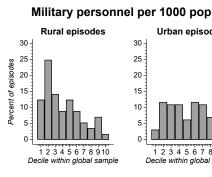
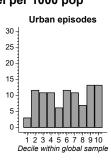
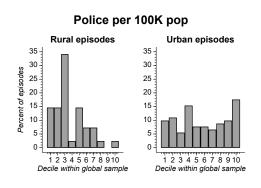
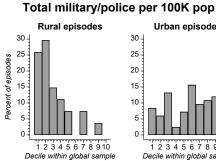


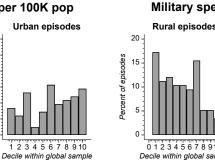
Figure 2. Distributions for state capacity variables

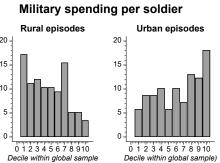




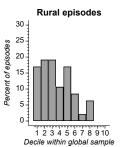


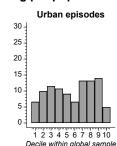




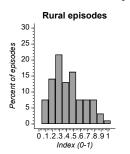


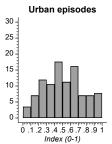
### Military spending per pop



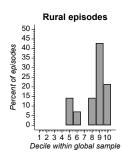


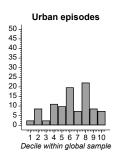
### V-Dem civil society repression index



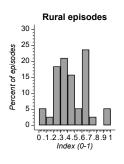


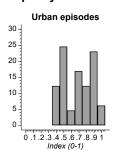
### Intentional homicide rate



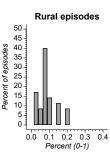


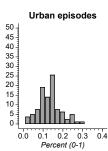
V-Dem state fiscal capacity index



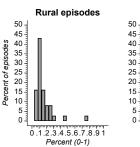


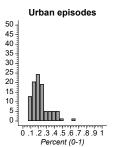
Tax revenue as percent of GDP



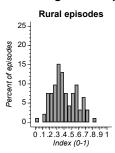


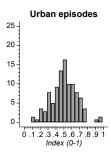
Govt revenue as percent of GDP



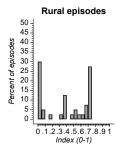


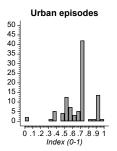
### V-Dem rigorous/impartial administration



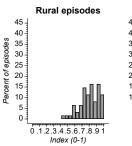


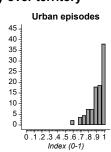
### Information capacity



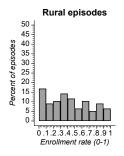


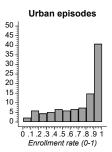
### V-Dem authority over territory



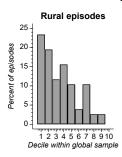


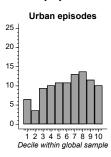
### Primary education enrollment rate



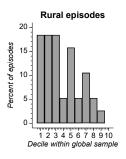


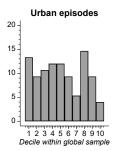
### Post offices per 1000 pop





### Road density





### **Appendix 1. Robustness tests**

Table A1-1. Differences of means and medians using an expansive definition of rural episodes<sup>a</sup>

	RU	JRAL EPI	SODES	URBAN EPISODES			TESTS: RURAL VS. URBAN		
							One-tailed	Mann-Whitney	
VARIABLE	n	mean	median	n	mean	median	t-test	test (z-score)	
Integral measures of state capacity									
Hanson/Sigman state capacity index, 0-1	79	0.43	0.43	81	0.56	0.54	4.54***	4.25***	
Transony Sigman state capacity mack, 0 1	1,3	0.43	0.43	01	0.50	0.54	7.57	7.23	
State coercive capacity									
Military personnel per 1000 pop	123	5.98	2.95	128	9.90	5.37	2.43**	3.86***	
Police per 100 thousand pop	54	201.80	125.07	91	300.76	206.21	2.10*	2.72**	
Total military/police per 100 thous pop	38	640.13	364.73	83	1069.23	841.88	2.61**	3.78***	
Military expenditure per soldier	158	3.93	1.78	138	11.04	3.90	4.91***	4.47***	
Military expenditure per population	70	31.96	5.43	121	78.25	18.64	2.26*	3.60***	
V-Dem repression of civil society index	126	0.42	0.41	142	0.51	0.49	2.98**	2.95**	
Homicides per 100 thousand population	26	10.81	9.61	81	7.12	4.25	-1.92*	-2.76**	
State fiscal capacity									
V-Dem fiscal capacity index, 0-1	51	0.50	0.49	65	0.68	0.68	4.45***	4.00***	
Tax revenue as percent of GDP, 0-1	48	0.10	0.08	78	0.13	0.14	3.54***	3.70***	
Total govt revenue as percent of GDP, 0-1	50	0.17	0.14	78	0.22	0.19	2.57**	3.47***	
State administrative capacity									
V-Dem rigorous/impartial public admin index, 0-1	126	0.42	0.40	141	0.50	0.50	4.31***	4.12***	
Information capacity index, 0-1	60	0.46	0.55	95	0.67	0.73	5.25***	3.91***	
, ,									
State penetration									
V-Dem state authority over territory index, 0-1	90	0.81	0.83	134	0.91	0.93	5.58***	5.05***	
Primary school enrollment rate, 0-1	112	0.47	0.44	135	0.73	0.86	6.90***	6.43***	
Post offices per 1000 population	107	0.09	0.05	138	0.21	0.14	5.03***	5.51***	
Road density, sq km roads per sq km territory	52	0.20	0.06	75	0.34	0.12	1.10	2.01*	
Geography and demography									
Rough terrain, mean (Carter, Shaver and Wright 2019)	_	121.07	85.02	148	139.40	112.47	1.41	1.56	
Rough terrain (Nunn and Puga 2012)	145	1.27	0.94	149	1.43	1.05	1.29	0.88	
Ethnic fractionalization index (Drazanova)	58	0.57	0.64	101	0.38	0.37	-4.28***	-4.19***	
Population density (pop per sq kilometer)	141	43.87	20.62	153	108.15	66.92	4.03***	5.53***	

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup> All mixed rural-urban episodes were classified as rural.

Table A1-2. Differences of means and medians using an expansive definition of urban episodes<sup>a</sup>

	RU	JRAL EPI	SODES	UF	RBAN EPI	SODES	TESTS: RURAL VS. URBAN		
VARIABLE		mean	median	n	mean	median	One-tailed t-test	Mann-Whitney test (z-score)	
Integral measures of state capacity									
Hanson/Sigman state capacity index, 0-1	61	0.40	0.38	99	0.55	0.53	-5.56***	-5.20***	
State coercive capacity									
Military personnel per 1000 pop	89	4.57	2.34	162	9.85	5.23	-3.15***	-4.69***	
Police per 100 thousand pop	41	144.83	111.00	104	310.85	209.76	-3.35***	-3.79***	
Total military/police per 100 thous pop	27	397.11	287.48	94	1088.81	836.94	-3.89***	-4.75***	
Military expenditure per soldier	116	3.60	1.58	180	9.59	3.36	-4.00***	-4.60***	
Military expenditure per population	47	10.90	3.84	144	77.73	18.72	-2.94**	-4.76***	
V-Dem repression of civil society index	92	0.43	0.41	176	0.49	0.48	-2.09*	-2.14*	
Homicides per 100 thousand population	14	11.55	12.46	93	7.48	4.59	1.65	2.87**	
State fiscal capacity									
V-Dem fiscal capacity index, 0-1	38	0.46	0.44	78	0.67	0.68	-5.40***	-4.81***	
Tax revenue as percent of GDP, 0-1	35	0.09	0.08	91	0.13	0.13	-3.78***	-3.81***	
Total govt revenue as percent of GDP, 0-1	37	0.16	0.11	91	0.22	0.20	-2.79**	-4.31***	
State administrative capacity									
V-Dem rigorous/impartial public admin index, 0-1	92	0.40	0.38	175	0.50	0.50	-4.52***	-4.31***	
Information capacity index, 0-1	40	0.39	0.37	115	0.66	0.72	-6.38***	-4.71***	
State penetration									
V-Dem state authority over territory index, 0-1	61	0.80	0.81	163	0.89	0.93	-4.86***	-4.91***	
Primary school enrollment rate, 0-1	77	0.43	0.39	170	0.69	0.80	-6.50***	-5.98***	
Post offices per 1000 population	77	0.07	0.04	168	0.20	0.13	-5.17***	-6.66***	
Road density, sq km roads per sq km territory	38	0.11	0.06	89	0.35	0.11	-1.77*	-2.10*	
Geography and demography									
Rough terrain, mean (Carter, Shaver and Wright 2019)	104	121.81	91.64	190	134.94	102.33	-0.96	-1.24	
Rough terrain (Nunn and Puga 2012)	103	1.28	0.99	191	1.39	1.01	-0.87	-0.49	
Ethnic fractionalization index (Drazanova)	41	0.63	0.71	118	0.39	0.38	4.88***	4.74***	
Population density (pop per sq kilometer)	100	35.91	17.66	194	98.67	49.09	-3.71***	-5.10***	

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup> All mixed rural-urban episodes were classified as urban.

Table A1-3. State capacity and the onset of revolutionary contention, robustness to expansive and narrow definitions of rural and urban episodes<sup>a</sup>

VARIABLE	PRIMARILY RURAL	RURAL [EXPANSIVE DEFINITION] <sup>b</sup>	RURAL [NARROW DEFINITION] <sup>b</sup>	PRIMARILY URBAN	URBAN [EXPANSIVE DEFINITION] <sup>b</sup>	URBAN [NARROW DEFINITION] <sup>b</sup>
Integral measures of state capacity						
Hanson-Sigman state capacity index (t-1)	0.389***	0.327***	0.266***	0.741	0.733	0.781
	(-4.11)	(-4.04)	(-5.12)	(-1.35)	(-1.48)	(-1.28)
State coercive capacity	<u> </u>	, ,	( - /	( /	, -,	, -,
Ln(Miitary personnel per thousand pop, t-1)	0.703**	0.888	0.759	1.088	1.031	0.983
	(-2.82)	(-0.69)	(-1.71)	(0.79)	(0.31)	(-0.15)
Ln(Police per 100 thousand population, t-1)	0.920	1.033	1.045	0.963	0.927	0.905
	(-0.48)	(0.17)	(0.18)	(-0.24)	(-0.52)	(-0.64)
Ln(Total military and police per 100k pop, t-1)	0.725	0.892	0.762	0.917	0.921	0.884
	(-1.89)	(-0.58)	(-1.05)	(-0.64)	(-0.58)	(-0.74)
Ln(Military expenditures per soldier, t-1)	1.215	0.999	0.964	0.851	0.865	0.851
	(0.99)	(-0.01)	(-0.12)	(-1.15)	(-1.07)	(-1.09)
Ln(Military expenditures per population, t-1)	0.874	1.031	0.863	1.031	1.015	0.960
	(-1.14)	(0.20)	(-0.80)	(0.28)	(0.15)	(-0.38)
V-Dem repression of civil society measure, t-1	0.842	0.747	0.796	0.872	0.858	0.910
·	(-1.23)	(-1.79)	(-1.26)	(-1.20)	(-1.37)	(-0.82)
Intentional homicides per 100k pop, t-1	1.005	1.010	1.010	1.001	1.004	0.998
	(0.53)	(1.33)	(0.57)	(0.07)	(0.59)	(-0.22)
State fiscal capacity						
V-Dem state fiscal capacity measure, t-1	0.647*	0.771	0.678	1.205	1.237	1.248
	(-2.56)	(-1.18)	(-1.51)	(1.70)	(1.60)	(1.84)
Tax revenues as percent of GDP, t-1	0.015	0.001**	0.001*	0.064	0.071	0.177
	(-1.61)	(-3.17)	(-2.43)	(-1.81)	(-1.91)	(-1.18)
Total govt revenue as percent of GDP, t-1	0.512	0.099	0.353	0.297	0.253	0.495
	(-0.29)	(-0.88)	(-0.33)	(-0.89)	(-1.05)	(-0.50)
State administrative capacity						
V-Dem rigorous/impartial administration measure, t-1	0.737**	0.635***	0.589***	0.862	0.825*	0.860
	(-2.60)	(-3.97)	(-3.85)	(-1.69)	(-2.36)	(-1.69)
Information capacity, t-1	0.758	0.794	0.749	0.588	0.587	0.502
	(-0.50)	(-0.42)	(-0.36)	(-1.09)	(-1.07)	(-1.20)
State penetration						
V-Dem measure of effective territorial control, t-1	0.967***	0.965***	0.968***	0.991	0.985*	0.995
	(-4.68)	(-5.01)	(-3.85)	(-1.15)	(-2.49)	(-0.61)
Primary education enrollment rate (%), t-1	0.981**	0.991	0.995	0.992	0.990*	0.991
	(-3.19)	(-1.57)	(-0.67)	(-1.51)	(-2.15)	(-1.50)
Post offices per thousand population, t-1	0.157*	0.095*	0.224	1.287	0.926	1.469
	(-2.33)	(-2.29)	(-1.29)	(0.67)	(-0.19)	(0.99)
Road density (km), t-1	0.195**	1.303	0.478	1.336**	1.233*	1.222*
	(-2.84)	(0.63)	(-0.86)	(2.77)	(2.18)	(2.06)
Geography and demography						
Measure of mean ruggedness (Carter et al)	0.999	0.999	0.999	1.001	1.001	1.001
	(-0.57)	(-0.80)	(-0.69)	(1.78)	(1.22)	(1.41)
Ruggedness (Terrain Ruggedness Index)	0.923	0.937	0.935	1.111	1.078	1.092
mile to forest and the standard for	(-0.87)	(-0.73)	(-0.70)	(1.45)	(1.05)	(1.08)
Ethnic fractionalization index (Drazanova), t-1	3.196**	2.688*	3.084	0.460	0.513	0.429
L. B L. D	(2.71)	(2.11)	(1.85)	(-1.72)	(-1.53)	(-1.71)
Ln (lagged population density + 1)	0.752*	0.874	0.851	1.087	1.067	1.111
	(-2.57)	(-1.22)	(-1.25)	(1.06)	(0.95)	(1.30)

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Coefficients are exponentiated, with z-scores in parentheses. Each result is based on a complementary log-log (discrete-time failure) random-effects model, with robust standard errors and controls for time dependence, population size, GDP per capita, and Polity score in the year prior to the onset of rebellion. Colonies excluded from the analysis.

b"Expansive rural" includes all episodes containing any rural component. "Narrow rural" includes episodes that occurred exclusively in rural areas. "Expansive urban" includes all episodes containing any urban component. "Narrow urban" includes episodes that occurred exclusively in urban areas.

Table A1-4: Dynamic political opportunities in rural vs. urban revolutionary episodes, under various definitions of rural and urban episodes<sup>a</sup>

		PRIMARIL	Y RURAL	-								
	V	S. PRIMAR	ILY URBA	AN	EXPA	NSIVE RURA	AL DEFII	NOITIN	EXPANSIVE URBAN DEFINITION			
	PRIMARILY	PRIMARILY			RURAL EPISODES:	URBAN EPISODES:			RURAL EPISODES:	URBAN EPISODES:		
POLITICAL OPPORTUNITY	RURAL EPISODES	URBAN EPISODES	n	CHI-SQUARE STATISTIC	EXPANSIVE DEFINITION	NARROW DEFINITION	n	CHI-SQUARE STATISTIC	NARROW DEFINITION	EXPANSIVE DEFINITION	n	CHI-SQUARE STATISTIC
Occurred during a period of political reform	10	37	293	9.85**	12	35	293	11.44***	7	40	293	10.68***
	8.1%	21.8%			8.5%	23.0%			6.7%	21.3%		
Occurred within the context of an election cycle	10	27	293	3.89*	13	24	293	2.86	7	30	293	5.27*
,	8.1%	15.9%			9.2%	15.8%			6.7%	16.0%		
Occurred within a transnational revolutionary wave <sup>b</sup>	20	82	293	32.15***	27	75	293	29.38***	15	87	293	30.38***
occurred within a translational revolutionary wave	16.3%	48.2%	233	32.13	19.1%	49.3%	233	23.30	14.3%	46.3%	233	30.30
Commend to the content of an entire of an	24	24	202	40	20	26	202	0.50	10	27	202	0.20
Occurred in the context of an external war	21 17.1%	34 20.0%	293	.40	29 20.6%	26 17.1%	293	0.58	18 17.1%	37 19.7%	293	0.28
	271275	20.070			201070	271270			271270	251770		
Occurred within the context of a financial crisis	16	44	293	7.26**	20	40	293	9.80**	11	49	293	10.05**
	13.0%	25.9%			14.2%	26.3%			10.5%	26.1%		
Occurred during any of the above	57	129	293	26.86***	73	113	293	24.54***	46	140	293	27.32***
V . ,	46.3%	75.9%			51.8%	74.3%		-	43.8%	74.5%		
Total	123	170	293		141	152	293		105	188	293	
	42.0%	58.0%	100.0%		48.1%	51.9%	100.0%		35.8%	64.2%	100.0%	i

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Colonies excluded from analysis. "Expansive rural" refers to all episodes containing any rural dimension, while "narrow rural" refers to episodes that occurred exclusive in rural areas. Conversely, "expansive urban" refers to all episodes containing any urban dimension, while "narrow urban" refers to episodes that exclusively occured in urban areas.

<sup>&</sup>lt;sup>b</sup>First movers in wave excluded from the analysis.

Table A1-5. Dynamic political opportunities and the onset of revolutionary contention, expansive vs. narrow definitions of rural and urban episodes<sup>a</sup>

	RURAL	RURAL	URBAN	URBAN
	[EXPANSIVE	[NARROW	[EXPANSIVE	[NARROW
VARIABLE	DEFINITION] <sup>b</sup>	DEFINITION] <sup>b</sup>	DEFINITION] <sup>b</sup>	DEFINITION] <sup>b</sup>
VANIADEL	DEFINITION	DEFINITION	DEFINITION	DEFINITION
Decline in level of civil society repression, t-1	0.393	0.570	1.710	2.251**
	(-1.86)	(-0.54)	(1.34)	(2.60)
Competed election in authoritarian regime prior to onset	0.673	0.699	1.671*	1.849**
	(-1.05)	(-0.80)	(2.47)	(2.93)
Part of a transnational revolutionary wave <sup>c</sup>	0.480*	0.469*	1.748*	1.692*
	(-2.46)	(-2.01)	(2.07)	(2.12)
Presence of battle deaths from external war, t-1	1.209	0.712	1.230	1.047
	(0.42)	(-0.70)	(0.62)	(0.12)
Presence of a financial crisis, t-1	0.853	0.649	1.082	1.051
	(-0.46)	(-1.13)	(0.36)	(0.17)
Any of the above political opportunities	1.824**	1.178	4.677***	4.618***
	(2.61)	(0.60)	(7.20)	(6.05)

<sup>\*\*\*</sup> p<.001, \*\* p<.01, \* p<.05

<sup>&</sup>lt;sup>a</sup>Coefficients are exponentiated, with z-scores in parentheses. Each result is based on a seaparative complementary log-log (discrete-time failure) random-effects model, with robust standard errors and controls for time dependence, population size, GDP per capita, and Polity score in the year prior to the onset of rebellion. Colonies excluded from the analysis.

<sup>&</sup>lt;sup>b</sup>"Expansive rural" includes all episodes containing any rural component. "Narrow rural" includes only episodes that occurred exclusively in rural areas. "Expansive urban" includes all episodes containing any urban component. "Narrow urban" includes only episodes that occurred exclusively in urban areas.

<sup>&</sup>lt;sup>c</sup>First movers in wave excluded from the analysis.

### Appendix 2. Sources and Descriptions for State Capacity Variables

- **Hanson-Sigman state capacity index.** Sources: Hanson and Sigman 2021. Information was available for 6,767 country years among 158 countries from 1961-2010. The range of the global sample was standardized from 0 to 1, with a mean of .57.
- Military personnel per thousand population. Sources: Bennett and Stam 2000; World Bank, at <a href="http://data.worldbank.org/indicator/MS.MIL.TOTL.P1">http://data.worldbank.org/indicator/MS.MIL.TOTL.P1</a>; Earthtrends, at <a href="http://earthtrends.wri.org">http://earthtrends.wri.org</a>. Information was available for 11,030 country-years among 164 countries from 1900-2014. The global sample ranged from 0 to 556.8, with a mean of 8.19. For regressions, all values were logged, while for Figures 1 and 2 the logged variable was transformed into deciles within the global distribution.
- Police personnel per 100 thousand population. Sources: The Statesman's Yearbook (various editions); Taylor and Hudson 1972; UN Survey of Crime Trends and Operations of Criminal Justice Systems (various years). Information was available for 6,838 country-years among 156 countries from 1900-2014. The global sample ranged from 2.5 to 3219.2, with a mean of 252.1. For regressions, all values were logged, while in Figures 1 and 2 the logged variable was transformed into deciles within the global distribution.
- Total military and police personnel per thousand population. Sources: Bennett and Stam 2000; World Bank, at <a href="http://data.worldbank.org/indicator/MS.MIL.TOTL.P1">http://data.worldbank.org/indicator/MS.MIL.TOTL.P1</a>; The Statesman's Yearbook (various editions); Taylor and Hudson 1972; UN Survey of Crime Trends and Operations of Criminal Justice Systems (various years); Earthtrends, at <a href="http://earthtrends.wri.org">http://earthtrends.wri.org</a>. Information was available for 6,599 country-years among 156 countries from 1900-2014. The global sample ranged from 3.1 to 13,774.2, with a mean of 985.8. For regressions, all values were logged, while in Figures 1 and 2 the logged variable was transformed into deciles within the global distribution.
- Military expenditure per soldier. Sources: Bennett and Stam 2000; SIPRI, at <a href="https://www.sipri.org/databases/milex">https://www.sipri.org/databases/milex</a>; World Bank, at <a href="http://data.worldbank.org/indicator/MS.MIL.TOTL.P1">http://data.worldbank.org/indicator/MS.MIL.TOTL.P1</a>. Expressed in thousands of dollars. Information was available for 9,964 country-years among 163 countries from 1900-2014. The global sample ranged from 0 to 2416.7, with a mean of 17.4. For regressions, all values were logged, while in Figures 1 and 2 the logged variable was transformed into deciles within the global distribution.
- Military expenditure per population. Sources: Bennett and Stam 2000; SIPRI, at <a href="https://www.sipri.org/databases/milex">https://www.sipri.org/databases/milex</a>; Earthtrends, at <a href="http://earthtrends.wri.org">http://earthtrends.wri.org</a>. Expressed in thousands of dollars. Information was available for the 10,476 country-years among 164 countries from 1900-2014. The global sample ranged from 0 to 15072.2, with a mean of 119.1. For regressions, all values were logged, while in Figures 1 and 2 the logged variable was transformed into deciles within the global distribution.

- **Repression of civil society index**. Sources: V-Dem (Coppedge et al. 2018). Lower scores represent greater repression. Information was available for 11,673 country-years among 162 countries from 1900-2014. The range of the global sample was standardized from 0 to 1, with a mean of .53.
- Intentional homicides per 100 thousand population. Sources: Clio Infra, at <a href="https://clio-infra.eu/">https://clio-infra.eu/</a>; United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems (various years); WHO, at <a href="https://apps.who.int/violence-info/homicide/">https://apps.who.int/violence-info/homicide/</a>. Information was available for 7,326 country-years among 161 countries from 1900-2014. The global sample ranged from 0 to 138, with a mean of 6.8. For Figures 1 and 2, the values were transformed into deciles within the global distribution.
- **Fiscal capacity index**. Source: V-Dem (Coppedge et al. 2018). Information was available for 5,227 country-years among 99 countries from 1900-2014. The range of the global sample was standardized from 0 to 1, with a mean of .60.
- **Tax revenue as percentage of GDP**. Sources: Cao and Ward 2015; Thies, Chyzh, and Nieman 2016; IMF (at <a href="https://data.imf.org/?sk=77413f1d-1525-450a-a23a-47aeed40fe78">https://data.imf.org/?sk=77413f1d-1525-450a-a23a-47aeed40fe78</a>). Information was available for 6,743 country-years among 157 countries from 1961-2014 (global mean=.16).
- **Total government revenue as percentage of GDP**. Sources: Mauro et al. 2013; IMF (at <a href="https://data.imf.org/?sk=77413f1d-1525-450a-a23a-47aeed40fe78">https://data.imf.org/?sk=77413f1d-1525-450a-a23a-47aeed40fe78</a>). Information was available for 6,806 country-years among 158 countries from 1900-2014. The global sample ranged from .002 to .678, with a mean of .158.
- Rigorous and impartial public administration. Source: V-Dem (Coppedge et al. 2018).

  Information was available for 11,655 country-years among 162 countries from 1900-2014. The range of the global sample was standardized to a range of 0 to 1, with a mean of .43.
- **Information capacity index**. Source: Brambor et al. 2019. Information was available for 6,670 country-years among 65 countries from 1900-2014. The global sample ranged from 0 to 1, with a mean of .63.
- **State authority over territory index**. Source: V-Dem (Coppedge et al. 2018). Represents the proportion of territory over which the state exercises control. Information was available for 11,400 country-years (among 162 countries from 1900-2014). The global sample ranged from .225 to 1, with a mean of .907.
- Primary school enrollment rate. Sources: Lee and Lee 2016; World Bank (at <a href="https://data.worldbank.org/indicator/SE.PRM.ENRR">https://data.worldbank.org/indicator/SE.PRM.ENRR</a>). Information was available for 10,463 country-years among 160 countries from 1900-2014. The global sample ranged from 0 to 1, with a mean of .64.

- Post offices per thousand population. Sources: Rogowski et al. 2022; Universal Postal Union (at <a href="https://www.upu.int/en/home">https://www.upu.int/en/home</a>). Information was available for 10,925 country-years among 161 countries from 1900-2014. The global sample ranged from .0002 to 4.72, with a mean of .21. For Figures 1 and 2, the values were transformed into deciles within the global distribution.
- Road density. Sources: International Road Federation, World Road Statistics (various years); Canning 1998; Canning and Farahani 2007; CIA World Factbook (at <a href="https://www.cia.gov/the-world-factbook/">https://www.cia.gov/the-world-factbook/</a>); Banks and Wilson 2015. Measured as kilometers of roads per square kilometer of territory. Information was available for 6,927 country-years among 149 countries from 1949-2014. The global sample ranged from .0024 to 6.1706, with a mean of .4089. For Figures 1 and 2, the values were transformed into deciles within the global distribution.
- **Mean ruggedness.** Source: Carter, Shaver and Wright 2019. Information was available for 18,076 country-years among 161 countries from 1900-2014. The global sample ranged from 0 to 765.2, with a mean of 127.2.
- **Rough terrain**. Source: Nunn and Puga 2012. Information was available for 18388 country-years among 165 countries from 1900-2014. The global sample ranged from .012 to 6.740, with a mean of 1.323.
- **Ethnic fractionalization**. Source: Dražanová 2020. Information available for 8,412 country-years among 152 countries from 1946 to 2014. The global sample ranged from 0 to .89, with a mean of .43.
- Population density. Sources: Population statistics website (at <a href="http://www.populstat.info/">http://www.populstat.info/</a>); Gapminder (at <a href="https://www.gapminder.org/">https://www.gapminder.org/</a>); World Bank (<a href="http://data.worldbank.org/">http://data.worldbank.org/</a>). Measured as people per square kilometer of territory. Information was available for 18,388 country-years among 165 countries from 1900-2014. The global sample ranged from .19 to 1272.59.