

BACKGROUND NOTE

**GOVERNANCE *and* THE LAW**

# The Origins Of The State

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## *Background Note for the 2017 World Development Report*

### **ON THE ORIGINS OF THE STATE**

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The state, understood as an organization holding the monopoly of force over a stable population and territory, emerged a few thousand years ago, mainly in those areas that had first transited to agriculture, and then spread rather slowly across the globe – vast parts of the world still remained stateless until the age of European colonialism. Today, however, states cover the entire planet, at least from a formal point of view, prompting historian Joseph Strayer to write that “there is no salvation on earth outside the framework of an organized state”.

Here I explore the process leading to the formation of the state in two steps. In the first part of this research note, I examine the transition from stateless to state societies, that is, I characterize the conditions under which the state arises. In the second part, I analyze the consolidation of the state, that is, the conditions under which, once it has been established, the state remains in place and avoids falling back into what many have referred to as a “failed state”. In both parts I proceed in the same fashion. After presenting a “minimalist” or bare-bones theory, I briefly discuss the extent to which our empirical evidence seems to match the main insights of the theory.

This research note does not examine the problem of ‘state capacity’ – understood as quality in the delivery of goods and services. Although institutional performance is correlated to (and presupposes) the presence of a consolidated or stable state, it goes beyond the latter and it is too broad (and contentious) a topic to examine here.

## **1. ORIGINS OF THE STATE**

### **Cooperation under anarchy**

To understand how states arise, it seems convenient to start from the simplest possible scenario: a world where growth has not happened yet, where all humans have the same resource – time – in equal proportions, and where there are no institutions (particularly no “state-like” institutions or individuals holding the monopoly of violence over everyone else).

In this “tabula rasa”, human beings may allocate their time into two different strategies to maximize their welfare. They may pursue some direct ‘productive’ activity – e.g. hunting or gathering. Alternatively, they may spend it in predatory activities aimed at grabbing other individuals’ production.<sup>2</sup> Reducing our population, for the sake of simplicity, to two individuals, A and B, we may represent their alternative strategies (productive and predatory) and the four

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<sup>2</sup> In more complex societies, these two strategies should be thought of in broader terms. A productive strategy implies allocating one’s own time and endowments to produce goods and services which are paid at the rate established in an arena (market) of voluntary transactions. An extractive or expropriatory strategy is equivalent to the appropriation of the assets or returns of other individuals, either directly or through the introduction of distortionary policies that change the prices of their assets.

outcomes that result from combining the strategies (with both, none, or just one individual producing) in Figure 1.<sup>3</sup>

Although the payoffs received by each individual (in each cell) may take many forms, the payoffs in Figure 1 represent a game structure in which individuals have strong incentives to exploit each other. Besides being conceptually plausible, this is the most theoretically interesting modelling choice for the purposes of understanding when and how cooperation may emerge.<sup>4</sup> More specifically, the best or most profitable outcome for any individual is one where he steals while the other person produces: following a standard convention, I assign a payoff of 4 (monetary or utility units) to this case. The worst possible outcome is the opposite case where the player produces while the other agent loots him or her: the payoff will be 1. In between those two extreme cases, players prefer a situation in which both produce to one in which both loot (or attempt to loot) each other. Hence, I assign a payoff of 3 to the production-production outcome and 2 to the looting-looting one. (Figure 1 includes a discount rate  $\delta$  that I examine later on.)

**Figure 1. Cooperation in an Iterated Prisoners' Dilemma Game.**

		A	
		Produces	Loots
B	Produces	3 / $1-\delta$	4
	Loots	1	2 / $1-\delta$

In this game, which has a prisoner's dilemma structure, each individual has a unilateral incentive to exploit the other side. Independently of what A may do, B's best response is always to loot: with A producing, B obtains 4 if she loots (as opposed to 3 if she decides to cooperate as well); with A looting, B's payoff is 2 (rather than 1 if B decides to produce). Since the same incentives operate for A, both players choose to loot and the final outcome is one of generalized looting – even though, once again, both players would be better off under a cooperative or production-production outcome.

Cooperation may become a feasible outcome, however, once the game is played over time (with future payoffs valued with discount rate  $\delta$ , such as the ones represented in Figure 1). In this instance, because A and B have to decide whether to cooperate or loot every day, they need to consider the effects of their current decision both on today's payoffs and on the decisions and

<sup>3</sup> These agents can be thought of as individuals living together or as individuals or households populating some territory. They can also be thought of as representative individuals of homogeneous groups, that is, groups formed by "identical" agents who have somehow solved their intragroup collective action problems.

<sup>4</sup> In Boix (2015) I generalize the game to entertain the effects of other payoff structures on the outcome of cooperation.

payoffs of the following days. To see how (and when) cooperation emerges, consider the possibility that this iterated game may start in the following ways: in the first day of their interaction, both players may decide to loot; they may split with one looting and one producing; and both may go for production.

In the first two instances, both A and B will choose to loot the following day. If both were already looting, none will have any incentive to shift to a cooperative strategy. If A had started the game cooperating while B had not, A will now respond by switching to predation – to avoid being exploited more than once. In short, the looting-looting outcome will become self-sustaining because no player will have any incentive to respond to looting with cooperation.

In the third scenario, however, where both sides try cooperation on day one, and knowing then that looting the other side in the following iteration would make cooperation unravel, they have an incentive to keep cooperating as long as the other side cooperates. For this cooperative outcome to be a self-sustaining equilibrium, however, the value of choosing a continuous production strategy (and receiving 3 every day) should be larger than exploiting the other side in the first period (and earning 4) and then facing a looting response (and a payoff of 2) always ever after. Employing the payoffs in Figure 1, now adjusted by the discount rate  $\delta$ , this means that cooperation will happen when the following inequality holds:

$$3/(1-\delta) > 4 + 2(\delta/1-\delta) \quad (1)$$

An examination of this inequality shows that, even when individuals have strong incentives to exploit each other, they can engage in productive activities and maintain peace without having to resort to any centralized mechanisms of authority if two conditions hold. First, all parties have to value the future to some extent, that is, their discount rate has to be larger than a given threshold (determined by the payoffs of each side). Second, there should be some fundamental equality of conditions (payoffs) among players. I discuss each prerequisite in turn.

If the shadow of the future (captured by  $\delta$ ) is short or, in other words, if players believe that the probability that their interactions will continue over time is low, they will only cooperate with each other if their incomes are very similar. Take again the example of Figure 1. There, cooperation is feasible for any  $\delta$  higher than 0.5. Otherwise, inequality (1) does not hold and all parties revert to looting.

The weight that individuals give to their future income may be in part the result of personal idiosyncratic factors – such as age. However, the discount rate is likely to be shaped also by the size of the population of the group within which all interactions take place and by the probability with which players may interact with the same partners over time. Suppose that the members of a particular human community have to decide to cooperate or not after they have been paired off with each other through a random mechanism every day. If there are only two players, they will be interacting with each other with a probability equal to one by definition. However, as the number of players increase, the likelihood that the same pairing of individuals will occur over time will decline, the expectation of maintaining future exchanges with the same people will drop, and cooperation will be more likely to unravel. The existing literature has indeed shown that the possibility of cooperation and the size of the group are negatively related to each other (Axelrod 1984; Olson 1993).

More centrally to this research note, (relative) equality is a precondition to achieve cooperation under anarchy, that is, without the enforcement of a state. To see why, consider what would happen if *B* benefited from a positive technological shock such that his production payoff doubled from 3 to 6. Assume that, if *A* decided to raid *B*, *A* would grab all that additional income such that her payoff (from looting) would rise from 4 to 7. In this new context, *A* would only follow a peaceful strategy if the following inequality held:

$$3/(1-\delta) > 7 + 2(\delta/1-\delta) \quad (2)$$

In this scenario, *A* would only choose a production strategy if  $\delta > 0.8$ , that is, if he valued future payoffs very highly indeed. In other words, a biased production (or technological shock) would, first of all, sort individuals into different types with opposite economic and political strategies. The more productive agents (*B* in the example) would still have an interest in sustaining a production equilibrium: in fact, their incentive to cooperate would become stronger. By contrast, the less advantaged individuals would prefer to plunder the most productive individuals. Given this changed incentive structure, conflict would become widespread and the possibility of cooperation under anarchy would collapse.

### **Inequality and the formation of the state**

The breakdown of a spontaneous social order may then result in two alternative outcomes. On the one hand, the situation of looting and conflict may last until all the growth that came from technological innovation (and that generated the collapse of cooperation) is squandered. On the other hand, looting may lead to the formation of a “state”, that is, to the creation of some organization or structure with the incentives and the capacity to enforce order among both producers and looters. Given the nature of the conflict and the two classes of individuals (producers and looters) involved, the creation of a political authority may take place through two alternative paths — with each institutional solution embodying the interests of each type of individuals respectively: a “dictatorial” outcome (or a “monarchical” outcome when the dictator inherits the position from his or her predecessor), governed by the looters, and, for a lack of a better term, a “republican” compact, run by the producers.

In a dictatorial or monarchical regime, looters or bandits – those individuals who did not benefited from the technological shock, govern ‘natural’ producers, that is, those that benefit from growth. Under this political solution, natural producers, who devote themselves entirely to a productive strategy, transfer some part of their output (generally in the form of direct labor, some tribute or lump-sum payment) to the agents governing them. If that permanent transfer is sufficiently large (i.e. it exceeds the value of plundering the producers and destroying their incentives to produce), the potential looters have an incentive to protect the natural producers from their own violence and against other potential bandits. Following Olson’s terms (1993, 2000), in the monarchical solution “roving bandits” turn into “stationary bandits” or landlords.

The internal structure of monarchical or dictatorial regimes varies depending on the distribution of power within the ruling elite (and therefore the ways in which bandits cooperate among them). As was widely accepted in modern political thought (Anderson 1974: 397–400),

monarchies range from despotic systems to feudal kingdoms. In despotic or sultanistic regimes, such as those that prevailed in the Ottoman Empire and in most Asian kingdoms, servants were vertically integrated below the monarch. In a feudal monarchy the allies of the king, although they were subservient or vassals to him, conserved some autonomy of power (backed up by their own weapons or assets) and often participated in some common institutional structure (such as an assembly of warriors or a parliament of notables) with the monarch. Similar variation may be found in modern dictatorships – ranging from personalistic regimes to electoral autocracies. I consider this again in the context of discussing the problem of state consolidation in part 2.

The ‘natural’ producers may oppose a monarchical solution and decide to spend some fraction of their own time setting up a defensive structure and fighting to deter any potential plunderers. Under this scenario, producers double as rulers. To fund and manage their defensive structures, producers establish some governing institutions. These institutional bodies take different forms – an elected leader, a governing committee, a general assembly or a mix of all of them. These institutions monopolize the exercise of violence among natural producers (and any subjected looters) and perform two additional functions: they reduce the costs of coordinating all the citizens of the political community; and, more importantly, they guarantee that none of the members with the right to participate will free ride on or exploit the rest of the polity. As a result, they constitute a state – in this case, of a “republican” kind.

The type of political regime that will prevail would be a function of two main variables: the military power between producers and looters; and the level of rents extracted by looters. Suppose that military technologies evolve to some degree independently of economic technologies (understood as those to produce things). To the extent that those warfare innovations dovetail more closely with the resources and skills of each particular group, the political regime in place responds to the interests of that group. If producers are better at waging war than plunderers, republican structures form at a higher rate. By contrast, as soon as the producers’ technology of war worsens relative to that of the looters, monarchical regimes become the dominant form of government. The regime in place is also a function of the level of rents that is optimal for a dictator or monarch for the following reason. In a regime where the “stationary bandits” have the monopoly of force (and therefore the producers do not retain any armed force to resist the rulers), the self-interest of the former is the only mechanism that guarantees that they will behave “well”: the stationary bandits extracts rents below the total output in the economy to the point where they maximize their present-value income; any promise they may make to reduce those rents below their optimal choice will never be credible. Hence, as soon as rents (determined by the ease with which they can be extracted) exceed some given threshold, producers will stop having an incentive to subject themselves to a bandit.

## **Empirics**

The first insight of the theory – that cooperation without state institutions can only happen in small and equal human communities employing relatively simple technologies of production – matches the existing archaeological evidence and current anthropological research.

Among human societies, simple foragers, that is, hunter and gathering groups that do not rely on aquatic resources, exhibit lower productivity levels (proxied through population densities) than any other human communities: they average 0.05 persons per square mile versus 3.5 inhabitants per square mile in complex foraging (i.e., mainly riverine and maritime) societies (Keeley 1995) and over 90 persons per square kilometer in the first agricultural communities that appeared in the Neolithic Levant about 10,000 years ago (Bellwood 2005 : 14–19). They are also small in size – the sum of a few families. In the Ethnographic Atlas, a data set developed by George P. Murdock and containing economic, social and institutional information about almost 1,100 human communities, almost 60 percent of all simple foraging communities have less than 50 people and an additional third have less than 200. By contrast, the modal settlement of fishing groups as well as populations living on shifting agriculture is between 50 and 200 people. Agricultural communities are much larger: more than half of those that rely exclusively on agriculture have more than 1,000 people. Likewise, the internal level of differentiation of simple foraging bands is minimal – individuals exhibit similar age-specific patterns of consumption, and this equality persists over time due to the type of technologies in use (strongly correlated with individual ingenuity and physical strength) and to the fact that asset accumulation (and hence any intergenerational transmission of wealth) is impossible. Again according to Murdock’s Atlas, inheritance rules are sparsely used among simple (non-maritime) foraging groups. Only 30 percent have some norms on how to transfer movable assets of deceased individuals. Less than 10 percent have them for fixed assets. By contrast, land property and the intergenerational transmission of land are central features in agrarian and pastoral societies: almost all agricultural societies have well-defined inheritance mechanisms for all kinds of wealth. Social stratification is absent in simple foraging communities: only 2 percent of them have formal class structures. By contrast, more than half of agriculture-intensive societies do.

Among simple foragers, cooperation takes place without stable structures of authority or permanent leaders (at least beyond one generation). Band or tribe chiefs act as mere referees among different individuals or families, cajoling, persuading or mediating between their group members (Clastres 1972, 1974). In the Ethnographic Atlas dataset, 56 percent of simple foraging communities (i.e. those with no fishing activity) are organized at the family or band level. Another 30 percent are structured at the clan or village level. By contrast, almost half of the maritime communities are organized at the village level and around a fourth of them fall into the category of chiefdoms. Two thirds of all agricultural communities are chiefdoms or states.

The presence of cooperation without state institutions does not exclude the possibility of violence. In fact, the latter seems to be endemic in pre-agrarian societies (Gat 2000, LeBlanc 2003). That is not incompatible with the model, which predicts the possibility of an alternative equilibrium of generalized looting. The crucial point is, though, that violence remains individualized, hardly escalating into a general conflict splitting the band into different groups and resulting into the collapse of all social interaction within that community. When it does, foragers tend to deal with it through a regular process of fission (Hirschman 1982).

The second insight of the theory – that the emergence of inequalities leads to collapse of spontaneous or non-state-enforced cooperation and to the emergence of state institutions – has also started to receive confirmation in the empirical literature. Sanchez de la Sierra (2015) has examined the patterns of violence and the emergence of “stationary bandits” in war-torn areas of the Democratic Republic of Congo in the early 2000s. A sharp rise in the world demand for coltan,

a bulky commodity used in the electronics industry, pushed guerrillas to “establish village-level monopolies of violence and create stable taxation systems” (p.3). Exploiting climatic shocks exogenous to human activity, Boix (2015) shows that formal political institutions appeared in response to a process of biased technological change and the spatial concentration of resources. A drop in temperatures in northwestern Alaska about 800 years ago restricted the use of the drag-floating kayak employed to hunt whales to a set of very specific and highly valuable points of the coast that, due to their topographical features, provided easy access to whale trails in the ocean. The pattern of dispersed habitation that had prevailed until then gave way to the emergence of permanent whaling villages around the four coastal ice-leads of northwestern Alaska: Barrow, Icy Cape, Point Hope, and Wales. The remaining territories were either used seasonally by those communities or, especially inland, populated by nonwhaling foragers. Each one of the whaling communities controlled a well-defined territory that encompassed its permanent settlements and all the land that its residents employed for their provisioning strategies. All these societies “recognized contiguous fixed boundaries and their violation was considered an act of aggression” (Sheehan 1985: 126). War between communities was widespread. These changes, which were not correlated with any change in military technologies, led also to the creation of a hierarchical authority within each one of those permanent communities.

More generally, the emergence of inequalities and of state institutions across the globe took place when a particular batch of tools and production techniques altered the marginal productivity of land differently leading to the rise of a spatially biased gradient in the value of economic resources. That probably occurred for the first time among those foraging communities, such as the populations on the Northwest Pacific Coast, that developed complex fish traps to exploit abundant riverine resources strongly concentrated in some specific spots. The formation of highly productive territorial clusters accelerated once plants and animals started to be domesticated in a few, relatively delimited regions across the world from 9,000 BC onward. Hibbs and Olsson (2004), Olsson and Hibbs (2005), Putterman (2008), and Boix (2015) show that, starting in the Holocene, agriculture emerged in those areas that had biogeographical conditions suitable for the domestication of animals and plants. This, as I examine next, led to the construction of state institutions.

## **Violence and the state**

Given the existing correlation between economic development and state formation, most evolutionary biologists and economists explain the emergence of political institutions as a natural response to a “market failure” or collective action problem. According to this functionalist approach, in which institutions develop because they fulfill a function that benefits society, human beings, confronted with violence or simply the lack of social cooperation, put themselves, deliberately or not, under a common agent or authority with the capacity to coordinate them around certain norms of conduct, to punish them whenever they refuse to comply with the legal order, and to supply them with some public goods.

The way in which those institutions emerged takes several forms and is often left unclear in this intellectual tradition. For some researchers, they appeared spontaneously, in a *deus ex machina* fashion. For others, mostly coming from the field of evolutionary biology, institutions

rose and remained in place through a process of natural selection that weeds out suboptimal outcomes. For neoclassical economists, individuals engaged in a process of political bargaining, similar to the one that happens in markets, that resulted in the construction of rules and institutions to solve those collective failures.

Functionalist explanations face a logical conundrum. If A can profit from raiding B, it is not evident why A will agree to subject himself to an authority that will restrain him. Conversely, if, for some reason, both A and B already have the incentives to cooperate in setting up a formal political authority, there is no need for them to establish it so since they will cooperate among themselves even in its absence – precisely the case of stateless societies.

From an empirical point of view, these theories do not hold up well either. Although a very influential historical literature claims that monarchical states were first born to coordinate and manage vast irrigation schemes in the river civilizations of the Middle East, India and China (Wittfogel 1957), modern ethnographic work shows that that irrigation systems in pre-contact Hawaii were small, limited to a single locality, and did not need a central control system (of the kind that has been seen as the engine to the construction of political structures) (Earle 1977, 1978). Instead, Hawaiian chiefdoms formed as a result of warfare. In Polynesian islands, the size and border of states were strictly explained by geography and warfare technologies – and not by the need to solve collective action problems and supply certain public goods. The traditional anthropological literature on the so-called “great men” of the Papua New Guinea Highlands saw them as mediators at the center of an exchange network in essentially anarchic communities (Sahlins 1963). More recent work has shown, however, that those “great men” were extractive individuals that employed extraordinary violence to amass a surplus and buy a retinue of allies and servants (Roscoe 2000).

More generally, even though economic technological change opened the door to the construction of political institutions, functionalist theories cannot explain the fact that it was war that made the state and war technologies that shaped its internal organization. Both the introduction of agriculture, which took place around 8,500 BC in the Middle East, 6,000 BC in parts of China and India and 4,000 BC in Egypt and Mexico, and the dissemination from 4,000 BC onward of intensive forms of agriculture, which for some it led to higher levels of accumulation and therefore stronger incentives (and resources) to build political institutions, started around 4,000 BC, were associated with the formation of compact villages with shared infrastructures and an incipient labor specialization. But state structures (of the vertical kind we live under today) took much longer to emerge. With the exception of military structures pointing to the existence of some political authority in Jericho at around 6,500 BC, the introduction of formal political hierarchies coincided with the application of copper to military purposes and the corresponding formation of a class of individuals with a clear comparative advantage in the use of violence in the Middle East between 3,500 and 3,100 BC. The invention of bronze, an alloy of copper and tin, intensified the trend toward the construction of specialized armies and the creation of a stable ruling elite. The use of bronze helmets and swords is correlated with the first big monarchical states in the Middle East around the middle of the third millennium BC and the first centralized states in China in the first half of the second millennium BC.

## 2. CONSOLIDATION OF STATE INSTITUTIONS

Under what conditions do states become consolidated? Or, conversely, when do states break down and turn into “failed states”? As it turns out, having stable states depends on two types of factors. On the hand, it needs the “correct” alignment of the incentives of both rulers and ruled – or what we may want to call the parameters external to the political institutions per se. On the other hand, it requires the design of institutions that minimize the possibility that any of the parties (any of the rulers or of the ruled) of a given state structure will strategize to change the existing payoff structure to their advantage to the point that their manipulation jeopardizes the interest of the other agents in accepting the state institutions as they were created initially.

### Incentives

A dictatorial or monarchical regime only remains in place when two “exogenous” conditions (with “exogenous” meaning here that they are external to the institutional structure of the state) are continuously met. First, the rents extracted by the stationary bandits or rulers must be higher than the cost they incur to govern the producers (both in terms of repressing them and protecting them). Second, the rents paid by the producers (to the rulers) must be lower than the value of the output the former would forgo if they decided to resist the stationary bandits. These conditions depend, in turn, on the military capacity of each side, the extraction rate, and the costs of government. Sudden changes in any of these parameters may lead, if they are large enough, to the collapse of the monopoly of violence in the hands of the stationary bandits. Without any intention of being exhaustive, I consider here two examples – the first on rents, the second on power ratios.

A sudden fall in the level of rent extraction may dissuade the stationary bandits from restraining themselves and may push them to engage in direct looting. Likewise, a reduction in the producers’ payoff or output net of the extracted rent may lead them to challenge the status quo. In a celebrated article on conflict in Africa, Miguel et al (2004) find that weather conditions, and particular droughts, leading to economic contractions, are more likely to ignite civil wars in Africa (Miguel et al. 2004) – arguably because those that accepted the rulers in place ceased to have the economic incentives to comply.

States may unravel also when the power (military) ratio of the parties involved changes over time. The transformation of the international system at the end of the Cold War can be seen as a recent example of this process. The collapse of the Soviet Union led to a sharp reduction in military and economic resources that great powers had employed to shore up their client states in the developing world before the fall of the Berlin Wall. As the military and political capacity of the ruling elites in those countries declined, political institutions liberalized (Boix 2011, Gunitsky 2014) and the pattern of civil wars changed (Balcells & Kalyvas 2010).

The incentive structure behind republican compacts is partially different. In the first place, producers will only pool their sovereignty under a common authority if they are threatened by looters. In the absence of the danger of looting (either within or outside the territory inhabited by a set of producers), they will have no incentive to set up any state structure. Producers will simply

carry out their productive activities knowing that everyone else will. Or, in other words, they will sustain a cooperative equilibrium of the kind modeled in the previous subsection (and represented in Figure 1) without having to resort to strong or formal institutions.

In the second place, a republican structure will only remain in place if there is some relative equality among its members. By contrast, if their economic differences are not relatively bounded, they will internally split between those interested in producing and those interested in looting – following the logic of the model discussed around Figure 1.

## **Institutions**

As noted earlier in this note, authoritarian regimes vary in their internal structure as a function of the number of individuals that control the levers of power – ranging from personal dictatorships to authoritarian regimes where the ruling elite relies on parties and elections to govern. Personal dictatorships, which received the name of tyranny in classical Greece and ancient Rome, are only a fraction of all authoritarian systems. Less than a fourth of all dictatorships since the end of World War II and only about a tenth of all currently existing countries have been governed by a single ruler. Furthermore, roughly three-fourths of all dictatorships in the last sixty years have had a legislature, while more than 60 percent have relied on a political party to organize their base of support. Even in regimes without these institutions, the leadership often maintains a smaller institutionalized body, such as a ruling council or a politburo, which sustains regularized political interactions that may serve to restrain the tyrannical tendencies of any single ruler.

The prevalence of non-personal dictatorships derives from a simple fact: most dictators do not directly control enough resources to govern alone, needing instead the support of a set of allies and notables. That forces them, in turn, to share power with a multiplicity of actors. Power-sharing power in dictatorships comes, however, with a key commitment problem: how to sustain the agreement between the dictator and his allies.

A verbal pact among dictator and allies, i.e. an orally given promise to respect the position or status of everyone and to consult everyone informally to decide over any issue, is not sufficient to maintain a power-sharing system. A mere written agreement (in the form of a contract accepted and signed by everyone) is not enough either. The initial conditions that facilitated the emergence of a state may be undone by the strategizing of the parties involved in the cooperation structure. The dictator, who has promised to share some rents (extracted from the producers) with his allies, may try to withhold some of those benefits or even undermining the position of his allies to make them irrelevant in the future (and transform an authoritarian regime with allies into a personalistic dictatorship or tyranny). In turn, the allies may attempt to erode the dictator's preeminent position to increase their share of rents – and eventually to substitute him in power.

The consolidation of the state requires the creation of a mechanism or institution that stabilizes the deal made among rulers. Such an institution or structure cannot be a third party independent from the autocratic elite: having one would imply that the dictator has surrendered the very powers that make him a dictator. Hence, the only solution consists in setting up an institution (or a set of institutions) that includes the members of the autocratic elite and that reflects

the nature of the pact among the members of the elite. Through this institutional structure, the ruling elite receives the right type of information about the resources of the dictator and the internal flows of income within the elite and, therefore, about the current balance of power and the possible attempts made to alter the latter. With this information in place – and with an institution that reduces the costs of coordination, the allies of the dictator can make sure that the leader does not develop strategies to shift the distribution of power, assets and status. Similarly, every member of the ruling coalition observes the nature, size and stability of the existing factions in the country. In doing so, they verify that no section of the ruling class is too loyal to the leader or, in other words, too monarchical. The very routine of meeting in a committee, party congress or assembly serves as a yardstick to measure the intentions of the leader. Any attempt by the national leader to block or not convene his allies would be a signal that he is indeed intent on disrupting the old balance of power and should therefore trigger an immediate backlash from them.

Employing available data on legislatures and parties in the period 1950-99, Boix and Svobik (2013) show that the presence of institutions reduces political instability in authoritarian regimes. In dictatorships without legislatures, leaders are about three times more likely to be removed in a coup or a revolt than dictators with legislatures. Similarly, leaders in dictatorships with legislatures survive in office for an average of 8.5 years whereas the corresponding figure is 6.1 years in dictatorships without legislatures. The existence of institutions is strongly correlated with the informational quality and transparency of a regime. While building the Penn World Tables, Summers and Heston (1991) graded the overall quality of each country's estimates in a A to D+ range (or 1- to 10-point scale). The presence of a legislature or a party is correlated with a 0.5-point and a one-point increase respectively. This effect is substantial: although the Summers-Heston grade ranges from 1 to 10, 95 percent of dictatorships have a grade between 1 and 4.

Conditioning for the different nature of democracies (and the role that political consent plays in legitimizing them), institutions may also matter there to avoid the breakdown of a state. In a democratic or republican form of government that employs political representatives, the latter can exploit informational asymmetries and deficient mechanisms of control to shift rents to themselves and this in turn may alter the incentive structure that sustained the republican consensus. Hence, regular elections and free media contribute to sustain the relative equality that underpins a liberal political consensus.

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