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LITERATURE SURVEY

State capacity and public choice: a critical survey

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Abstract
'State capacity' is a term associated with a popular argument in fiscal sociology, history, and political economy regarding the role of the state in the process of economic development. Much of the applied and theoretical work on state capacity already shows some influence from public choice theory, the application of the economic approach to the study of political processes. These commonalities notwithstanding, this paper argues that public choice theory can offer further insights into this literature. In particular, the public choice approach can help illuminate concepts such as those of 'state capacity' and 'governance,' which are often casually employed in the literature. It can also help us understand the interaction between state capacity and competitive pressures in the 'market for governance'. Finally, insights from public choice can illuminate the causal nexus between investment in state capacity and economic development.

Keywords State capacity · Public choice · Interjurisdictional competition · Political property rights

1 Introduction

'State capacity' is a term associated with a popular argument in fiscal sociology, history and political economy regarding the role of the state in the process of economic development. The argument purports to solve the long-standing 'paradox of government'—how can a government strong enough to foster economic development be constrained from capturing the wealth of its citizens—which has been at the core of many recent developments in political economy.[1] The solution lies in the ruler's incentives to protect wealth generation. The larger the share of the state's wealth the ruler expects to enjoy, the more resources will be allocated to (1) the creation and enforcement of those institutions that are required for the maximum possible degree of specialization and trade in society, and (2) the

[1] I do not mean to claim that all contributors to the relevant literature see themselves as providing a solution to the paradox of government. While that conclusion explicitly is true in the case of some scholars (e.g., North et al. 2009), it may not be so for others. My claim simply is that their arguments and results effectively constitute one possible answer to the paradox.

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provision of public goods and other forms of productive investment. Furthermore, as the ruler's "encompassing interest" (Olson 1993) in the productivity of the economy increases, the ruler will substitute away from distortionary policies like hyperinflation, rent-seeking, and distortionary taxation.[2]

Owing to the literature's focus on the incentives faced by government agents, public choice theory is exceptionally well-positioned to inform it. The fundamental staple of public choice theory is the application of the "economic approach to human behavior" to the study of political actors, institutions and processes. Agents pursuing 'political' ends are modeled as rationally responsive to incentives, which in turn are determined by the institutions that characterize the environment within which they operate. Viewed through those lenses, political equilibria become intelligible to the social scientist (Buchanan 1987; Riker 1990). By adopting that methodological position, public choice theorists extended the scope of economic analysis beyond its traditional boundaries. What is most important, they showed that one cannot assume that the government would behave in accordance with the normative guidelines identified by orthodox welfare economics. Public officials are to be treated like any other actor, assuming that they will maximize whatever enters their objective function if one is to predict what government intervention actually is to look like in the real world.

Much of the applied and theoretical work on state capacity already shows some influence from public choice (Dincecco 2011; Johnson and Koyama 2017). Most important of that influence is the adoption of the view that rulers must be assumed to be wealth maximizers, rather than selflessly driven by social welfare considerations. For example, the basic intuition behind models of state capacity (Besley and Persson 2010) closely relates to Mancur Olson's theory of the state as a stationary bandit (Olson 1993), which treats the ruler as a self-interested revenue-maximizer.[3] The argument also is closely related to the one advanced by Geoffrey Brennan and James Buchanan (1980),[4] which studies the institutions of public finance from a public choice perspective. The connection between the public choice tradition and the state capacity literature is personified by Timothy Besley, one of the pioneers in the development of the economic approach to state capacity. Before his contribution to the state capacity literature, Besley's work on democratic decision making (Besley and Coate 1997) and on the 'pathologies of the state" (Besley 2011) places him within the broader public choice tradition. Besley himself (2007) identified the public choice school as an antecedent to his own approach to political economy.

Overall, by adopting the view that the state (or, better, the individuals who operate within it) may have goals and interests of its own, separate and divergent from the maximization of welfare of its subjects, the literature constitutes a major improvement over the standard analysis of the role of the state in economic development, at least from the perspective of public choice. Ironically, while public choice theory often is associated with a position that

[2] A growing empirical literature relies on Olson's model to study the evolution of governance institutions of different societies throughout history (Kurrild-Klitgaard and Svendsen 2003; Vahabi 2011; Salter 2015; Young 2015, 2016).

[3] Olson was a longtime member and president of the Public Choice Society and made many contributions to the field.

[4] Brennan and Buchanan are two major figures in the public choice tradition.

is skeptical of the ability government actors to improve upon market outcomes,[5] the state capacity argument suggests that the state can and has played a major positive role in the process of economic development.[6]

The purpose of this paper is to contribute to the growing literature in historical political economy addressing the role of the public sector in the process of historical development. I wish to direct the attention of scholars interested in the state capacity literature to incorporate the many contributions to the study of political institutions developed within the public choice tradition.[7] The public choice approach can help illuminate concepts such as those of 'state capacity' and 'governance', which often are employed casually in the literature. Much of the contemporary discussion of the historical role of the state in contributing to economic growth downplays the effect of competitive forces on the ruler's behavior. That point is not original to me. For example, Salter and Young (2018) have made very similar arguments in their critical study of state capacity in early modern Europe. What is more important, the literature ignores the effect of investments in state capacity on the degree of rivalry that characterizes the market for governance. In this paper, I develop this idea by focusing on the interactions amongst those variables, by characterizing state capacity as a technological variable, distinguishing it explicitly from the incentive to supply public goods, and identifying the specific way in which it interacts with the elasticity of demand faced by the ruler. By furthering our understanding of the nature of the interaction between technology and competition in the market for governance, themes from public choice also can illuminate the causal nexus between investment in state capacity and economic development.

2 State capacity and economic performance

The state capacity literature identifies the ability of a ruler to provide—i.e., to both finance and supply—some fundamental public goods, including defense, a legal framework and some degree of productive investment, as key to economic and political development. "Fiscal" and "legal capacity" usually are identified as the two major dimensions of state capacity (Johnson and Koyama 2017).[8] That argument has been used to make sense of the historical process known as "great divergence" or "European miracle."[9] Europe, the argument goes, was able to surpass all other regions of the world along such dimensions as economic growth, human capital accumulation, political openness and civil liberties

[5] On the relationship between public choice as a positive research program, ideology and normative economics, see Boettke and Piano (2019).

[6] A growing literature within public choice focuses on the possibility of stateless social order. Powell and Stringham (2009) provide an early overview of this work. See Leeson (2007a, 2009, 2012) and Candela and Geloso (2018) for some empirical applications. More to the point, Leeson (2007b) and Leeson and Williamson (2009) investigate the theoretical and empirical conditions under which the very existence of a state is detrimental to economic development.

[7] See Martin and Ruhland (2018) for an attempt to reconcile public choice theory (and Buchanan's brand of public choice in particular) with state capacity with an application to the Byzantine Empire.

[8] The historical relationship between fiscal and legal capacity seldom has been studied. An important exception is Johnson and Koyama's (2014b) work on the evolution of the fiscal and legal regime in seventeenth century France. They argue that the decline of witch trials there at the time was symptomatic of the decision of the French government to centralize the administration of its legal system and the introduction of homogeneously enforced, country-wide legal standards. See also Shughart's (2018) discussion of the adoption of a Civil Law regime in post-revolutionary France.

[9] See North and Thomas (1973) and Jones (2003) for two influential treatments of the "miracle".

because of the emergence of a state system of strong, competing sovereignties (Acharya and Lee 2018). After the fall of the Roman Empire, Western Europe became populated by a multitude of limited sovereignties of continuously changing size and shape. By the late Middle Ages, that fractured political landscape was characterized by the presence of relatively large (though still weak) regional states in Spain, France, Italy and the British Isles, as well as by the complex system of overlapping jurisdictions in the territories of the Holy Roman Empire. That landscape of kingdoms, republics, principalities and city states was one prone to quarrelsomeness over territorial control, glory and prestige (Dincecco and Wang 2018). Such civil unrest generated a high demand by rulers for the capital necessary to defend one's own territory and conquer those of others (Tilly 1990).

The tragic consequences of continuous state of warfare were an unintended blessing in disguise for rise of the modern nation-state (Besley and Persson 2010). European rulers, starting with the Italian city-states and the *Compagnie d'ordonnance* in 15th century France, begun to establish armies that were to remain permanently employed under the direct control of the government. Those standing armies required the creation of a corpus of public administrators of unprecedented size and sophistication. By the end of the 19th century, virtually every country in western Europe was ruled by governments characterized by the following, unique features: controlled by a relatively large, professional bureaucratic apparatus, employed in the provision of a wide array of goods and service, including military defense and the enforcement of social order through courts and policing.

At the analytical core of most models of state capacity (e.g., Besley and Persson 2008, 2010, 2013; McBride et al. 2011) is some version of Mancur Olson's (1993) "stationary bandit" argument. Olson's analysis establishes the superiority of the "stationary" equilibrium over its anarchic, "roving bandit" alternative. Driven by self-interest, the bandit supplies its subjects with some public goods, such as protection from outsiders and the enforcement of internal social order. In exchange, the bandit gets a share of the wealth created. The broader the "encompassing interest" of the ruler—which is to say, the more the ruler internalizes the benefits and costs of its own policies—the more the ruler would invest in the provision of public goods and productive investment (Olson 1993; McGuire and Olson 1996).

Models of state capacity make the ruler's encompassing interest endogenous to its own investment decisions. At any given time, the ruler must decide what share of public revenues to allocate to own consumption and what share to allocate to the technology of governance underlying state capacity. When a revenue-maximizer invests in such a technology, it also increases its share of (or residual claimancy over) domestic output. As a result, it faces more of an incentive to reduce the distortionary effect of its policies and provide more and better public goods. In practice, that might mean such actions as the standardization of measurements, the rationalization of the bureaucratic apparatus, the provision of a competent and fair legal system, investment in infrastructure, and so forth (Bardhan 2016; Johnson and Koyama 2017).

Besley and Persson (2013) find broad empirical support for that argument. Today, a country's economic performance is strongly and positively correlated with the ability of its government to collect taxes, the latter being a popular proxy for the level of "fiscal capacity". The key to understanding the divergence between high capacity, high productivity and low capacity, low productivity countries lies in the trajectory of the evolution of their respective political institutions. Besley and Persson (2010) develop a model in which rulers face a tradeoff between, on the one hand, investing in their ability to collect revenues from their subjects and consumption, on the other. They argue that an increase in the risk of foreign aggression leads rational rulers to forego some present consumption to invest in state

capacity as to fund spending on military defense. They argue further that the experiences of western European countries fit the story well. Finding themselves in an almost uninterrupted state of war throughout the early modern era, Western European rulers needed unprecedented levels of resources to pay for the wages, arms and armor, and food and shelter for large professional armies. Failure to do so meant conquest by foreign rulers.

The historical evidence suggests that the evolution of the institutions of public finance since the late middle ages was indeed driven by a generalized increase in government spending, particularly on the military (Schulze 1995, p. 268). Historically, tax collection had been the prerogative of local authorities, not kings and princes, who were forced to fund their own expenses (military and otherwise) by selling privileges, obtaining loans from private individuals, and, from time to time, expropriating their own subjects (Johnson and Koyama 2014a). Things began changing in the 16th and 17th centuries. Between the Great Italian Wars (1494–1559) and the Thirty Years' War (1618–1648), European rulers faced rapid increases in their military requirements. In response to such circumstances, a new system of public finance, "the finance state" emerged (Bonney 1995). That shift in priorities was accompanied by an unprecedented expansion of the bureaucratic apparatus under the control of national authorities and the adoption of innovative fiscal technologies. For example, in the electorate of Bavaria, the number of people employed in the state bureaucracy went from 162 in 1508 to 866 in 1571. Dittmar and Meisenzahl (2016) focus on the origins of state provision of "non-defense public goods" across German cities during the 16th century. According to their analysis, the Protestant Reformation "shocked" the system by introducing stronger religious and political rivalry between German sovereignties. That rivalry led to the introduction, in a subset of the newly Protestant cities, of "public good institutions"—municipal legislation that "(1) expanded the set of services provided by the state, (2) transferred control of existing service provision from the Catholic Church to secular state authorities, and (3) institutionalized anti-corruption and oversight rules to improve quality and prevent the misappropriation of public and church finances" (Dittmar and Meisenzahl 2016, p. 7). The purpose of the 'church ordinances' was to create an administrative environment so as to maximize the productivity of the local economy, which included the formation of high human capital public servants through state-provided higher education and the introduction of stricter provisions against public corruption (Dittmar and Meisenzahl 2016, p. 8). During the time, annual revenues in western European countries increased radically (Schulze 1995, p. 270), and recourse to debt finance became an increasingly popular tool of public finance (Stasavage 2011).

The process of fiscal development continued, although not in a linear fashion, throughout the 18th, 19th and 20th centuries (Dincecco 2011). One important step in the evolutionary process was the consolidation of the national authorities' "power to tax" over the entirety of a well-defined territory. With the notable exception of England, which had achieved a relatively high level of fiscal consolidation in the first few decades after the Norman conquest in the 11th century, most western European rulers achieved the same goal only well into the 19th century (Dincecco 2011, p. 22). Until the French revolution and the Napoleonic wars, their tax systems were very fragmented. A merchant was forced to go through more than one internal customhouse even when operating between two cities within the same country, if not region. Only as a result of Napoleon's imposition of a new system of public administration across continental Europe did the sizes of those internal customs zones expand significantly. Johnson and Koyama (2014) discuss the evolution of tax collection institutions in France and England during that very time. By the turn of the 16th century, the two countries already represented polar opposites in the way in which they administered the collection of tax revenues. While England was decidedly centralized,

France was exceedingly fragmented. The authors attribute those differences to the fact that France was more geographically diverse than England, thus forcing the French king to rely on local elites and other private individuals to undertake “tax-farming”.[10] Over time, with an increase in the demand for internal finance, both countries converged on a highly centralized system, until the full nationalization of tax collection in 1688 (in England) and 1789 (in France).

Along with fiscal consolidation, another characteristic feature of the western European ‘effective state’ was the presence of institutional constraints on the arbitrary power of the ruler. Historically, parliamentary institutions have been the most popular way of introducing such constraints. Dincecco (2011, 2015) argues that fiscal centralization and constraints on the executive branch complemented each other in solving the ruler’s commitment problem. Their interaction allowed for an unprecedented expansion in the ruler’s budget constraint and redirected public spending towards the provision of public goods and productive investment (North and Weingast 1989, p. 816). The economic consequences of that process, for those countries going through it, were enormous (North and Weingast 1989; Weingast 1995; Stasavage 2002). With more resources at its disposal than ever before and constrained by the representative assemblies in its policy choices, the modern state strengthened the fundamental governance institutions of a dynamic market economy. Those institutions explain the variance in economic and political success over time and across countries (Acemoglu et al. 2005; Besley and Persson 2013; Bardhan 2016; Johnson and Koyama 2017).

3 Capacity and competition

The notion of state capacity refers to “the ability of a state to collect taxes, enforce law and order, and provide public goods” (Johnson and Koyama 2017, p. 2). In that sense, capacity is a technological notion, rather than an economic one. Which is to say that observing an increase in state capacity does not necessarily tell us how that capacity will be employed, but merely that the ruler now is better able to “collect taxes, enforce law and order, and provide public goods.” In order to predict the new optimal behavior, one must also investigate how such an investment affects the ruler’s incentives to maximize social welfare. To see that, consider how the argument would apply to a firm operating within a standard industry. This firm’s productive capacity is given by its production function and its monetized reciprocal, the cost function. In general, knowledge of a firm’s production and cost functions is not enough to predict the quantity it actually will supply in equilibrium. The standard analysis of firm behavior also requires that we make assumptions about the environment within which it operates. More specifically, we need to know the shape and position of the demand the firm faces. Under the assumption of perfect competition, the answer to that question is given by the intersection of the demand curve and the firm’s marginal cost curve, which is the quantity that maximizes total surplus. The answer changes if we instead assume that the firm enjoys some degree of market power. Under those circumstances, the firm’s optimal quantity supplied is found at the intersection of its marginal revenue and marginal cost curves. In that case, then, the firm will not produce the quantity

[10] Tax-farming referred to the practice of entrusting private contractors with the task of tax-collection in exchange for an advanced payment to the sovereign.

that maximizes total surplus. Even though the firm has available to it the technology to supply the socially optimal quantity of output, it is not interested in doing so. A second factor affects supply behavior when the firm enjoys market power: its ability to price discriminate. The better able the firm is to charge different prices for different units of the same good to different consumers, the closer the quantity supplied will get to its optimal level, the more of its productive 'capacity' it will exploit.

Looking through the foregoing lenses, we can disentangle different dimensions that often are conflated in discussions of state capacity.[11] Consider, first, production technology. That aspect relates to the ability of the state to provide public goods and other services usually associated with "good governance" (e.g., defense, courts, policing and infrastructure). Doing so requires that the government have access to a trained bureaucratic body, a professional army, and a wide array of military tools. Consider the case of policing. In modern times, policing often has been left in the hands of civil society and market forces.[12] That happened only after the industrial revolution had led to a significant expansion in the standardization of consumer goods and factors of production, which. lowered the cost of centralized and publicly provided policing relative to its private, decentralized alternative. As standardization spread, so did the scope of the public sector's involvement in law enforcement, with the creation of public police forces and the evolution of the legal treatment of theft and fraud away from tort and towards the modern criminal system (Allen and Barzel 2009). Another important example of the effect of technology on the supply of governance is that of military innovation. Consider the introduction of cheap gunpowder and the cylindric cannon. That innovation strengthened drastically the effectiveness of besiegers against the besieged, as fortifications that had lasted hundreds of years were now collapsing after a few hours of cannonading. That innovation altered dramatically the optimal economies of scale in the provision of defense (Batchelder and Freudenberger 1983). On the offensive side, the spread of firearms made mass, trained, coordinated armies the dominant strategy in military affairs (Latzko 1993; Hendrickson et al. 2018).

Similar arguments apply to the 'price discrimination' dimension of state capacity. In order to extract surplus (that is, wealth) from its subjects, the ruler also must possess some kind of bureaucratic apparatus. In many ways, the same technology that allows the ruler to provide public goods will facilitate rent extraction. The same armed men employed in the enforcement of the law and the protection from foreign aggression are the ones who can use violence to force subjects to comply with the ruler's efforts toward wealth extraction. To that end, the ruler has an advantage over a private firm that enjoys some degree of market power, as it can use force to prevent or at least discourage arbitrage. The same bureaucracy that allows for the supply of public goods and other services also can collect the information necessary to assess the relative elasticities of different 'markets' for governance within its jurisdiction. For example, the technology used to implement 'demand-revealing processes' (Tideman and Tullock 1976) could at the same time help reveal a subject's willingness to pay, hence enhancing the state's ability to price discriminate.

Some classic examples of such technologies are alphabets, numerals, storage facilities, money and other instruments of public finance (Monson and Scheidel 2015). For instance, the very first 'fiscal states' were the city republics of late medieval and Renaissance Italy that, in the thirteenth and fourteenth centuries introduced a wide array of fiscal innovations

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[11] Salter (2018) uses a similar framework to study the development of the modern Prussian state under Fredrick II.

[12] See Friedman (1977) and Koyama (2012, 2014).

and sponsored censuses of land titles and values in order to reform the tax system (Zorzi 2004). Agricultural technologies likewise can affect a ruler's ability to extract wealth from the state's subjects. For example, crops differ in the degree to which the ruler or government agents can measure and appropriate agricultural output. Compared to tubers, more "appropriable" crops (like cereal grains) encourage rulers to invest in the necessary bureaucratic apparatus for large-scale wealth extraction (Mayshar et al. 2018).[13] Another example is given by Ekelund et al.'s (2002) treatment of the Catholic church during the pre-Reformation era.[14] The institution of the confessional, combined with the Church's extensive records of its members, and the relatively stable wealth distribution that characterized the period, allowed the Church to adjust the cost of access to its services (e.g., religious and non-religious goods, including some falling under the 'governance' umbrella) according to the faithful's willingness to pay.

Finally, the competitive aspect of state capacity can take multiple forms. The relevant literature has done much to further our understanding of one type of 'competitive pressure' faced by the ruler, namely, the potential challenge to the ruler's grip on power from domestic competitors. For example, Acemoglu and Robinson (2001, 2005) find that the threat of internal unrest is a major determinant of the choice, on the part of domestic elites, to invest in legal capacity and extend access to political rights and public goods to a larger share of the population. In North et al. (2009), political institutions and their evolution over time are explained by the fundamental fact that any society contains a multiplicity of actors and groups with the potential to use violence to capture wealth. As violence generates large losses for members of the elite as well as society as a whole, the elites would like to introduce institutions that minimize the likelihood of violent conflict so as to generate rents for themselves. Those rents will be available only as long as some degree of social order is in place, thus reducing the incentives to use force by actors with potential for violence. Once such institutions have emerged (what North et al. 2009 refer to as "natural state"), and a monopoly of the use of violence is in place, the elites will benefit from investing in the creation of a strong bureaucratic apparatus and the provision of public goods. Initially, access to those public goods, such as impartial legal procedures and property rights enforcement, will be reserved to members of the "ruling coalition", but as the benefits of a larger market increase, access will be extended to larger and larger portions of the general population.[15]

However, another important form of 'competitive pressure' has been underappreciated: the ability of other rulers within the same region to affect, through the introduction of policies and institutions, the elasticity of the demand a given ruler faces for the 'governance bundle' it supplies. In general, a ruler operating within a context characterized by many small sovereignties can be expected to face a more elastic demand curve for its services than otherwise. That conclusion is illustrated by the strategies of medieval and early modern rulers in the highly fractured lands of central Europe[16]:

[13] Scott (2017) argues that the very choice of what crops are and are not grown is endogenous to the threat of wealth capture.

[14] While the pre-Reformation Catholic Church was not exactly what people picture when they think of a modern state, neither was any other European sovereignty of the time. Indeed, the Church had the widest encompassing interest and taxing authority beyond the regional level of any sovereign outside of England (Ekelund et al. 1996; Leeson and Russ 2018).

[15] See Acemoglu and Wolitzky (2018) for an alternative theory of the extension of the rule of law to the broader population.

[16] On the effect of jurisdictional competition on public finance institutions in early modern Central Europe see Backhaus and Wagner (1987).

> If a prince extracted too much wealth from his subjects, subjects and their capital can, and did, seek better terms in a neighboring polity. Recognizing this practical reality, the cameralist writers advised princes to employ their own property holdings within the broader market in order to acquire resources, rather than impose on the market for extractive purposes. Taxation, on the whole, was viewed with suspicion, and cameralist writers advised princes to tax only in emergencies. This is astonishing because the maxims advised by the cameralist writers regarding taxation were more laissez-faire than the famous principles emphasized by Adam Smith, the father of economic liberalism! (Hendrickson et al. 2018, pp. 166–167)

The foregoing approach models the ruler as an economic firm operating within a peculiar market setting, namely, the market for governance. Each of the 'firms' in that market supplies a 'governance bundle' (enforcement of property rights, public goods, productive investment). In turn, the subjects pick under which ruler to live, or, what is the same thing, which 'governance bundle' to purchase. The choice will depend on both the value they assign to this bundle as well as the 'price' demanded by the ruler, where that 'price' is the value of its wealth a subject expects will be captured by the ruler.

The peculiarity of this market lies in the fact that rulers can affect the exit costs of the subjects. Hence, they always enjoy some degree of market power and the more market power they enjoy, the worse the contractual terms (tax rate, quality, and quantity of public goods and other services) that they will offer to the subjects.

Theories of jurisdictional competition have often been at the heart of social scientific explanations of the 'European miracle' (Jones 2003). The view is exemplified by Lopez's (1976, p. 26) claim that:

> Had the Carolingian Empire endured, Catholic Europe might perhaps have become a centralized, authoritarian, land-rooted monarchy combining Byzantine with Barbarian characteristics. It crumbled before the end of the ninth century, and the budding nations of the West were released to work their way up by trial and error, in an original key.

Models of interjurisdictional competition consider the behavior of a plurality of rational rulers or stationary bandits all operating within the same territory. Tiebout (1956) is the classic treatment of the effect of competitive forces on the behavior of revenue-maximizing rulers. The same logic has been extended to the analysis of "induced competition" systems (Weingast 1995). In those models, the extent of each ruler's encompassing interest is treated as given. Rulers are assumed to compete for tax revenues. Their optimal policy is determined by, among other variables, the exit costs of their subjects, the degree to which the latter are informed about their options, and the number of options available to them. Tiebout (1956) finds that, when those variables approximate the conditions of a competitive market for mundane commodities, the optimal behavior of the rulers also will coincide with those of competitive suppliers, and the overall outcome will be socially optimal.

Cox (2017) provides an application of the logic of Tiebout to the economic history of western Europe in the late middle ages. He argues that at the heart of the region's economic miracle is the interaction of Europe's fragmented political landscape and its peculiar political institutions. Thanks to that interaction, European merchants experienced exceptional degrees of economic freedom. According to him, interjurisdictional rivalry played a major role in the process. He argues that, by introducing pro-business reforms, local parliaments generated "spillover effects" leading neighboring rulers and assemblies to adopt similar policies in order to prevent outflows of economic activity.

Cox (2017) identifies control over mercantile routes in continental Europe as one important channel through which political fragmentation affects the incentives of princes and parliaments. Interregional trade in Western Europe was one of the fundamental engines of the commercial revolution of the late middle ages. The extent of the European market was expanded considerably by such trade. But in order for the market to operate, merchants (or their agents) from all corners of the continent had to travel across a multiplicity of jurisdictions. Local sovereigns were of course tempted to extract rents from the merchants. They were constrained in their efforts by the existence of alternative routes. If a ruler were to ask too heavy a toll for the crossing of his/her territory, merchants could opt to travel a different way, one in which rulers were less predatory in their demands. Such competition between rulers was guaranteed by the combination of the geography of Europe (with its many rivers, long coast, and plenty of lowlands) and its fractured political landscape.

The logic behind the foregoing result is straightforward. Consider the case of a ruler who, operating under the conditions above, decides to deviate from competitive behavior. One can imagine two such circumstances. The ruler might decide to supply a different bundle of public goods and services than the one desired by her subjects while keeping the tax rate fixed. Alternatively, she might supply the desired bundle but charge a higher tax rate. The latter would produce an immediate outflow of taxpayers until the ruler reverses course or is driven "out of business".

Naturally, the assumptions of the model are far from realistic. If the perfectly competitive equilibrium is unlikely to materialize itself in mundane markets (Hayek 1945), it is even less so when it comes to the market for governance (Acemoglu 2003). Perfect information is not a thing of this world; neither is costless exit. But the results of the model remain valuable in that they clearly identify a tendency at the margin. A ruler will tend not to adopt policies that drive subjects into the hands of other sovereigns.

The analysis of interjurisdictional competitive environments is complicated by the fact that rulers operate in a context of international anarchy (Spruyt 1994; Volckart 2002): they are the very enforcers of their own political property rights (Salter 2015). No formal or informal authority exists above them, no third party is available to enforce contracts among rulers or between rulers and their subjects. Thus, rulers must not take the extent of contestability they face as God-given and, to the extent that they can, they will take actions to reduce it. For example, rulers may implement policies that directly or indirectly raise subjects' exit costs, such as restrictions on labor and capital mobility. Propaganda and the spreading of nationalistic tendencies amongst citizens are other tools that can affect subjects' ability and/or desire to move to a different territory. Finally, rulers may resort to military conquest of neighboring territories to affect the elasticity of demand for their own services (Scott 2017).

Market-like competition is not the necessary outcome of interjurisdictional rivalry. Violent conflict also is a possibility, while the standard analysis of market competition assumes that possibility away (Hirshleifer 1994). The ability and willingness to use violence are the most fundamental characteristics of territorial states and thus warrants consideration. Nevertheless, the possibility of armed conflict does not undermine the relevance of market competition between sovereigns. Indeed, the two dimensions will most likely both play roles in equilibrium (Friedman 1977; Cowen 1990). Corner solutions are implausible. During a war, resources are allocated away from productive (and, what is most important from the point of the view of the ruler, taxable) activities. In the short run, resource reallocation reduces the ruler's inflow of tax revenues, while the damages caused by war, such as the destruction of physical and human capital, can reduce the productive potential of the

economy in the long run (Baumol 1990). Thus, the ruler will rely on conquest only up to the point where its expected benefits are matched by the expected losses in domestic revenues.

A similar argument can be made about a ruler's actions and policies aimed at reducing competitive pressures. Resources must be spent in order to create and maintain the bureaucratic and physical infrastructure required to implement the ruler's policies. Another way in which the regulatory apparatus can be costly to the ruler is by reducing the productivity of her subjects. For example, public policies might make the acquisition of technological innovation and knowhow harder. A subtler effect comes in the form of the distortion of investment decisions in human and physical capital, as the expected value of some such investments would decline when the subjects' ability to employ them beyond the ruler's territory also declines.

At the end of the day, neither the isolated stationary bandit nor the competitive model fully captures the dynamics that determine the optimal behavior of rulers or the resulting equilibrium. For the purpose of my discussion, the important result is that, at the margin, competitive forces affect the terms the ruler will offer to subjects in equilibrium (North 1979). Ceteris paribus, the stronger (weaker) the interjurisdictional rivalry faced by each individual ruler, the better (worse) those terms will be. Thus, the comparative statics of the equilibrium quality of governance within a given territory will depend, in part, on the elasticity of demand for the services offered by each sovereign.

The state capacity literature has generally focused on the first two dimensions above, the ability to provide public goods and that to extract revenues, over the third, the competitive pressures faced by a ruler. More importantly, the former two and the latter are seldom considered together, and little attention has been paid to the way in which they might affect one another. The implicit assumption is that these dimensions operate independently, which is to say, that changes in the ruler's ability to extract revenues and provide public goods, on the one hand, do not affect the degree of competitiveness it must face.

Figure 1 illustrates the basic logic of the argument. The vertical axis measures the 'capacity' (or technological ability) of the ruler to provide a given governance bundle to subjects. The horizontal axis measures the degree of competition faced by the same ruler. The convex curves represent the preferences of a representative subject over the terms of trade offered by the ruler. For a given level of capacity, the subject always prefers more jurisdictional competition to less, as the latter will force the ruler to supply its governance bundle on better terms. Similarly, for a given level of competition, the subject also prefers more capacity than less. A more 'capable' ruler will, if competitive pressures are not affected, also offer 'better terms', as he/she faces a larger encompassing interest in subjects' productivity. However, on the margin, subjects will prefer more competition to more capacity. That is because, at very high levels of state capacity, the ruler will be able to capture the entirety of the increase in productivity from investments in public goods and services, leaving the subject effectively indifferent.

However, multiple reasons can be found to doubt that the variables represented on the two axes in Fig. 1 actually are mutually independent. Scholars have identified a variety of channels through which the technology of governance may affect the vigor of interjurisdictional competition. Among them, economies of scale in the provision of public goods are particularly important. Alesina and Spolaore (1997) focus on the tradeoff between the benefits of larger political units and the costs of governing a more heterogeneous population. On the one hand, larger countries can take advantage of a lower average cost for the provision of purely national public goods. For example, they face lower costs in the provision of military defense (Batchelder and Freudenberger 1983; Volckart 2000), but also that

of a legal framework, standards of measurement, a medium of exchange, disaster prevention, and so forth (Jones 2003, p. 147). Such countries can more easily take advantage of division of labor and specialization as their citizens operate within a fully integrated market, free of duties or tariffs, and are more resilient to negative economic shocks. On the other hand, larger countries are more likely to have more heterogeneous populations. To the extent that population heterogeneity negatively affects the cost of public good provision, it also will affect (downward) the equilibrium sizes of nations.

Also relevant is the technology of wealth extraction available to the ruler. Once an apparatus for the estimation of the wealth generated by one's subjects is in place, the marginal cost of extending the apparatus's reach to new territories generally is low. A territorial state's very size can be expanded and/or reshaped in order to ease the ruler's extractive capability (Friedman 1977, pp. 61–62). Such economies of scale eventually are "counterbalanced by congestion and coordination problems" (Alesina and Spolaore 1997, p. 1028).[17] Ethnic and cultural heterogeneity, for example, increase the cost of public good provision, hence negatively affecting the economies of scale. Geographic characteristics also influence the calculus of the ruler (Jones 2003).

When a ruler's investment in state capacity is not technologically independent of the extent of contestability faced, the effect of investment on the optimal supply of governance becomes more complex than usually assumed in the state capacity literature. The overall effect ultimately will be determined by the specific channels through which the investment affects interjurisdictional competition.[18] One such channel is an increase in the subjects' exit costs, thus interfering with the Tiebout mechanism and weakening the ruler's incentive to provide favorable terms to the subjects. In the presence of economies of 'territorial scale', in equilibrium, an increase in state capacity will lead to fewer sovereignties, each of larger size, operating within a given territory. To the extent that exit costs are increasing functions of the sizes of the sovereignties, expansion will result in a less effective Tiebout mechanism (Bueno de Mesquita 2018, p. 5). That consequence is reinforced by the fact that fewer sovereignties operate within the same territory and 'market for governance'. The combination of an increase in the sizes of (and decline) in the number of sovereignties within a given region also affects the "yardstick" dimension of interjurisdictional competition. With fewer rulers, fewer independent 'decision nodes' will populate the system, which reduces the amount of experimentation, adaptation and filtering of policies and institutions.

Alesina and Reich's (2016) theory of 'nation-building' fits well the case of an investment in state capacity that is likely to affect both dimensions of the market for governance. One application of the theory focuses on the efforts of the ruling elite to reduce a nation's cultural diversity. In so doing, the elite endogenizes cultural homogeneity, one of the main determinants of the cost of providing public goods. Nation-building thus can be seen as a specific mechanism for the development of state capacity. Once investment in fiscal capacity has been undertaken, the ruler has an encompassing interest in investing in public goods. The cost of such provision is itself a function of subjects' homogeneity. Hence, it would expend resources into increasing the degree of homogeneity.

[17] With respect to congestion, nations face similar challenges as those identified in Buchanan's (1965) theory of clubs.

[18] In the context of Fig. 1, the effect would be represented by a leftward shift in the equilibrium value of competition following the upward shift in the value of capacity. If the former effect is large enough, the equilibrium terms of trade will lie on a less-preferred curve, in other words, a curve that is closer to the origin.

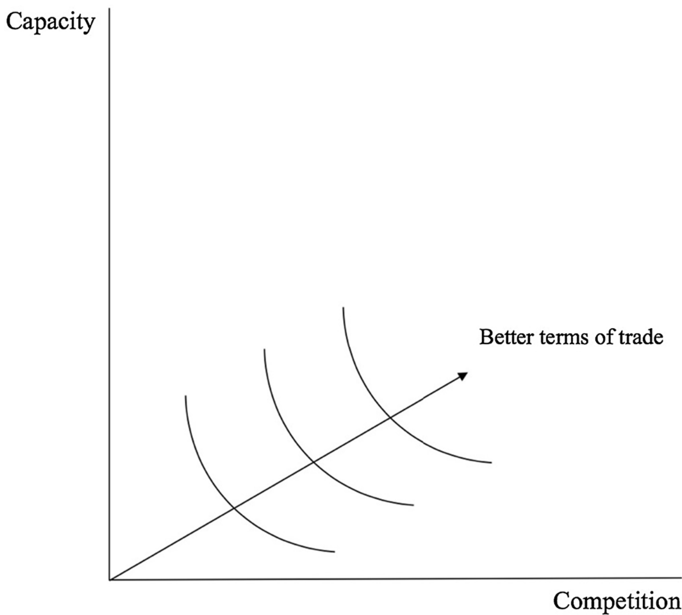

Fig. 1 Capacity and competition in the market for governance

Alesina and Reich (2016, p. 31) also see their argument as consistent with the results in Aghion et al. (2018), which predict that democracies will expand their nation-building efforts when threatened by foreign aggression. Seen through the lens of state capacity, that conclusion can be seen as resulting from two effects. First, foreign aggression increases investment in state capacity, which raises the profitability of investments in nation-building. Second, nation-building may reduce the cost of effective military defense. A large, highly hierarchical army is unlikely to be effective if soldiers do not speak the same language. Soldiers also will be more likely to follow orders and refrain from deserting if they feel some sense of common purpose with their superiors and comrades (Brennan and Tullock 1982).

Note that the foregoing discussion is very much related to the 'demand elasticity' issue. Alesina and Reich (2016, p. 3) define nation-building as "a process which leads to the formation of countries in which the citizens feel a sufficient amount of commonality of interests, goals and preference so that they do not wish to separate from each other." Nation-building has two effects. On the one hand, it reduces the social distance between a ruler's subjects. As they put it, lessened social distance leads subjects "not [to] wish to separate from each other", which effectively raises their exit costs and reduces the elasticity of their demands for governance. On the other hand, the social distance between the subjects of one ruler and those of another rises. As such, the benefits of the latter challenging the sovereignty of the former decline. For example, the French region of Languedoc-Rousillon had been culturally more similar to the Spanish region of Catalonia than to the rest of France before the French government's state-building efforts during the 19th century (Alesina and Reich 2016, pp. 23–24).

Alesina and Reich also point to the possibility that a more homogeneous population made elevated the likelihood of successful domestic challenge. They argue that weak

regimes (regimes with low levels of state capacity) may, by investing in nation-building, reduce the subject population's cost of organizing a coup or revolution.[19] Hence, such regimes will avoid investing in nation building and may indeed attempt to make their subjects more heterogeneous. Note that that possibility implies that, as more investments in state capacity are undertaken, nation-building becomes increasingly beneficial to the ruler. The prediction s consistent with the historical experience of Western European countries, which began their efforts in nation-building during the 19th century, alongside larger investments in fiscal capacity (Dincecco 2011).

If a ruler expects that his ability to extract wealth from subjects won't last long, the optimal strategy is to extract as much as possible in the short run. Investments in nation-building therefore are less privately beneficial to the ruler, who will then be less likely to undertake them. Indeed, Alesina and Reich (2016, p. 29) argue that such regimes will rely on a 'divide et impera' strategy instead, which is consistent with the historical experience of colonial powers in Africa and Latin America.

In order to predict with any degree of certainty what the net effect of the ruler's investment in state capacity will be, we need to know how those investments also affect the competitiveness of the market for governance and the ruler's degree of market power. Such factors as geography, culture, or technology may affect the behavior of different rulers differently. After having invested in state capacity, two rulers might find themselves enjoying more or less of market power. The one facing stronger pressure from the competition from other rulers will be keener to offer better terms to subjects than one who is more or less insulated from such forces.[20]

4 The problem of causality

The discussion in Sect. 3 argues that a ruler's decision to invest in the apparatus for extracting wealth and providing public goods and productive services, as well as the content of the 'governance bundles' supplied to the market for governance, will depend on the nature and degree of competition the ruler faces in the same market. One important contribution of the literature on state capacity was the identification of the factors likely to affect those variables. In particular, the focus has been on the role of the danger posed by internal and external threats to the ruler's hold on power. When internal turmoil is prevalent, rulers will tend to underinvest in the 'productive and protective state' as they expect not to be in power when the fruits of such investments come to fruition. On the other hand, when the polity is stable internally, but threatened by foreign aggressors, the ruler will invest resources in the creation of fiscal institutions that would allow the financing of territorial defense against incursions by outsiders (Besley and Persson 2010). An exogenous shock to the ruler's claim to sovereignty in the form of military aggression has here the unintended result of forcing the ruler to extend its encompassing interest in economic productivity. As

[19] On the economics of revolutions, see Tullock (1974).

[20] One potential example of the inverse relationship between state capacity and the quality of governance supplied by the ruler (or rulers) is that of Somalia after the collapse of its national government in 1991. In the decade that followed, Somalians' daily lives were governed by a mix of informal norms, traditional customs and local bands. While state capacity was almost non-existent during that period, Leeson (2007a) finds that the welfare of the local population rose under Somalian anarchy. The creation of a federal government in Somalia in 2012 signed the end of more of a decade of statelessness in the region.

a result, by the time the conflict has ended, the ruler's incentives to provide public goods and other services to its subjects are strengthened.

A growing number of scholars have employed the framework above to study the evolutions of political institutions and long-run economic performances, particularly in Western Europe and East Asia. Of particular importance is the attempt to identify empirically the effects of investments in state capacity on economic development. Consider the following examples. Building on their own model, Besley and Persson (2009) find that a measure of exposure to external military aggression in the past predicts current levels of fiscal capacity, which is in turn correlated highly with current economic performance. In a similar spirit, Dincecco and Onorato (2016) find that exposure to armed conflict predicts the sizes of urban populations in Western Europe, a popular proxy for economic performance in the pre-modern world (De Long and Shleifer 1993). In the case of East Asia, Koyama et al. (2018) find that the "little divergence" in state centralization between China (which grew less centralized) and Japan (which underwent a radical and rapid process of centralization) after 1850 was the result of the threats to their respective sovereignties by European powers under alternative geographical constraints.[21]

This evidence opens up the question of causality (Johnson and Koyama 2017, pp. 8–13), which is to say, whether the investments in state capacity that took place in Western Europe in the early modern period were responsible for the subsequent growth in productivity and standards of living in that region. In the case of Europe, the causal claim relies on the assumption that the large investments in state capacity that characterized its sovereignties were caused by Western Europe's history of frequent territorial conflicts (Dincecco and Wang 2018). Taking Europe's unique fractured political landscape and propensity for internecine warfare as exogenous, one can trace the trajectory of productivity in the region over the following decades back to the rulers' investments in state capacity in response to military threats.

That interpretation of the evidence would indeed be consistent with a scenario in which a wealth-maximizing ruler responds rationally to changing circumstances.[22] The sequence can be summarized as follows. Consider an initial equilibrium characterized by a relatively large number of sovereign rulers operating within a well-defined region. Each sovereign controls an equal territorial share, each containing the same number of (homogeneous) subjects. In every period, each ruler supplies the same 'governance bundle', which we assume to be characterized by weak fiscal and legal capacities, but also low levels of taxation.

This initial equilibrium is disturbed by an exogenous change in the technology of wealth extraction, one that makes that activity less costly. The change has two effects. First, by lowering the cost of domestic wealth extraction, it increases the rulers' encompassing interests in the productivities of their subjects. Second, by raising the value of territorial control, the benefits of expansionism rise. Because the original equilibrium was characterized by low levels of state capacity, the political property rights of the rulers are imperfect and incomplete, implying that some land (as well as the assets it contains) originally had been left in the public domain (Barzel 2002). As the exogenous shock lowers the cost of wealth extraction, rulers will invest more resources in invest in capturing wealth. With more conflict comes the need for military defense, which in turn requires control over a larger share

[21] The more homogeneous Japan faced a lower cost of centralization than the more diverse China.

[22] Geloso and Salter (2018) provide an alternative, though compatible, criticism of standard arguments about the relationship between conflict, investment in state capacity, and long-run economic performance.

of domestic resources, which also eventually increases the rulers' encompassing interests in their subjects' productivities. Following the logic of the state capacity argument, at the end of this process, the new equilibrium will be characterized by the supply of 'governance bundles' containing more expenditures on public goods, but also increases in the rulers' consumption of the region's output, where that output now also is higher owing to better enforcement of the subjects' property rights.

However, a second scenario illustrates that no unequivocal relationship exists between increases in state capacity and economic performance. This second scenario is analytically analogous to the one identified by Demsetz (1967) in his study of the property rights institutions of the Montagnes people in the Labrador Peninsula during the seventeenth and eighteenth centuries. Among the Montagnes, land historically had been in the public domain and access to it was regulated by custom. While that configuration of property rights likely generated the standard external diseconomies caused by overhunting, the magnitude of those effects was relatively minor because of the costs of enforcing private property claims in a subsistence economy. Things changed with the rise of the Atlantic trade. The European demand for fur acted as an exogenous shock to the value of the resource. What before constituted negligible harm to game hunters now became a serious problem. Under the existing common property regime, the incentives introduced by the European demand for fur would have led to the rapid exhaustion of valuable resource. The Montagnes responded efficiently to the change in circumstances and transitioned rapidly to a new regime characterized by private property rights to land and, what is more important, to the fur-bearing game that inhabited it.

Consider once again the original equilibrium. As before, delineating and enforcing the sovereigns' political property rights being costly, at low levels of subjects' productivity it is efficient to leave some valuable assets in the public domain (Barzel 1997). In a development entirely independent of the sovereigns' behavior, the subjects' productivity suddenly increases owing to the discovery of a new market. That change affected the benefit of enforcing and defining the political property rights of the sovereign, which takes the form of investments in state capacity, including military capacity. Thus, according to the alternative scenario, the increase in state capacity is a response to an increase in the productivity of the economy and not the reverse. The explanation does not preclude the possibility that the increase in state capacity might have a secondary effect on the productivity of the economy, which is, in fact, consistent with the framework. But it does raise doubts about the idea of interpreting increases in the pervasiveness of military conflict as exogenous to changes in the underlying productivity of the economy.

Any detailed historical application of the alternative framework would be beyond the scope of this review. All historical processes, the cliché goes, are complex and multicausal. Identifying whether any specific case of an increase in state capacity caused or was caused by a rise in the productivity of the economy necessarily requires careful historical analysis and sophisticated empirical techniques. Such an effort is complicated even more by the possibility of virtuous cycles. An increase in productivity may lead to investments in state capacity, which in turn may lead to a further increase in productivity, and so forth.

Nevertheless, a brief sketch of a case study seen through the lens of the above framework can serve illustrative purposes. Within the broader context of a developing urban and mercantile European society during the late Middle Ages, the Italian cities of Florence, Genoa, Milan, Siena and Venice (but also Bologna, Padua, Pisa, Verona and others) were among the richest and most dynamic. Starting in the tenth century, those cities emerged as regional and soon international nodes in the growing Mediterranean and European markets (Lopez 1976). The case of Florence is representative of the other major Italian

trading centers. Between 1175 and 1300, the city's population grew more than tenfold, from 10,000 to 105,000. Similarly, the urbanization rate for the whole region increased from 10 to 29% over the same period (Day 2002, p. 120). For premodern economies, urban population growth and urbanization rates are close proxies for economic productivity. The rapid and dramatic increases in the productivity of the Italian city-states seems confirmed by the development, in the same region, of innovative economic and financial institutions to facilitate commerce (Lopez 1976; Greif 2000). As the economies of central and northern Italy were becoming more productive, its cities began competing militarily with one another for the control of larger and larger territories. Even Venice, which had for centuries focused its military efforts on controlling commercial routes to the East, started to expand its influence on neighboring lands (Lane 1973). Through military conquest, by the second half of the fourteenth century, all of the major Italian communes had evolved into regional territorial states with sophisticated fiscal institutions and high levels of administrative capacity (Martines 1988, p. 175).

Another relevant case study could focus on colonial policy in the northern and southern halves of the American continent. Acemoglu et al. (2001) find that environmental factors affected the decisions of European colonists to migrate. Where climate and the absence of diseases allowed large inflows of European settlers, colonial powers adopted what the authors refer to as "inclusive institutions". Where these conditions were not met, colonial powers instead opted for "extractive institutions", such as slavery and autocratic politics. In the terminology of state capacity, inclusive institutions require substantial fiscal and legal capacity, while extractive institutions rely on investments in short-term predation (Batchelder and Sanchez 2013). Acemoglu et al. (2001) explain those discrepancies as being the result of European settlers' abilities effectively to demand better institutions from their homeland governments. My framework suggests an alternative—though not incompatible—hypothesis. The colonial governments invested in state capacity in those regions where, owing to environmental and geographic factors, more European settlers (with their relatively high levels of human capital) had migrated and where, therefore, long-run productivity was expected to be higher.[23]

The behavior of proto-governments like street gangs provides further evidence of the relationship between productivity, conflict and governance, although admittedly on smaller scales. Bueno de Mesquita (2018, p. 1) refers to the conflicts between Chicago street gangs in 2012 as the result of their attempts to "access territorial rents". American motorcycle gangs went through similar experiences during the 1970s and 1980s, the era of the so-called 'biker-wars'. The rapid increase in the profitability of distributing illicit drugs after the 1960s led local motorcycle gangs such as the Hells Angels and the Outlaws to enter the industry. Soon, in their attempt to monopolize larger and larger regional markets, the groups began fighting for territorial control. In response to the rise in violent conflict, the gangs adopted more hierarchical organizational structures, invested in the ability to tax members and to mobilize resources towards the defense of their respective territories (Piano 2017).

[23] O'Brien's (2011) study of the evolution of the English fiscal regime between the 17th and early 19th centuries suggests that the framework also could explain some aspects of the rise of a high-state capacity regime in England. According to O'Brien (2011, p. 420), the transformation of the pre-Commonwealth English economy had encouraged the rise of a fiscal state, as the development of "[l]arger and denser zones of production, together with established and regular circuits for distribution and exchange" facilitated tax collection by the English government.

5 Conclusion

This paper provides a look at the literature on state capacity from a public choice perspective. Its motivation lies in the belief that public choice theory can offer important insights into our understanding of the development of modern, creative, functional economies. Public choice theory focuses on the incentives faced by political actors, how political institutions frame those incentives, and how rational agents respond to them over time.

I identify some potential avenues for the further integration of public choice theory in the literature on the development of state capacity. First, is development of a general framework for the study of ruler's optimal decision-making. A more sophisticated (though still 'economical') approach would try to identify the interaction of such variables as political property rights, bureaucratic and administrative capacity, and interjurisdictional competition. Once this interaction is taken into consideration, the relationship between state capacity and a ruler's 'supply of governance' appears less straightforward then usually thought of. This framework also accounts for historical cases that seem to defy the logic of standard theories of state capacity, such as when an increase in the latter lead to worse 'terms of trade' in the market for governance.

Second, I argue that a more thorough consideration of rulers' motivations and incentives would lead one to question the standard interpretation of the relationship between conflict between sovereigns, investment in state capacity, and economic performance. Basic economics suggests that an increase in the productivity of the economy will lead, at low level of state capacity, to more intense conflict between sovereigns for the control of this more valuable tax-base. Hence, hypotheses that rely on conflict between rulers as a exogenous shock on the equilibrium investment on state capacity are likely to misidentify the latter's causal effect on long-run productivity in the region.

Given the historical experience of the rise of high-productivity economies in the western world over the past 300 years, it is of foremost importance to incorporate the principles of public choice in studies of the evolution of the institutions that steered political actors toward introducing policies that, if not favoring it, did not discourage the productive engine of the market.

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References

Acemoglu, D. (2003). Why not a political Coase theorem? Social conflict, commitment, and politics. *Journal of Comparative Economics, 31*(4), 620–652.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review, 91*(5), 1369–1401.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. In P. Aghion & S. Durlauf (Eds.), *Handbook of economic growth* (Vol. 1, pp. 385–472). Amsterdam: Elsevier.

Acemoglu, D., & Robinson, J. A. (2001). A theory of political transitions. *American Economic Review, 91*(4), 938–963.

Acemoglu, D., & Robinson, J. A. (2005). *Economic origins of dictatorship and democracy*. Cambridge: Cambridge University Press.

Acemoglu, D., & Wolitzky, A. (2018). A theory of equality before the law. *National Bureau of Economic Research*.

Acharya, A. & Lee, A. (2018). Economic foundations of the territorial state system. *American Journal of Political Science*, forthcoming.

Aghion, P., Jaravel, X., Persson, T., & Rouzet, D. (2018). Education and military rivalry. *Journal of the European Economic Association*, forthcoming.

Alesina, A., & Reich, B. (2016). Nation-building, *National Bureau of Economic Research.*

Alesina, A., & Spolaore, E. (1997). On the number and size of nations. *Quarterly Journal of Economics, 112*(4), 1027–1056.

Allen, D. W., & Barzel, Y. (2009). The evolution of criminal law and police during the pre-modern era. *The Journal of Law, Economics, and Organization, 27*(3), 540–567.

Backhaus, J., & Wagner, R. E. (1987). The cameralists: A public choice perspective. *Public Choice, 53*(1), 3–20.

Bardhan, P. (2016). State and development: The need for a reappraisal of the current literature. *Journal of Economic Literature, 54*(3), 862–892.

Barzel, Y. (1997). *Economic analysis of property rights*. Cambridge: Cambridge University Press.

Barzel, Y. (2002). *A theory of the state: economic rights, legal rights, and the scope of the state*. Cambridge: Cambridge University Press.

Batchelder, R. W., & Freudenberger, H. (1983). On the rational origins of the modern centralized state. *Explorations in Economic History, 20*(1), 1.

Batchelder, R. W., & Sanchez, N. (2013). The encomienda and the optimizing imperialist: an interpretation of Spanish imperialism in the Americas. *Public Choice, 156*(1–2), 45–60.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy, 98*((5 Part 1)), 893–921.

Besley, T. (2007). The new political economy. *Economic Journal, 117*(524), F570–F587.

Besley, T. (2011). Pathologies of the state. *Journal of Economic Behavior and Organization, 80*(2), 339–350.

Besley, T., & Coate, S. (1997). An economic model of representative democracy. *Quarterly Journal of Economics, 112*(1), 85–114.

Besley, T., & Persson, T. (2008). Wars and state capacity. *Journal of the European Economic Association, 6*(2–3), 522–530.

Besley, T., & Persson, T. (2009). The origins of state capacity: Property rights, taxation, and politics. *American Economic Review, 99*(4), 1218–1244.

Besley, T., & Persson, T. (2010). State capacity, conflict, and development. *Econometrica, 78*(1), 1–34.

Besley, T., & Persson, T. (2013). Taxation and development. *Handbook of public economics* (Vol. 5, pp. 51–110). Amsterdam: Elsevier.

Boettke, P. J., & Piano, E. E. (2019). Public choice and libertarianism. In R. Congleton, B. N. Grofman, & S. Voigt (Eds.), *The Oxford handbook of public choice*. Oxford: Oxford University Press.

Bonney, R. (1995). *Economic systems and state finance: The origins of the modern state in Europe 13th to 18th centuries*. Oxford: Oxford University Press.

Brennan, G., & Buchanan, J. M. (1980). *The power to tax: Analytic foundations of a fiscal constitution*. Cambridge: Cambridge University Press.

Brennan, G., & Tullock, G. (1982). An economic theory of military tactics: Methodological individualism at war. *Journal of Economic Behavior and Organization, 3*(2–3), 225–242.

Buchanan, J. M. (1965). An economic theory of clubs. *Economica, 32*(125), 1–14.

Buchanan, J. M. (1987). The constitution of economic policy. *The American Economic Review, 77*(3), 243–250.

Bueno de Mesquita, E. D. (2018). Territorial conflict and endogenous rents. *The Journal of Politics*, forthcoming.

Candela, R., & Geloso, V. (2018). *Trade or raid: Acadian settlers and native Indians Before 1755*. Working paper.

Cowen, T. (1990). Economic effects of a conflict-prone world order. *Public Choice, 64*(2), 121–134.

Cox, G. W. (2017). Political institutions, economic liberty, and the great divergence. *The Journal of Economic History, 77*(3), 724–755.

Day, W. R., Jr., (2002). The population of Florence before the Black Death: survey and synthesis. *Journal of Medieval History, 28*(2), 93–129.

De Long, J. B., & Shleifer, A. (1993). Princes and merchants: European city growth before the industrial revolution. *The Journal of Law and Economics, 36*(2), 671–702.

Demsetz, H. (1967). Toward a theory of property rights. *American Economic Review, 62,* 347–359.

Dincecco, M. (2011). *Political transformations and public finances: Europe, 1650–1913*. Cambridge: Cambridge University Press.

Dincecco, M. (2015). The rise of effective states in Europe. *The Journal of Economic History, 75*(3), 901–918.

Dincecco, M., & Onorato, M. G. (2016). Military conflict and the rise of urban Europe. *Journal of Economic Growth, 21*(3), 259–282.

Dincecco, M., & Wang, Y. (2018). Violent conflict and political development over the long run: China versus Europe. *Annual Review of Political Science, 21,* 341–358.

Dittmar, J., & Meisenzahl, R. R. (2016). *State capacity and public goods: Institutional change, human capital, and growth in early modern Germany*. Working paper.

Ekelund, R. B., Jr., Hébert, R. F., & Tollison, R. D. (2002). An economic analysis of the Protestant Reformation. *Journal of Political Economy, 110*(3), 646–671.

Ekelund, R. B., Tollison, R. D., Anderson, G. M., Hébert, R. F., & Davidson, A. B. (1996). *Sacred trust: The medieval church as an economic firm*. Oxford: Oxford University Press.

Friedman, D. (1977). A theory of the size and shape of nations. *Journal of Political Economy, 85*(1), 59–77.

Geloso, V., & Salter, A. W. (2018). *State capacity and economic development: Causal mechanism or correlative filter?* Working paper.

Greif, A. (2000). The fundamental problem of exchange: A research agenda in historical institutional analysis. *European Review of Economic History, 4*(3), 251–284.

Hayek, F. A. (1945). The use of knowledge in society. *The American Economic Review, 35*(4), 519–530.

Hendrickson, J. R., Salter, A. W., & Albrecht, B. C. (2018). Preventing plunder: Military technology, capital accumulation, and economic growth. *Journal of Macroeconomics*, forthcoming.

Hirshleifer, J. (1994). The dark side of the force. *Economic Inquiry, 32*(1), 1–10.

Johnson, N. D., & Koyama, M. (2014a). Tax farming and the origins of state capacity in England and France. *Explorations in Economic History, 51,* 1–20.

Johnson, N. D., & Koyama, M. (2014b). Taxes, lawyers, and the decline of witch trials in France. *The Journal of Law and Economics, 57*(1), 77–112.

Johnson, N. D., & Koyama, M. (2017). States and economic growth: Capacity and constraints. *Explorations in Economic History, 64,* 1–20.

Jones, E. (2003). *The European miracle: Environments, economies and geopolitics in the history of Europe and Asia*. Cambridge: Cambridge University Press.

Koyama, M. (2012). Prosecution associations in industrial revolution England: Private providers of public goods? *The Journal of Legal Studies, 41*(1), 95–130.

Koyama, M. (2014). The law and economics of private prosecutions in industrial revolution England. *Public Choice, 159*(1–2), 277–298.

Koyama, M., Moriguchi, C., & Sng, T. H. (2018). Geopolitics and Asia's little divergence: A comparative analysis of state building in China and Japan after 1850. *Journal of Economic Behavior and Organization*, forthcoming.

Kurrild-Klitgaard, P., & Svendsen, G. T. (2003). Rational bandits: Plunder, public goods, and the Vikings. *Public Choice, 117*(3–4), 255–272.

Lane, F. C. (1973). *Venice: A maritime republic*. Baltimore: JHU Press.

Latzko, D. A. (1993). The Concept of "Military Economies of Scale". *Explorations in Economic History, 30*(4), 470–484.

Leeson, P. T. (2007a). Better off stateless: Somalia before and after government collapse. *Journal of Comparative Economics, 35*(4), 689–710.

Leeson, P. T. (2007b). Efficient anarchy. *Public Choice, 130*(1–2), 41–53.

Leeson, P. T. (2009). The laws of lawlessness. *The Journal of Legal Studies, 38*(2), 471–503.

Leeson, P. T. (2012). Ordeals. *The Journal of Law and Economics, 55*(3), 691–714.

Leeson, P. T., & Russ, J. W. (2018). Witch trials. *The Economic Journal, 128*(613), 2066–2105.

Leeson, P. T., & Williamson, C. R. (2009). Anarchy and development: An application of the theory of second best. *The Law and Development Review, 2*(1), 77–96.

Lopez, R. S. (1976). *The Commercial revolution of the Middle Ages* (pp. 950–1350). Cambridge: Cambridge University Press.

Martin, A. G., & Ruhland, J. (2018). *Politics as exchange in the Byzantine Empire*. Working paper.

Martines, L. (1988). *Power and imagination: City-states in Renaissance Italy*. London: Taylor & Francis.

Mayshar, J., Moav, O., Neeman, Z., & Pascali, L. (2018). *The emergence of hierarchies and states: Productivity vs. appropriability*. Working paper.

McBride, M., Milante, G., & Skaperdas, S. (2011). Peace and war with endogenous state capacity. *Journal of Conflict Resolution, 55*(3), 446–468.

McGuire, M. C., & Olson, M. (1996). The economics of autocracy and majority rule: the invisible hand and the use of force. *Journal of Economic Literature, 34*(1), 72–96.

Monson, A., & Scheidel, W. (Eds.). (2015). *Fiscal regimes and the political economy of premodern states*. Cambridge: Cambridge University Press.
North, D. C. (1979). A framework for analyzing the state in economic history. *Explorations in Economic History, 16*(3), 249–259.
North, D. C., & Thomas, R. P. (1973). *The rise of the western world: A new economic history*. Cambridge: Cambridge University Press.
North, D. C., Wallis, J. J., & Weingast, B. R. (2009). *Violence and social orders: A conceptual framework for interpreting recorded human history*. Cambridge: Cambridge University Press.
North, D. C., & Weingast, B. R. (1989). Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England. *The Journal of Economic History, 49*(4), 803–832.
O'Brien, P. (2011). The nature and historical evolution of an exceptional fiscal state and its possible significance for the precocious commercialization and industrialization of the British economy from Cromwell to Nelson. *The Economic History Review, 64*(2), 408–446.
Olson, M. (1993). Dictatorship, democracy, and development. *American Political Science Review, 87*(3), 567–576.
Piano, E. E. (2017). Free riders: The economics and organization of outlaw motorcycle gangs. *Public Choice, 171*(3–4), 283–301.
Powell, B., & Stringham, E. P. (2009). Public choice and the economic analysis of anarchy: A survey. *Public Choice, 140*(3–4), 503–538.
Riker, W. H. (1990). *Political science and rational choice. Perspectives on positive political economy* (pp. 163–181). Cambridge: Cambridge University Press.
Salter, A. W. (2015). Sovereignty as exchange of political property rights. *Public Choice, 165*(1–2), 79–96.
Salter, A. W. (2018). *Private prerogative, public purpose: Public entrepreneurship and management in frederick the Great's Anti-Machiavel*. Working paper.
Salter, A. W., & Young, A. T. (2018). Polycentric sovereignty: The medieval constitution, governance quality, and the wealth of nations. *Social Science Quarterly*, forthcoming.
Schulze, W. (1995). The emergence and consolidation of the "tax state": The sixteenth century. In R. Bonney (Ed.), *Economic systems and state finance. The origins of the modern state in Europe 13th to 18th centuries* (pp. 261–280). Oxford: Oxford University Press.
Scott, J. C. (2017). *Against the grain: A deep history of the earliest states*. New Haven: Yale University Press.
Shughart, W. F. (2018). Gordon Tullock's critique of the common law. *The Independent Review, 23*(2), 209–227.
Spruyt, H. (1994). Institutional selection in international relations: state anarchy as order. *International Organization, 48*(4), 527–557.
Stasavage, D. (2002). Credible commitment in early modern Europe: North and Weingast revisited. *Journal of Law Economics and Organization, 18*(1), 155–186.
Stasavage, D. (2011). *States of credit: Size, power, and the development of European polities* (Vol. 35). Princeton: Princeton University Press.
Tideman, T. N., & Tullock, G. (1976). A new and superior process for making social choices. *Journal of Political Economy, 84*(6), 1145–1159.
Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy, 64*(5), 416–424.
Tilly, C. (1990). *Coercion, capital, and European states, AD 990*. Cambridge: Basil Blackwell.
Tullock, G. (1974). *The social dilemma: The economics of war and revolution*. Blacksburg: University Publications.
Vahabi, M. (2011). Appropriation, violent enforcement, and transaction costs: A critical survey. *Public Choice, 147*(1–2), 227–253.
Volckart, O. (2000). State building by bargaining for monopoly rents. *Kyklos, 53*(3), 265–291.
Volckart, O. (2002). No utopia: Government without territorial monopoly in medieval central Europe. *Journal of Institutional and Theoretical Economics, 158*(2), 325–343.
Weingast, B. R. (1995). The economic role of political institutions: Market-preserving federalism and economic development. *Journal of Law, Economics, and Organization, 11*(1), 1–31.
Young, A. T. (2015). From Caesar to Tacitus: Changes in early Germanic governance circa 50 BC-50 AD. *Public Choice, 164*(3–4), 357–378.
Young, A. T. (2016). What does it take for a roving bandit settle down? Theory and an illustrative history of the Visigoths. *Public Choice, 168*(1–2), 75–102.
Zorzi, A. (2004). The popolo. In J. M. Najemy (Ed.), *Italy in the Age of the Renaissance: 1300–1550*. Oxford: Oxford University Press.

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