

THE ORIGINS OF THE STATE'S INSTITUTIONAL CAPACITY.*

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Abstract

We develop and test a theory of the state's institutional capacity, which is the elites' ability to garner the non-elites' cooperation in joint investments via public good provision. Notably, the elites can entice the non-elites by enacting either an inclusive political process, which grants them the power to select the tax rate and their preferred public good, or an inclusive fiscal regime, which prescribes that compromise fiscal policies are chosen. Both a smaller investment return and a larger non-elites' outside option make it more necessary to embrace inclusive institutions to support cooperation. These predictions are consistent, across identification strategies, with the negative links between measures of the inclusiveness of the political process and the degree of non-elites' control over fiscal policies and proxies for both long-distance trade potential and the strength of the non-elites' culture of cooperation in a panel of 90 European historical regions spanning the 1000-1600 period. *Keywords:* State's fiscal capacity; political institutions; trade potential; culture. *JEL classification:* H10; O13; Z10; O10.

“Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things.” Adam Smith, *The Theory Of Moral Sentiments*, p. 86.

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1 Introduction

Although social scientists have usually taken for granted the very fabric of the state and, in particular, its institutional capacity to provide public goods to support economic cooperation, such an assumption is inaccurate for many societies, both historically and in today’s developing world (North et al., 2009). To shed light on this issue, a recent literature has inquired into the drivers of the state’s institutional capacity and has concluded that, across countries and as far back as the Ancien Régime, it is related to more inclusive political institutions and a more intense warfare (Besley and Persson, 2009; Dincecco, 2009; Karaman and Pamuk, 2013; Gennaioli and Voth, 2015; Stasavage, 2016; de Oliveira and Guerriero, 2018; Schönholzer and Weese, 2021; Huning and Wahl, 2023; Cantoni et al., 2024; Cox et al., 2024; 2025; Becker et al., 2025). Documenting, however, that these factors reinforce one another and are persistent does not help identify their single role.

To clarify the complex interplay among the inclusiveness of the political process, the state’s fiscal capacity and the extent of economic cooperation, we develop a “time-inconsistency” theory of the determinants of the “state’s institutional capacity,” which is the elites’ ability to garner the non-elites’ cooperation in joint investments via public good provision, and we test its empirical predictions on the vast institutional revolution that shook Europe between 1000 and 1600. With the opening of the second millennium, the feudal lords started to cooperate with a rising class of merchants engaged in reestablishing long-distance trade over the Mediterranean first and the Atlantic then. Where, moreover, the trade potential was more limited, the magnates found it more necessary to relinquish some political and fiscal power to gain credibility as investment partners. As a result of these epochal institutional discontinuities, the allocation of tax revenues shifted from financing military and/or royal expenses to securing trade routes. Once the long-distance trade networks had become sufficiently dense, the elites strove to reacquire their control over policy-making.

Our model builds on Boranbay and Guerriero (2019) and Benati et al. (2022) and studies the possible cooperation between an “elite” and a “non-elite” in a joint investment, i.e., a long-distance trade. This activity delivers a positive output only if the non-elite incurs a costly investment, and the value of the output is larger the more favorable are the production

conditions, e.g., the larger is the trade potential. The elite keeps the untaxed output and cannot entice the non-elite by either punishing him or committing to direct transfers.¹ She can, however, lean on either one of two other instruments. She can either grant the non-elite a more inclusive political process, which allows him to select the tax rate and his preferred public good (Fleck and Hanssen, 2006; Blanton and Fargher, 2016), or enact an inclusive fiscal regime (Levi, 1988; McCubbins et al., 1987). Under this last institution, the prevailing tax rate is bargained between the two groups and a compromise public good is produced.

When the investment return is small—but not too limited to forbid production, cooperation can only be attained under the inclusive political institution and full taxation. When it is intermediate, the elite garners the non-elite’s cooperation by picking the inclusive fiscal regime and partial taxation might prevail. When the investment return is large, the elite keeps control over fiscal policies and selects partial taxation whenever possible. Regardless of the size of the investment return, the larger is the non-elite’s outside option, the more necessary more inclusive institutions are to support cooperation when autocracy cannot.

We evaluate the main model implications by analyzing 90 historical regions, part of 16 present-day European countries, on which we have sufficient data for each half-century between 1000 and 1600. This sample offers substantial variation on economies sufficiently simple to allow us to credibly relate investment-specific factors to institutional evolution. Given that the most relevant joint investment activity was trading over long-distance (Boranbay and Guerriero, 2019), we capture its return with a measure of trade potential obtained from a naive gravity trade model. This proxy is defined as the sum of all the urban potentials of the main cities in each historical regions, each of which, in turn, equals the distance-weighted sum of the sizes in 100,000 inhabitants of the city’s relevant trade partners. Turning to the inclusiveness of the political process, we rely on a dummy for substantial constraints on the elites’ decision-making power based on the events within a 40-year window around each time period (Boranbay and Guerriero, 2019). Regarding the strength of the state’s fiscal capacity, we build on the literature on the selection, collection and use of the main levies imposed over our sample, i.e., taxes on personal and real property, feudal aids and custom duties.

As detailed in the Internet appendix, the levies on personal and real property were the

¹We refer to the elite as “she”, to the non-elite as “he” and to a generic party as “it.”

most heterogeneous category and included repartition taxes, duties with a fixed rate such as the fifteenth and the tenth in 13th century England and progressive taxes such as the *estimo*, *cadastre*, and *compoix*. The degree of inclusiveness of the process overseeing the levy of these duties ranged from the fully centralized imposition on all the territories annexed by an historical region of the same tax rate—i.e., *matrikel* and *vermögensteuern* in the 15th century Holy Roman Empire—to the fully decentralized fiscal organization of chartered communes and cities. The allotment system was an intermediate option whereby the magnates selected the total tax revenues to raise, whereas the local communities decided the object and rate of the prevailing tax, e.g., *tailles* in 13th and 14th century France. In a similar manner, the feudal lords contracted with cities and local communities the feudal aids—i.e., use, passage and lodging rights, gifts, judicial fines, military duties and certain forms of monopoly—and the customs, which were fixed rate duties imposed on traded goods.²

Based on the events within a 40-year window around each time period and for each type of levy, each historical region and each half-century, we construct a one to four indicator increasing with the intensity of the participation of local representatives in the design of fiscal policies and four dummies for whether, respectively, a sizable part of the population was partially exempted from taxation, the tax rate varied across localities, the tax revenues were gathered by local tax farmers, and they financed also local public goods and, not only, military and/or royal expenses. Intuitively, the adoption of these fiscal institutions strengthened the non-elites’ incentives to cooperate in joint investments with the elites since they allowed the former to participate in the design of the fiscal policies, to be exempted in the face of large negative shocks such as the conflicts hitting peripheral localities, to shape local tax rates, to be involved in tax collection, and to obtain their preferred public good. To capture the underlying unobserved “state’s fiscal capacity” dimension, we also construct a synthetic measure, which is obtained as the normalized—to range between 0 and 1—first principal component extracted from all the five aforementioned indicators.

Conditional on levy, historical region and half-century fixed effects, OLS estimates suggest

²A fourth type of levy was the poll tax, which was also known as head tax or capitation and was imposed as a lump sum on every liable individual. This duty, however, was rarely employed and was eventually substituted by the taxes on personal and real property (Bonney, 1999). On the contrary, the reliance on public debt intensified over the sample and, thus, we incorporate the forced loans among the duties on personal and real property. Their size was fixed by a bargaining between elites and non-elites (Bonney, 1995; 1999).

that inclusive political institutions and a stronger state’s fiscal capacity are found in regions displaying a limited trade potential. Even if these results are consistent with the central prediction of the model, they might be attenuated by measurement errors, they may be capturing reverse causality and/or they might be driven by unobserved heterogeneity.

We evaluate these issues in turn. First, we obtain similar results when we deal with measurement errors by considering alternative proxies for dependent and independent variables.

Second, inclusive political and fiscal institutions are unrelated to future values of the proxy for the long-distance trade potential. Given the plausible lag with which institutions shape long-distance trades, this evidence is inconsistent with the possibility that the former are driving the latter and not the other way around (Angrist and Pischke, 2009).

Finally, our focus on medieval Europe rules out that our results are spuriously produced by region-specific features of the European colonization, i.e., colonizers’ institutional strategy (Acemoglu et al., 2001), intensity of missionary activities (Nunn, 2010), and relevance of slavery (Nunn and Wantchekon, 2011). We cannot, however, exclude that other unobservable factors are biasing our estimates. To evaluate this issue, we follow a three-step strategy. First, we control for the other key determinants of the state’s institutional capacity, i.e., strength of a culture of cooperation proxied by the activity of Cistercian and Franciscan houses (Boranbay and Guerriero, 2019), severity of external and internal conflicts (Besley and Persson, 2009; Acemoglu and Robinson, 2000), degree of economic circumscription as captured by the ratio of the historical region’s trade potential to its average over neighboring historical regions (Carneiro, 1970), degree of urbanization (Inglehart and Welzel, 2005) and, in the Internet appendix, the return on farming and the severity of the Black Death (Voigtländer and Voth, 2009). Considering these observable factors leaves our results almost intact and confirms that a larger non-elites’ outside option, as captured by a weaker non-elites’ culture, is related to inclusive political institutions and a stronger state’s fiscal capacity. To illustrate, weaker norms of cooperation reduce the possibility that the non-elites are exploited in alternative risk-sharing activities and, thus, increase their outside option (Boranbay and Guerriero, 2019). Second, we calculate how much greater the influence of unobservables, relative to that of all the main observables, would need to be to explain away the links between our proxy for trade potential and institutions. We find that it would have

to be on average more than eight times greater than the influence of all main observables, which seems unlikely. Finally, we show that our conclusions are the same when we employ as excluded instrument for trade potential the exogenous fall in the ease of the neighboring historical regions’ access to key trade hubs driven by the opening of the Atlantic routes and captured by their average inverse distance to Istanbul and Alexandria between 1000 and 1350 and Havana and Cape Town otherwise. Conditional on fixed effects, the historical region’s ease of access to key hubs, its direct access to the most commercially-relevant sea—i.e., Mediterranean between 1000 and 1350 and Atlantic otherwise—and that of the neighboring historical regions, it is unlikely that such an instrument might impact the historical region’s institutions via channels different from its exogenous—and strong—effect on trade potential.

Ultimately, these robustness checks make it difficult to envision that our estimates are driven by mechanisms different from those we model. Accordingly, we take these extra results as consistent with causality running from trade potential to political and fiscal institutions.

Our paper is closely related to three main strands of the vast literature on the formation of the state’s institutional capacity. First, we share with North and Weingast (1989), Barzel and Kiser (1991), Myerson (2008) and Boranbay and Guerriero (2019) the idea that time inconsistency issues created by the elites’ inability to commit to direct transfers are key determinants of state-building. Notably, Boranbay and Guerriero (2019) study the same panel of medieval European regions that we analyze but build on a model in which investment never prevails under less inclusive political institutions and inclusive fiscal institutions are unavailable. Second, we circumvent the lack of outcome-based proxies for the state’s fiscal capacity—e.g., tax revenues—by devising a novel theory-based measure capturing the elites’ ability to garner the non-elites’ cooperation through public good provision. To capture this construct, we study the structure of the fiscal order. Different from the related literature focusing on either the introduction of fiscal bodies, like regional chambers or city councils (Cantoni et al., 2024; Becker et al., 2025), or the existence of state institutions (Cox et al., 2024; 2025; Huning and Wahl, 2023; Schönholzer and Weese, 2021), we decompose the concept of state’s fiscal capacity in inclusiveness, redistributiveness, autonomy, decentralization and cooperation of the design of fiscal policies, we organically relate these features to our time inconsistency theory of state-building and we clarify the differences between inclusive-

ness of political institutions and state’s fiscal capacity. Finally, we compare the explanatory power of our framework with that of other well-known theories of state-building suggesting that the elites empower the non-elites when the latter can threat rebellions, monopolize new technologies or leave the jurisdiction (Acemoglu and Robinson, 2000; Acemoglu et al., 2005; Inglehart and Welzel, 2005; Fleck and Hanssen, 2013; Boix, 2015; Huning and Wahl, 2023).

The paper proceeds as follows. In section 2, we review several key stylized historical facts about our sample consonant with the central implication of the model that we illustrate in section 3. Next, we state the model predictions in section 4, and we discuss their test in sections 5 and 6. Finally, we conclude in section 7, and we report figures and tables in the appendix and extra tables and the data construction in the Internet appendix.

2 Institutions and Trade in Medieval Europe

1000-1350: Mediterranean trades and institutional change.—The fall of the Western Roman empire deprived Europe of political stability and long-distance trade pushing the defenseless non-elites to seek the protection of local lords [Stearns 2001, p. 165].

The consequent rise of the feudal contract pacified the allotted domains and triggered an institutional revolution that changed Europe forever [Stearns 2001, p. 176]. Attracted by the prospect of reestablishing long-distance trade where it was most depressed, the feudal lords enacted more inclusive political and fiscal institutions to establish themselves as credible partners in the eyes of a rising class of merchants, who, in turn, obtained protection of the trade routes and inter-polity exchange treaties [Stearns 2001, p. 191-222, 265].

The Holy Roman Empire is a case in point. Frederick I granted the communal privileges to the difficult-to-reach Northern Italian communities to maximize the customs on long-distance trades foreseen by the 1183 Peace of Constance [Stearns 2001, p. 208]. Political autonomy was accompanied by an expansion of these polities’ fiscal capacity. Notably, taxation on personal and real property as well as traded goods was designed by a communal “assembly [serving] a one-year term, and chosen from the leading families [originated from the] merger of [the] feudal nobility and the commercial aristocracy” [Stearns 2001, p. 216].

A similar mix of parliaments and inclusive fiscal assemblies—*Diets*—were established in other low-trade potential localities and notably, the Swiss Cantons, the German Imperial

Cities and the northern Mediterranean regions [see figure 1; Bonney, 1999; Isenmann 1988, p. 173-174]. While the Sardinian *Giudicati* were ruled by parliamentary assizes called *Corona de Logu* (Ortu, 2005), the towns of the Kingdom of Aragon established in 1301 a representative assembly called *Cortes* through which they could veto the fiscal decisions of the king, i.e., *encabezamiento* [Thompson 2002, p. 146]. Sometimes, the king also conceded to a town a *fuero*, which was the power of imposing tributes in exchange for tax revenues [O’Callaghan 1975, p. 267-270]. Ultimately, these discontinuities shifted the allocation of tax revenues from financing military and/or royal expenses to securing trade routes, reviving, in this way, long-distance exchanges [Stearns 2001, p. 192-199; 205-221; 239-249].³

Different trajectories were followed by the Mediterranean regions with high-trade potential (see figure 1). While in Southern Italy the design of taxes was left to barons maintaining a vassalage relationship with the king (Bulgarelli Lukacs, 2008), the early Capetian kings tried to appropriate part of the returns of the lucrative exchanges of woollens for Eastern spices by chartering the *consulates* of Roussillon, Provence, Languedoc, Gascony and Guienne [Stearns 2001, p. 199]. While doing so, they kept a more direct control over taxation. For instance, the king was supposed to ask the approval of the *Etats Generaux* of Languedoc only when trying to impose extraordinary taxes [Fletcher et al. 2015, p. 116-149].

1350-1600: Atlantic trades and institutional change.—With the opening of the Atlantic routes and the consequent further thickening of the European trade network, the isolated merchant groups of England and the Provinces gained increasing decision-making power (see figure 2), whereas the French and Italian communes turned into commercial oligarchies [Bonney, 1999; Stearns 2001, p. 202-259, 281-282; Ormrod 2009, p. 214-219].

Two episodes are revealing about these dynamics. First, the 1435 treaty between the Duke of Burgundy and the Crown centralized fiscal power in the hands of the French kings, who were able to permanently impose direct taxes on property called *grandes tailles* [Bonney 1999, p. 112-113]. In Languedoc, local assemblies tried in 1440 to oppose these reforms, but the royal power prevailed [Bonney 1999, p.112-120]. Second, after the 1297 restrictions on the non-elites’ participation in the main public assembly—i.e., *serrata* of the *Maggior Consiglio*,

³ “In town such as Tarragona, Lerida, and especially Barcelona, entrepreneurs, involved in the trade of Moorish slaves, emerged as a class of “proto-patricians,” business people whose local power rested on their wealth [...]. The towns gained independence from feudal and ecclesiastical authorities” [Stearns 2001, p. 219-221].

the Venetian elites were able to dismantle the mosaic of fiscal privileges previously granted to the mainland towns to incentivize trade (Pezzolo, 2012). Eventually, fiscal centralization prevailed in most of Europe as revealed by the diminishing fiscal capacity over our sample (see figures 1 and 2).⁴ This drop was especially sharp over the Mediterranean.

3 Theory

Next, we illustrate our model of endogenous political and fiscal institutions.

3.1 Model Setup

We analyze the interaction between a representative elite and a representative non-elite, who can cooperate in a joint investment, i.e., organizing a long-distance trade. While the elite gathers the agents with control over both scarce resources and the institutional design, the non-elite assembles the initially rightless agents. In our historical case, the feudal lords represent the elite group, whereas the rising merchant class stands for the non-elite group.

The economy.—The investment delivers an output of value Y , which equals $V > 0$ if the elite entrusts an input to the non-elite and the non-elite incurs the investment cost $\gamma > 0$ and zero otherwise. We normalize the elite’s cost of providing her input to zero.⁵ In our historical case, while the elite often provided venture capital, the non-elite bore huge transportation risks [Stearns 2001, p. 216]. Accordingly, the output value Y gauges the returns on long-distance trade, which felt with the distance to the commercial partners.

Inclusive institutions.—We maintain that the elite cannot entice the non-elite by either punishing him or committing to direct transfers. Yet, she can either grant an inclusive political institution, which transfer to the non-elite the power to fix the tax rate and select his preferred public good, or enact an inclusive fiscal regime such that the two choices are determined by a bargaining between the two groups (Boranbay and Guerriero, 2019; Benati et al., 2022). Ultimately, the tax rate δ_r is selected by the elite under the autocratic regime $r = A$, is picked by the non-elite under the inclusive political institution $r = I$, and maximizes a weighted average of the two groups’ utilities with a weight ϵ on the elite’s utility under the

⁴For instance, the failure of the 1521 *comuneros* revolt freed the Spanish kings from financial control by depriving the *Cortes* of their veto power authority in fiscal matters [Thompson 2002, p. 141-147].

⁵Should agents be risk-averse and V capture the expected output value, the non-elite will require an expected utility strictly greater than his outside option to participate but our conclusions will stand.

inclusive fiscal regime $r = B$. Furthermore, public good provision has a technology linear in the tax revenues $g_r = V\delta_r$ and a supply g_r of public good delivers a sub-utility ρg_r to the group in power—i.e., the elite under $r = A$ and the non-elite under $r = I$, a sub-utility βg_r to the other group—i.e., the non-elite under $r = A$ and the elite under $r = I$, and a subutility μg_r to both groups under $r = B$. We posit that $0 < \beta < \mu < \rho < 1$.

While $\rho < 1$ entails that the public good is less valuable than the private one, $\rho > \beta$ captures the idea that a group gains less from consuming the public good preferred by the partner guiding fiscal policies than it enjoys from the provision of its preferred common good.⁶ The two groups can cooperate in providing a compromise public good whose marginal utility μ is such that $\beta < \mu < \rho$. In our sample, even if the elite (non-elite) favored waging war over securing commercial routes (the other way around), both groups could cooperate in providing a middle ground public good, i.e., public buildings [Stearns 2001, p. 258, 297-300].

Payoffs.—The elite’s and non-elite’s outside options equal 0 and $\alpha > 0$, respectively, and both groups are risk-neutral. To illustrate, the elite’s payoff from cooperation π_r is given by the untaxed output value plus her payoff from public good consumption—i.e., $\pi_A = (1 - \delta_A)V + \rho\delta_AV$, $\pi_I = (1 - \delta_I)V + \beta\delta_IV$ and $\pi_B = (1 - \delta_B)V + \mu\delta_BV$, whereas the non-elite’s utility from cooperation—i.e., U_r —equals his subutility from public good consumption net of the investment cost, i.e., $U_A = \beta\delta_AV - \gamma$, $U_I = \rho\delta_IV - \gamma$ and $U_B = \mu\delta_BV - \gamma$.

Timing of events.—At time t_0 , the elite picks the institutional regime r . At time t_1 , the tax rate δ_r is chosen. At time t_2 , the elite decides whether to entrust the input to the non-elite who, in turn, chooses whether to participate and, in the case, if he wants to invest. At time t_3 , private and public goods are possibly produced and the payoffs are realized.

3.2 Discussion

In evaluating the credibility our setup, several crucial remarks should be considered.

First, the interaction between the elite and the non-elite should be envisioned between any two consecutive and unforeseen technological shocks, each endowing the non-elite with a more efficient technology and leaving to the elite the control over the scarce resources as well as the institutional design (Benati and Guerriero, 2021; 2022).

⁶Implicitly, we also assume that elite cannot commit to contract away the inefficiency of public good provision.

Second, our dynamic interpretation of the equilibrium in the empirical test is justified by the fact that our conclusions survive in dynamic versions of the model allowing the elite to regain the surrendered power after unforeseen shocks (Boranbay and Guerriero, 2019).

Third, α encapsulates determinants of the non-elite's outside option like a weaker culture of cooperation, which reduces his odds of being cheated in alternative risk-sharing activities (Boranbay and Guerriero, 2019). Crucially, our conclusions will be the same should the elite's outside option be, instead, positive but not too large (see footnote 9).

Fourth, we maintain that the elite keeps control and transfer rights to the input, leaving to the non-elite only the use rights (Benati et al., 2022). Accordingly, she retains the untaxed output. Albeit this hypothesis captures the prevailing distribution of property rights over our sample [Stearns 2001, p. 165], we can relax it (see footnote 11).

Fifth, the elite might embrace the stick instead of sharing her power to incentivize the non-elite (Mayshar et al., 2017). Yet, this strategy would be ineffective since the elite cannot always entice the non-elite (Benati et al., 2022). Consistent with this remark, internal conflicts are generally unrelated to inclusive institutions in our sample (see section 5).

Finally, the hypothesis that the elite lacks the commitment to write contracts with the non-elite builds on a long literature on the time inconsistency issues inherent to politics (North and Weingast, 1989; Barzel and Kiser, 1991; Fleck and Hanssen, 2006; Myerson, 2008), and it is justified in our case by the fact that contractual agreements were enforced by courts controlled by the same elite promising not to renege on future transfers (Acemoglu, 2003).⁷ We assume, instead, that the group in power can commit to a tax rate. While this assumption is irrelevant in the case of the inclusive political regime since the non-elite would never deviate from full-taxation, it can be justified in the other cases by foreseeing that the non-elite can impose a loss τ on an elite deviating to her preferred zero tax rate by refusing to fight external enemies (Acemoglu, 2003).⁸ More generally, our conclusions will be the same should we assume that $(\rho - \beta) g_r$ is the share of output expropriated by the group in power or should we let the elite commit to contracts (see footnote 11). Hence, our assumptions on

⁷Klerman and Mahoney (2007) report broad historical evidence of the fact that, between the 11th and 17th century, both the English and French kings kept under strict control the judiciary.

⁸For instance, under $r = A$, a $\tau > V - \pi_A$ will suffice. Similarly, the elite could also renege on her time t_0 's regime choice. If she reinstated autocracy at time t_1 , the non-elite would become uncooperative. If, instead, the elite could regain power at time t_3 , the non-elite could discourage her with a punishment $\tau > V - \pi_I$.

the asymmetry in the preferences and property rights of the two groups are mild.

3.3 Endogenous State's Institutional Capacity

Since the game is of perfect information, we solve it by backward induction. Being the outside options weakly positive, the two groups participate only to invest. Being, moreover, private good consumption preferred to public good consumption, the elite decreases taxation as the output value rises if she is sure of the non-elite's participation in investment.

Once the elite has enacted the inclusive political institution, a non-elite foreseeing to participate selects at time t_1 a tax rate δ_I maximizing his subutility from redistributing via public spending the output value—i.e., $\rho\delta_IV$, subject to assuring the elite's participation in investment. To illustrate, he selects $\delta_I = 1$, which, in turn, entails $\pi_I = \beta V > 0$ and thus, does not discourage the elite. Crucially, full taxation also maximizes the utility of the non-elite, who participates whenever $U_I = \rho V - \gamma \geq \alpha$. Overall, for $r = I$ and $V \geq \frac{\alpha+\gamma}{\rho} \equiv \tilde{\Omega}$, $\delta_I^* = 1$ and the individual rationality constraints $\pi_I \geq 0$ and $U_I \geq 0$ hold.

Once the elite has introduced the inclusive fiscal regime $r = B$, the tax rate δ_B prevailing at time t_1 is selected through bargaining to maximize the following linear objective function

$$\max_{\delta_B \in [0,1], d} \quad \epsilon [(1 - \delta_B)V + \mu\delta_B V] + (1 - \epsilon)\mu\delta_B V, \quad (1)$$

subject to satisfying the individual rationality constraints $\pi_B \geq 0$ and $U_B \geq 0$. While the former is always met, the latter fails if the non-elite invests and $V < \frac{\alpha+\gamma}{\mu} \equiv \hat{\Omega}$. For $V \geq \hat{\Omega}$ instead, it is satisfied when the investment cost is incurred and δ_B^* is sufficiently large. If $\epsilon \geq \mu$ and thus, the elite has a sufficiently large bargaining power, δ_B^* is set at the lowest possible level $\frac{\alpha+\gamma}{\mu V} \leq 1$ such that the non-elite's individual rationality constraint holds, i.e., $U_B = \mu\delta_B^*V - \gamma = \alpha$. Then, $\pi_B = (1 - \delta_B^*)V + \mu\delta_B^*V > \mu V > \pi_I$. If $\epsilon < \mu$, the elite has a limited bargaining power and $\delta_B^* = 1$, $U_B = \mu V - \gamma > (=) \alpha$ if $V > (=) \hat{\Omega}$ and $\pi_B = \mu V > \pi_I$.

Once the elite has kept the autocratic regime, she picks the tax rate δ_A maximizing

$$\max_{\delta_A \in [0,1]} \quad (1 - \delta_A)V + \rho\delta_A V, \quad (2)$$

subject to satisfying the individual rationality constraints $\pi_A \geq 0$ and $U_A \geq 0$. While the

former is always met, the latter fails when the non-elite invests and $V < \frac{\alpha+\gamma}{\beta} \equiv \bar{\Omega}$. If $V \geq \bar{\Omega}$ instead, it is satisfied when the non-elite invests and δ_A^* equals $\frac{\alpha+\gamma}{\beta V} \leq 1$. This is, indeed, the lowest possible tax rate such that $U_A = \beta\delta_A^*V - \gamma \geq \alpha$. The elite, instead, obtains a payoff equal to $\pi_A = (1 - \delta_A^*)V + \rho\delta_A^*V > \beta V = \pi_I$. Finally, $\tilde{\Omega} \leq \hat{\Omega} \leq \bar{\Omega}$.

The prevailing institutional design is a function of both the output value V and the outside option α (see figure 3).⁹ While production is unfeasible for $V < \tilde{\Omega}$, granting the inclusive political institution is the only way of garnering the non-elite's cooperation given the inefficiency of public good provision and for severe but not insuperable elite's time inconsistency issues (Blanton and Fargher, 2008; 2016), i.e., $\tilde{\Omega} \leq V < \hat{\Omega}$. Cooperation can instead be elicited under either $r = I$ or $r = B$ for $\hat{\Omega} \leq V < \bar{\Omega}$ and under any regime for $V \geq \bar{\Omega}$. In these last two cases, the elite selects the r maximizing her utility. To illustrate, for $\hat{\Omega} \leq V < \bar{\Omega}$, she prefers $r = B$ over $r = I$ since $\pi_I = \beta V$ is smaller than μV , which is the smallest possible payoff under the inclusive fiscal regime.¹⁰ For $V \geq \bar{\Omega}$ instead, $r = B$ is picked instead of $r = A$ whenever $(1 - \delta_B^*)V + \mu\delta_B^*V > (1 - \delta_A^*)V + \rho\delta_A^*V$, which is the case for $\frac{\beta}{1-\rho+\beta} \leq \mu \leq \epsilon$ (compare top right with top left and bottom left graphs in figure 3). This condition will not be met in the most likely case of $\rho \rightarrow 1$ since then, μ and ϵ must tend to one. When inclusive institutions are unavailable, the elite can elicit production for $\frac{\gamma}{\zeta} < V \leq \hat{\Omega}$ and $\zeta > \beta$ only if able to credibly offer to the non-elite ζpV as either a direct transfer or an high-powered trade contract (see bottom right graph in figure 3).¹¹ Finally, a larger non-elite's outside option, due for instance to weaker norms of cooperation (Boranbay and Guerriero, 2019), raises the equilibrium tax rate as well as the ability of inclusive political and fiscal institutions to support cooperation when autocracy cannot. The following proposition summarizes our analysis:

Proposition: *Provided that $0 < \beta < \mu < \rho < 1$, 1. production is unfeasible for $V < \frac{\alpha+\gamma}{\rho}$; 2. the elite grants the inclusive political institution and the non-elite picks the maximum tax*

⁹A glance at the individual rationality constraints entails that the analysis stands when the elite's outside option is positive but smaller than $(\alpha + \gamma) \frac{\beta + \mu\rho - \mu}{\mu\beta}$, since she will participate when the non-elite does.

¹⁰The larger α and γ are, the more difficult is to support production and the larger will be the ability of the inclusive institutions to elicit cooperation when autocracy cannot, i.e., the larger $\bar{\Omega} - \hat{\Omega} = \frac{(\rho-\beta)(\alpha+\gamma)}{\rho\beta}$ is.

¹¹Should this payment be possible under any institution, the elite will rely on it only for $\frac{\alpha+\gamma}{\zeta} < V \leq \tilde{\Omega}$, $\zeta > \rho$ and no taxation. Intuitively, since she enjoys public good consumption, she also prefers to finance a non excludable public good over assuring direct and wasteful transfers to the non-elite.

rate $\delta_I^* = 1$ and invests for $\frac{\alpha+\gamma}{\rho} \leq V < \frac{\alpha+\gamma}{\mu}$; 3. the elite grants the inclusive fiscal regime, the equilibrium tax rate $\delta_B^* = \frac{\alpha+\gamma}{\mu V} \leq 1$ is bargained, and the non-elite invests for $\frac{\alpha+\gamma}{\mu} \leq V < \frac{\alpha+\gamma}{\beta}$; 4. the elite picks the inclusive fiscal regime for $\frac{\beta}{1-\rho+\beta} \leq \mu \leq \epsilon$ and the autocratic regime otherwise, the equilibrium tax rate equals δ_B^* in the first case and $\delta_A^* = \frac{\alpha+\gamma}{\beta V} \leq 1$ in the second case, and the non-elite invests for $V \geq \frac{\alpha+\gamma}{\beta}$; 5. the equilibrium tax rate and the relevance of the inclusive political and fiscal regimes as commitment devices for the elite—i.e., $\bar{\Omega} - \tilde{\Omega}$ —rise with both the non-elite’s outside option α and the investment cost γ for $V \geq \frac{\alpha+\gamma}{\rho}$.

4 Empirical Implications

In the most plausible scenario of asymmetric preferences for the public good—i.e., $0 < \beta < \mu < \rho < 1$ and $\mu < \frac{\beta}{1-\rho+\beta}$ —and sufficiently large return on long-distance trades—i.e., $V \geq \frac{\alpha+\gamma}{\rho}$ [Stearns 2001, p. 195-199, 281-283], the model implications can be restated as:

Predictions: *While the investment return weakens the inclusiveness of the political process and the state’s fiscal capacity, the non-elites’ outside option reinforces them.*

5 Evidence

To evaluate the testable predictions, we need proxies for the independent and dependent variables and a suitable empirical strategy. To select them, we build on section 2.

5.1 Measurement

5.1.1 Sample Construction

We focus on 90 historical regions, part of 16 present-day European countries, for which we have sufficient geographic and institutional data for each half-century t between 1000 and 1600. Similar to Boranbay and Guerriero (2019) and Tabellini (2010), we construct each historical region r by merging those neighboring NUTS 2 administrative units that, according to Sellier and Sellier (2002), were part of the same polity for most of the 1000-1600 period (see table 1 for the match between historical regions and medieval polities and the Internet appendix for the match between historical and NUTS 2 regions).¹² In contrast

¹²We define in a different way 17 of the 66 historical regions that we share with Tabellini (2010) since he focuses on the 1600-1750 period. Some of our historical regions have also been controlled by a state different from that reported in table 1—i.e., those in Belgium, Corse, Friuli-Venezia Giulia, and South Switzerland,

to either a grid or a city approach, which incorrectly miss the institutional design units, our sample choice allows us to consider as cross-section identifiers the units within which political and fiscal institutions were selected. Results reported in the Internet appendix reveal, moreover, that the message of our analysis will be unchanged should we, instead, average institutions over the boundaries of the medieval polities prevailing at each half-century and coded by Abramson (2017). These data, however, are significantly more noisy since, as clarified in section 2, political control did not imply fiscal control and seized polities kept fiscal autonomy. Finally, although our results are robust to the inclusion of the 1600-1850 period, which is, for instance, considered by Acemoglu et al. (2005), we concentrate on the first six centuries of the second millennium. Two are the key reasons. First, the within-country variation in political and fiscal institutions significantly drops with the rise of the nation-states during the 19th century [Stearns 2001, p. 465-508]. Second, the 17th, 18th, and 19th centuries witnessed technological innovations making economic activities far more complex than those prevailing over our sample [Stearns 2001, p. 284, 313 and 422].

5.1.2 Measuring the Returns on Long-distance Trade

Building on section 2, we proxy the investment profitability with a measure of the returns on long-distance trades first proposed by de Vries (1984) and based on a naive gravity trade model. To illustrate, *Trade-Potential* equals the sum of the urban potentials of all the main cities in the historical region (see table 2 for the definition and sources of the variables that we use). The urban potential of each main city is constructed, in turn, as the distance-weighted sum of the sizes in 100,000 inhabitants of all its relevant trade partners. Following Bosker et al. (2013), we define as “main cities” all those settlements part of our sample and displaying, according to Bairoch et al. (1988), more than 10,000 inhabitants at least once between 1000 and 1600. Furthermore, we consider as trade partners both the 677 European cities for which Bairoch et al. (1988) report at least once over the 1000-1600 period a population larger than 10,000 inhabitants and the 116 Middle East and North Africa cities ever larger than 10,000 inhabitants between 1000 and 1600 according to the data collected by Bosker et al. (2013).

Over the sample, we observe first a sharp rise of the trade potential between the 11th and the 14th century, then a drop following both the Black Death and the opening of the

whereas others have experienced both foreign control and independence, i.e., the Netherlands and Sardegna.

Atlantic routes and, finally, a further acceleration (see bottom graphs of figures 1 and 2). As the bottom right graph of figure 4 reveals, this trend was heterogeneous over the sample, whereby the communes of Northern Italy and Mediterranean France, the German imperial cities, and the Provinces witnessed the more robust rises. To evaluate the error in the measurement of *Trade-Potential*, we recalculate the historical region’s trade potential using either only Christian or only Muslim trade partners, i.e., *Trade-Potential-C* and *Trade-Potential-M*. Until the eighth century, Christianity was the dominant religion but things changed with the Arab expansion of the end of the first millennium [Stearns 2001, p. 116-117]. The religious divide resulting from the subsequent conflicts erected a significant trade barrier between continental Europe and the Islamic world (Greif, 2006).

5.1.3 Capturing an Inclusive Political Process and the State’s Fiscal Capacity

To measure the inclusiveness of the political process, we construct a dummy turning on if the constraints on the elites’ power score developed by Boranbay and Guerriero (2019) for our sample is weakly larger than five, i.e., *Political-Institutions*. Such a score is based on the events within a 40-year window around each year t (see Boranbay and Guerriero, [2019]), it ranges between one and seven, and assumes higher values when the the strength of the institutionalized constraints imposed by the non-elites on the decision-making powers of the elites is more intense (Marshall and Jaggers, 2016). To elaborate, values of the score between one and four pick slight to moderate checks and balances on the elites’ decision-making power, whereas values weakly larger than five capture substantial if not overwhelming limitations on the elites’ authority. Crucially, by focusing on reforms from limited to substantial constraints on the elites’ decision-making power, we minimize measurement errors and, notably, the possibility that changes in the cardinal values of the constraints on the elites’ power score correspond to just ordinal switches or, even, no institutional evolution (Acemoglu et al., 2019). Over the sample, we observe first a trend towards inclusive political institutions with the mean of *Political-Institutions* rising from 0 in 1000 to 0.17 in 1250 and then, a comeback of autocracies with *Political-Institutions* averaging again 0 in 1600. This pattern is asymmetric, whereby the communities of Aragon and Cataluña, the Sardinian Giudicati and the communes of Northern Italy, first, and the Provinces and the Reign of England,

then, witnessed the more robust rise in the inclusiveness of political institutions, even if they never became what we nowadays consider “democracies” (see Boranbay and Guerriero [2019], figure 6). Crucially, Boranbay and Guerriero (2019) validate their constraints on the elites’ power score by reporting its strong positive correlation with a proxy for the present-day inclusiveness of regional political institutions combining the polity V project constraints on the executive authority score and a measure of each NUTS 2 region’s political autonomy, which, in turn, ranges between one and three (see also Guerriero, [2020]).

We focus on two main proxies for the state’s fiscal capacity. To construct these variables, we build on the existing historical literature on the selection, collection and use of the main taxes in our sample and, notably, those on personal and real property, feudal aids and custom duties (Bonney, 1995; 1999). Again, we build on the events within a 40-year window around each time period.¹³ For each class of duty, we code indicators for five crucial features of the structure of the fiscal system raising the non-elites’ control over fiscal policies and, in turn, strengthening their incentives to cooperate with the elites in long-distance trade.

The first aspect that we consider is the inclusiveness of the design of the fiscal policies, i.e., *Inclusiveness*. This proxy equals: four if the tax policies were picked by local representatives within assemblies, such as the *Corona de Logu*; three if they were selected, within an assembly—i.e., *Cortes*, *Diets* and *State General*, by the ruler and local representatives and the latter had veto power; two if tax policies were designed, within an assembly, by the ruler and local representatives and the latter had no veto power; and one if tax policies were under the full control of the ruler. We observe a sharp rise in the inclusiveness of the fiscal policy design in the Mediterranean regions with low trade potential and their neighbors, first, and in the Atlantic regions with low trade potential and their neighbors, later (see upper left graphs of figures 1 and 2). The first group also experienced a sharp fall in *Inclusiveness* as soon as the trade potential became sufficiently large (see figure 1). These patterns are again asymmetric across historical regions, whereby the communities of Aragon and Cataluña, Sardinian Giudicati, German imperial cities, communes of Northern Italy and Swiss Cantons supported more inclusive fiscal regimes (see upper left graph of figure 4).

A similar evolution characterizes the other four dimensions of the fiscal order that we con-

¹³We substitute missing observations with the closest data points. This choice does not affect our conclusions.

sider to capture the state’s fiscal capacity. The second of these features is whether a sizable part of the population was partially exempted from taxation, i.e., *Redistributiveness*. The third characteristic that we code is whether the tax rate varied across local communities, i.e., *Autonomy*. The fourth fiscal structure that we consider is whether tax revenues were gathered by local tax farmers rather than royal officers, i.e., *Decentralization*. The fifth feature of the fiscal regime that we evaluate is if tax revenues financed also local public goods and not only military and/or royal expenses, i.e., *Cooperation*. Intuitively, *Inclusiveness* together with the four structures just discussed reinforced the non-elites’ incentives to cooperate with the elites in joint trade investments since they allowed them to, respectively, participate in the design of the fiscal policies, be exempted in the face of large negative shocks, contract local tax rates, be involved in tax collection and obtain a public good that they preferred. To capture the unobserved underlying “state’s fiscal capacity” institutional dimension, we also construct a measure synthesizing our five indicators and defined as the normalized—to range between 0 and 1—first principal component extracted from them, i.e., *Capacity* (see upper right graphs of figures 1 and 2 and upper right graph of figure 4).

We employ either *Inclusiveness* or *Capacity* as our proxy for the state’s fiscal capacity, but we show in the Internet appendix that our conclusions will be qualitatively similar should we rely, instead, on either *Redistributiveness*, *Autonomy*, *Decentralization* or *Cooperation*. Five pieces of evidence confirm the reliability of our measurement strategy.

First, the variable *Capacity* is strongly and positively related to each and all its five components (see columns (1) to (5) of table 3). Second, *Capacity* and *Inclusiveness* are significantly and positively related to our proxy for the inclusiveness of the political process, i.e., *Political-Institutions* (see column (6) of table 3). This correlation is imperfect, whereby North-Eastern and North-Western UK—i.e., the Palatinates of Chester, Durham and Lancashire, Castilla y León and Navarra-Rioja thanks to their *Cortes* and Schleswig-Holstein, home of the Hanseatic league, displayed a large state’s fiscal capacity but lacked political autonomy. Crucially, we will obtain similar results should we instead combine the information on the inclusiveness of the political process with that on the state’s fiscal capacity treating the regions for which *Political-Institutions* equals one as those displaying the most inclusive fiscal regime (results available upon request). Third, the variable *Capacity* is significantly

and positively correlated with an alternative measure of the state’s fiscal capacity proposed by Becker et al. (2025) and picking the sophistication of each levy, i.e., *Complexity* (see column (7) of table 3). This dummy turns on when tax gathering required a registry—e.g., a cadastre—and a specialized class of bureaucrats rather than being easily imposed. Fourth, we document in column (8) of table 3 that *Capacity* is strongly and significantly related to the available data on the marginal rates of the tallages, feudal aids and customs on sales, i.e., *Tax-Rate*. This information is available for almost half of the sample, and it constitutes a more classical proxy for the state’s fiscal capacity (Cox et al., 2024; 2025). Finally, column (9) of table 3 reveals that the state’s fiscal capacity is persistent, whereby *Capacity* is significantly and positively correlated with a measure of its present-day counterpart, i.e., European quality of government index averaged between 2010 and 2017, i.e., *EQI*.¹⁴ Available for the NUTS 2 regions composing 88 of our 90 historical regions, this index assumes larger values when the citizens report a better “control of corruption,” more forceful “government effectiveness,” stronger “rule of law” and more intense “voice and accountability” and thus, they can more closely control the design of regional fiscal policies (Charron et al., 2021).

5.2 Estimating Equation

A glance at figures 1, 2 and 4 suggests that, consistent with the model predictions, at the dawn of the commercial revolution, Mediterranean regions with lower trade potential quickly acquired a large state’s fiscal capacity, which then started to deteriorate when the commercial networks became sufficiently dense starting from the second half of the 13th century. The opening of the Atlantic routes pushed the Atlantic regions with lower trade potential to follow suit. Albeit anecdotal evidence is instructive, multivariate analysis is more convincing. To elaborate, we run panel regressions of the following form

$$Y_{l,r,t} = \alpha_l + \beta_r + \gamma_t + \gamma' \mathbf{x}_{l,r,t} + \delta' \mathbf{z}_{l,r,t} + \varepsilon_{l,r,t}, \quad (3)$$

where $Y_{l,r,t}$ is either *Political-Institutions*, *Inclusiveness* or *Capacity* for levy l in historical region r at time t . α_l are levy fixed effects accounting for unobserved region- and time-

¹⁴If a historical region r spans multiple NUTS 2 units, we assign it a figure equal to the average of the values *EQI* assumes in each NUTS 2 unit weighted by such unit’s relative contribution to r ’s land area.

independent determinants of the duties that we consider such as the technological characteristics of the economic activity targeted by each levy. β_r are historical region fixed effects controlling for levy- and time-independent determinants of $Y_{l,r,t}$ such as geographic traits—i.e., the land suitability for irrigation, agriculture and pasture as well as the distance to the coast, navigable rivers and the nearest technological frontier (Bentzen et al., 2016; Litina, 2016; Andersen et al., 2017)—and predetermined shocks, i.e., density of the Roman roads, out of Africa exodus of humankind and agricultural revolution (Ashraf and Galor, 2013; Olsson and Paik, 2016). γ_t are half-century dummies picking up levy- and region-independent macro-shocks like, for instance, the Black Death, which modulated the incentives to trade and, thus, escape the Malthusian trap (Voigtländer and Voth, 2009). Finally, $\mathbf{x}_{l,r,t}$ gathers either *Trade-Potential* or *Trade-Potential-C* and *Trade-Potential-M*, and $\mathbf{z}_{l,r,t}$ possibly includes the extra control illustrated in section 6.3.

Two of the determinants of $Y_{l,r,t}$ encapsulated in either β_r or γ_t , and notably the return on farming and the severity of the Black Death, might vary over both historical regions and half-centuries. To evaluate this issue, we experiment with either the growing season temperature in Celsius averaged over the previous half-century and collected from Guiot et al. (2010) or the Black Death mortality rate averaged over the previous half-century and available from Benedictow (2004), and we obtain similar results (see the Internet appendix).

To reckon with the correlation in $\varepsilon_{l,r,t}$ possibly driven by the persistence of fiscal policies, we cluster the standard errors at the regional level. Similarly, we document that our conclusions will stand should we deal with the spatial dependence in $\varepsilon_{l,r,t}$, which is possibly produced by the formation over the sample of the national fiscal orders, by relying on either the Driscoll-Kraay or the Conley (1999) standard errors (see the Internet appendix). In this last case, the distance beyond which the correlation between error terms is assumed to be zero equals the average distance among the main cities in the sample, i.e., 1058 km.

5.3 Basic Empirical Results

Columns (1) to (3) of table 4 display the estimates of the basic specifications, which are all consistent with the model implications detailed in section 4. Regions with a lower trade potential developed a larger state’s institutional capacity. To illustrate, a standard deviation

increase in the trade potential—i.e., 0.52—entails a 0.30-standard-deviation fall in proxy for the inclusiveness of the political process, a 0.24-standard-deviation decrease in the measure of the inclusiveness of the fiscal policy design and a 0.11-standard-deviation fall in the proxy for the state’s fiscal capacity. All these effects are significant—at 5%—or better. Because of the stricter elites’ control over feudal aids, a larger reliance on the other two types of levies was associated to more inclusive political and fiscal institutions (not shown).

6 Gaining More Insights About Causality

Even if the basic estimates are consistent with the central prediction of the model, they might be attenuated by measurement errors, they may be capturing reverse causality and/or they might be driven by unobserved heterogeneity. We evaluate these issues in turn.

6.1 Evaluating the Role of Measurement Error

As columns (1) to (3) of table 5 suggest, the conclusions of our analysis are similar whenever we substitute both *Trade-Potential-C* and *Trade-Potential-M* for *Trade-Potential*. Interestingly, the inclusiveness of the political process was determined by the potential for any long-distance trade, whereas the strength of the state’s fiscal capacity was mainly driven by the desire to exchange with neighboring Christian partners (Bosker et al., 2013).

6.2 Evaluating the Impact of Reverse Causality

To rule out that the contemporary links between the intensity of the urban potential and both the inclusiveness of the political process and the strength of the state’s fiscal capacity are determined by institutions causing the trade potential, we follow Angrist and Pischke (2009), and we also incorporate in the vector $\mathbf{x}_{l,r,t}$ the variable *Trade-Potential* lead one half-century. If reverse causality was an issue, then one would expect even stronger correlations between current institutions and the future intensity of the urban potential because of the plausible lag with which institutional evolution affects long-distance trade (Stasavage, 2010). As detailed in columns (4) to (6) of table 5, this is not the case in our sample. Moreover, the coefficients on *Trade-Potential* keep their sign, statistical significance and magnitude.

6.3 Evaluating the Role of Unobserved Heterogeneity

Turning to the importance of omitted variables, we pursue a three-step strategy. First, we evaluate the impact on the main coefficients of considering the other key determinants of political and fiscal institutions identified by the extant literature. Considering these observable factors allows us to also control for the non-elites’ outside option, which, as clarified by our theoretical framework, discourages them from cooperating. Second, we calculate how much greater the influence of unobservable factors, relative to the relevance of all these extra observable controls, would need to be to completely explain away the main estimates. Finally, we employ as excluded instruments for trade potential proxies for the ease of the neighboring historical regions’ access to the most relevant trade routes.

6.3.1 Controlling for Observable Factors

Four are the other main theories of the state’s institutional capacity.

First, Boranbay and Guerriero (2019) clarify that a larger non-elites’ internalized reward from cooperating in any economic activity reinforces the elites’ incentives to cheat them in economic activities alternative to investment, e.g., risk-sharing. Then, a more cooperative non-elite will also enjoy a lower outside option and will be more willing to cooperate in investment, making less urgent reforms towards a more inclusive political and fiscal order (Benati and Guerriero, 2025). Our proxy for the strength of the non-elites’ culture of cooperation is the cumulated discounted number of years of activity of Cistercian and Franciscan houses per square km, i.e., *Culture*. For each of the 699 (2979) Cistercian (Franciscan) houses in our sample, this figure equals in year t the difference between the number of years in which the house had operated and those elapsed from its possible closure per square km if positive, and zero otherwise.¹⁵ Both monastic orders dictated norms of respect and trust in exchange for guidance on how to share consumption risk, and under the threat of defecting, to the populations subject to a high—but not excessive—risk of harvest destruction and, thus, more

¹⁵While the discounting emphasizes the importance of the monks’ activities, scaling the years of activities by the historical region’s area instead of its population is necessary to correctly represent the two monastic orders’ diffusion since a minimum distance between houses was compulsory (Boranbay and Guerriero, 2019). The raw data are obtained by eliminating from the lists of monasteries reported in Van Der Meer (1965) and Moorman (1983) those that are not indicated in at least another bibliographic and online source, i.e., <http://www.cistercensi.info/>, <http://users.bart.nl/~roestb/franciscan/>, and the bibliography therein.

interested in securing their services. Given the homogeneity of the Cistercian and Franciscan activities and their distinctiveness within Western monasticism, *Culture* gauges the input to the technology that transformed the non-elites' willingness to accumulate culture into evolutionarily stable norms, and higher values detect stronger cultural values.¹⁶

Second, Besley and Persson (2009) suggest that common interest goods, such as fighting external wars, contribute to institutional development. Similarly, Acemoglu and Robinson (2000) claim that a higher risk of internal conflicts pushes the elites to share decision-making power with the non-elites. Building on these two strands of literature, we consider the share of the previous half-century in which the polity was involved in either external or internal conflicts, i.e., *External-Conflicts* and *Internal-Conflicts*, respectively. The raw data are collected from Jaques (2007), who reports all the historical conflicts worldwide with written documentation from at least two independent sources and a consensus among sources on the main conflicts. For each conflict, Jaques provides a one-paragraph description of the relevant dates, participants and conflict type. We consider all the conflicts in which at least one of the polities in our sample participated, regardless of whether they took place in Europe or elsewhere. The resulting dataset contains 912 external conflicts and 381 internal conflicts. Crucially, by evaluating the intensity of conflicts we are also crudely controlling for the spread of innovations in warfare technology (Gennaioli and Voth, 2015).

Third, we assess whether the intensity of economic circumscription, which, in our case, is the difference between the trade potential of a historical region and that of the neighboring regions, represents a deterrent to exit and unrest (Carneiro, 1970). If it is, it should capture weaker elites' needs to introduce more inclusive institutions to appease the non-elites. Accordingly, we consider the ratio of the value of *Trade-Potential* to the average of the values that *Trade-Potential* assumes in the neighboring historical regions, i.e., *Circumscription*.

Finally, to evaluate the “modernization” effect of economic development on institutions (Inglehart and Welzel, 2005), we exploit the tendency of Malthusian societies to turn any economic innovation into a rise in the population rather than a larger income per capita level, and we consider the natural logarithm of the population density in inhabitants per square

¹⁶Boranbay and Guerriero (2019) report strong correlations between *Culture* and the coeval diffusion of micro-credit institutions, an outcome-based measure of culture, and present-day norms of respect and trust.

km, i.e., *LPD*. The raw data are estimated through time-variant allocation algorithms by Goldewijk et al. (2011) for the whole globe at the five minutes spatial resolution and the 10,000 BCE-2000 period. To obtain *LPD*, we average the cell data over historical regions weighting each observation by its relative contribution to the historical region land area.

Controlling for all the confounding variables delivers the results reported in columns (7) to (9) of table 5. While the model predictions continue to be supported by the data, three new patterns arise. First, as expected, *Culture* has a negative and significant impact on *Political-Institutions*, *Inclusiveness* and *Capacity*. Second, and different from what foreseen by the related literature, external and internal conflicts are not significantly related to the strength of the state’s fiscal capacity, while being positively and significantly linked to the inclusiveness of the political process. Similarly, *Circumscription* is positively and significantly linked to the strength of the state’s fiscal capacity. Finally, a more inclusive political process and a stronger state’s fiscal capacity are correlated with a larger economic development.

6.3.2 Using Selection on Observables to Assess the Bias from Unobservables

Despite our attempts to control for observable factors, the estimates presented so far may still be biased by unobserved heterogeneity. To evaluate this issue, we calculate the index proposed by Bellows and Miguel (2009) to measure how much stronger selection on unobservables, relative to selection on observables, must be to explain away the entire estimates. To understand the index, consider a regression with a restricted set of control variables and one with a full set of controls. Next, denote the estimate of the coefficient attached to the variable of interest from the first regression γ^R , where *R* stands for “restricted,” and that from the second regression γ^F , where *F* stands for “full.” Then, the index is the absolute value of $\gamma^F/(\gamma^R - \gamma^F)$. The intuition behind the formula is as follows. The lower the absolute value of $(\gamma^R - \gamma^F)$ is, the less the estimate of the coefficient attached to the variable of interest is affected by selection on observables, and the stronger selection on unobservables needs to be to explain away the entire effect. Similarly, the larger the absolute value of γ^F is, the greater is the effect that needs to be explained away by selection on unobservables.

We consider the specifications without control variables in table 4 as the restricted regressions and those incorporating all controls in columns (7) to (9) of table 5 as the full

regressions, and we report the indexes calculated when the dependent variable is either *Political-Institutions*, *Inclusiveness* or *Capacity* in columns (1) to (3) of table 6, respectively. No index is lower than one, and their median (average) is 11.5 (8.3). Hence, to attribute the entire estimates to selection effects, selection on unobservables would have to be on average more than eight times greater than selection on all observables, which is unlikely.

6.3.3 2SLS

Our final strategy is to use instrumental variables. This approach requires an instrument correlated with trade potential but uncorrelated with any other characteristic of the historical region shaping the inclusiveness of the political process and/or the state’s fiscal capacity. In line with our model, Boranbay and Guerriero (2019) document that the feudal lords expanded the political rights of the non-elites where the average distance to the commercial hubs, which, in turn, decreases the payoff from long-distance trade, was the largest. Building on this intuition, we exploit the natural experiment provided by the opening of the Atlantic routes after the 15th century Portuguese explorations [Stearns, 2001, p. 250–251], and we rely on the inverse average sea distance to the most commercially-relevant hubs, averaged over neighboring units, i.e., *Trade-N*. To illustrate, we average over neighboring historical regions the inverse of the: (a) average sea distance between each neighboring unit’s main harbor and both Istanbul and Alexandria (Havana and Cape Town) between 1000 and 1350 (1400 and 1600), if it had a direct access to the Mediterranean (Atlantic); (b) sum of this last figure and the straight line distance between the major city of the neighboring historical region and the closest major Mediterranean (Atlantic) harbor, otherwise. Intuitively, *Trade-N* picks the ease of the neighboring historical regions’ access to key trade hubs, and it exogenously falls because of the opening of the Atlantic routes (figure 4). To make sure that the ease of the neighboring units’ access to randomly determined hubs is related to the historical region’s institutional capacity only through its exogenous impact on the unit’s trade potential, we also control for the historical region’s ease of access to key hubs—i.e., *Trade*, its direct access to the Mediterranean between 1000 and 1350 and the Atlantic otherwise—i.e., *Coast*, and the direct access to the most commercially-relevant sea averaged over neighboring units, i.e., *Coast-N*. This last variable also captures the impact of the ease of the neighboring historical

regions’ access to the key trade routes on their state’s institutional capacity, which, in turn, might shape the willingness of the elites of the historical region to empower the non-elites of their unit to avoid migration and/or unrest (Fleck and Hanssen, 2013).

Table 7 reports both the OLS and 2SLS estimates of specifications of equation (3) controlling only for the fixed effects, *Trade*, *Coast* and *Coast-N* and not for the observable factors discussed in section 6.3.1, which might be “bad” controls. Three are the key observations. First, the OLS estimates remain pretty stable conditional on *Trade*, *Coast* and *Coast-N* (compare columns (1) to (3) of table 7 to columns (1) to (3) of table 4). Second, *Trade-N* is a strong and positive predictor of the historical region’s trade potential in the first stages (Boranbay and Guerriero, 2019), whereby the F-test on the excluded instrument is 14.74 and we can always reject at 1% that the estimated equation is underidentified (see columns (4) to (6) of table 7). Finally, the coefficient on *Trade-Potential* in the second stage is so similar to its OLS counterpart that we tend to not reject that the historical region’s trade potential can be treated as exogenous (see columns (4) to (6) of table 7).

Overall, the estimates produced by the 2SLS specifications provide support for the inference discussed so far and confirm the validity of the model testable predictions.

7 Conclusion

Rather than summarizing our analysis, we close by highlighting two key avenues for further research. First, a key issue unanswered by our empirical test is whether reforms towards a stronger state’s fiscal capacity fostered, thanks to the larger provision of public goods, economic development. Our results suggest that, differently from the extant literature (Besley and Persson, 2009), future research on these issues should employ the geographic determinants of the state’s fiscal capacity to isolate its true impact (Benati and Guerriero, 2022). Second, an issue key for the design of economic and political unions is to evaluate if the most fiscally developed medieval polities obstructed the market integration of the European national states, pushing the rulers to impose a complex bureaucracy on all of them and extractive policies on the less militarily relevant ones (Guerriero, 2020).¹⁷

¹⁷Grafe (2012) claims that the fiscal autonomy of the annexed polities, and not a powerful Madrid, is to blame for the hard-won process of state-building of early modern Spain. To elaborate, the peripheral regions’ attempt to safeguard their own commercial interests obstructed administrative centralization and market

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integration, dramatically exacerbating the severe transport costs. Similarly, de Oliveira and Guerriero (2018) show that the severity of the extractive policies selected by the post-unitary Italian governments diminished with the military relevance—i.e., proximity to prospective enemies—of the annexed polities.

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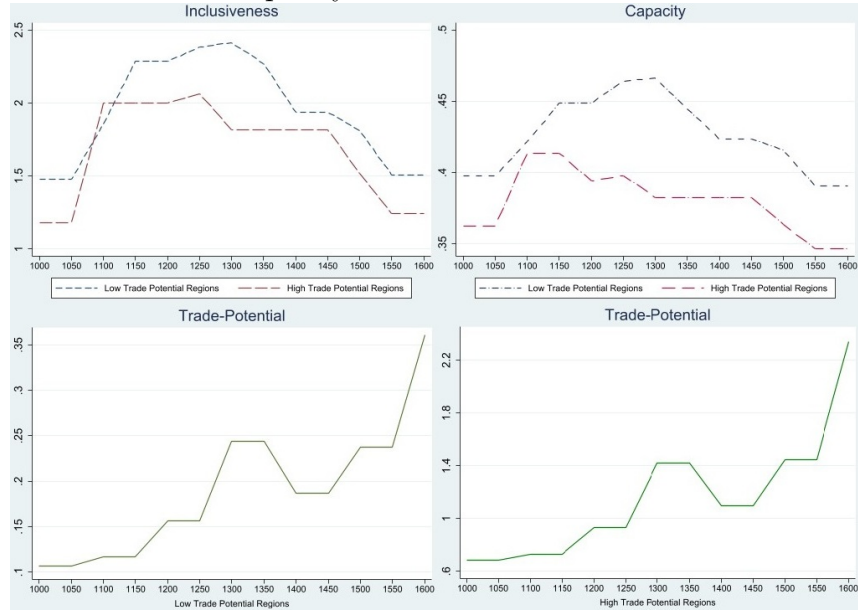
Tables and Figures

Table 1: The Sample — Medieval Polities, Historical Regions, and Present-day Countries

GENOA: Italy (*Liguria*); France (*Corse*). HOLY ROMAN EMPIRE: Austria and Italy (*Styria-Austria*, *Tyrol - Trentino-Alto Adige*); Belgium (*Région Bruxelles, Région Wallone*); Germany (*Baden-Württemberg, Bayern, Brandenburg, Bremen - Hamburg - Niedersachsen, Hessen, Mecklenburg-Vorpommern, Nordrhein-Westfalen, Rheinland-Pfalz - Saarland, Sachsen, Schleswig-Holstein, Thüringen - Sachsen-Anhalt*); Slovenia (*Carniola, Styria-Slovenia*). KINGDOM OF BOHEMIA: Czech Republic (*East Czech Republic, West Czech Republic*); Poland (*South Poland, West Poland*). KINGDOM OF PORTUGAL: Portugal (*Alentejo, Algarve, Centro, Lisboa - Vale do Tejo, Norte*). KINGDOM OF SICILY: Italy (*Abruzzo - Molise, Basilicata - Campania, Calabria, Puglia, Sicilia*). KINGDOM OF TUSCANY: Italy (*Toscana*). PAPAL STATE: Italy (*Emilia-Romagna, Lazio, Marche - Umbria*). PROVINCES: Netherlands (*Noord Nederland - Groningen, Oost-Nederland, West-Nederland, Zuid-Nederland*). REIGN OF ENGLAND: Ireland (*East Ireland, West Ireland*); UK (*East Anglia - London, East Midlands, North-East UK, North-West UK, Northern Ireland, Scotland, South-East UK, South-West UK, Wales, West Midlands, Yorkshire and the Humber*). REIGN OF FRANCE: Belgium (*Vlaams Gewest*); France (*East France, Île de France, Mediterranean France, North France, Paris Basin, South-East France, South-West France, West France*). REIGN OF HUNGARY: Hungary (*Central Hungary, Styria-Hungary, West Hungary*); Slovakia (*East Slovakia, West Slovakia*). REIGN OF POLAND: Poland (*East Poland, North Poland*). REIGN OF SPAIN: Spain (*Andalucía, Aragon, Asturias - Cantabria, Baleares, Castilla-La Mancha, Castilla y León, Cataluña, Comunidad Valenciana, Extremadura, Galicia, Madrid, Murcia, Navarra - Rioja, País Vasco*). SARDINIAN GIUDICATI: Italy (*Sardegna*). SAVOY: Italy (*Piemonte - Valle D’Aosta*). STATE OF MILAN: Italy (*Lombardia*). SWISS CANTONS: Switzerland (*North Switzerland, South Switzerland*). VENICE: Italy (*Friuli-Venezia Giulia - Veneto*).

Note: 1. The names of the medieval polities are in capital font, those of the historical regions that constitute the cross-section identifiers are in italic lowercase font, and those of the present-day countries are in regular lowercase font.

Figure 1: State's Fiscal Capacity and Trade Potential Over the Mediterranean



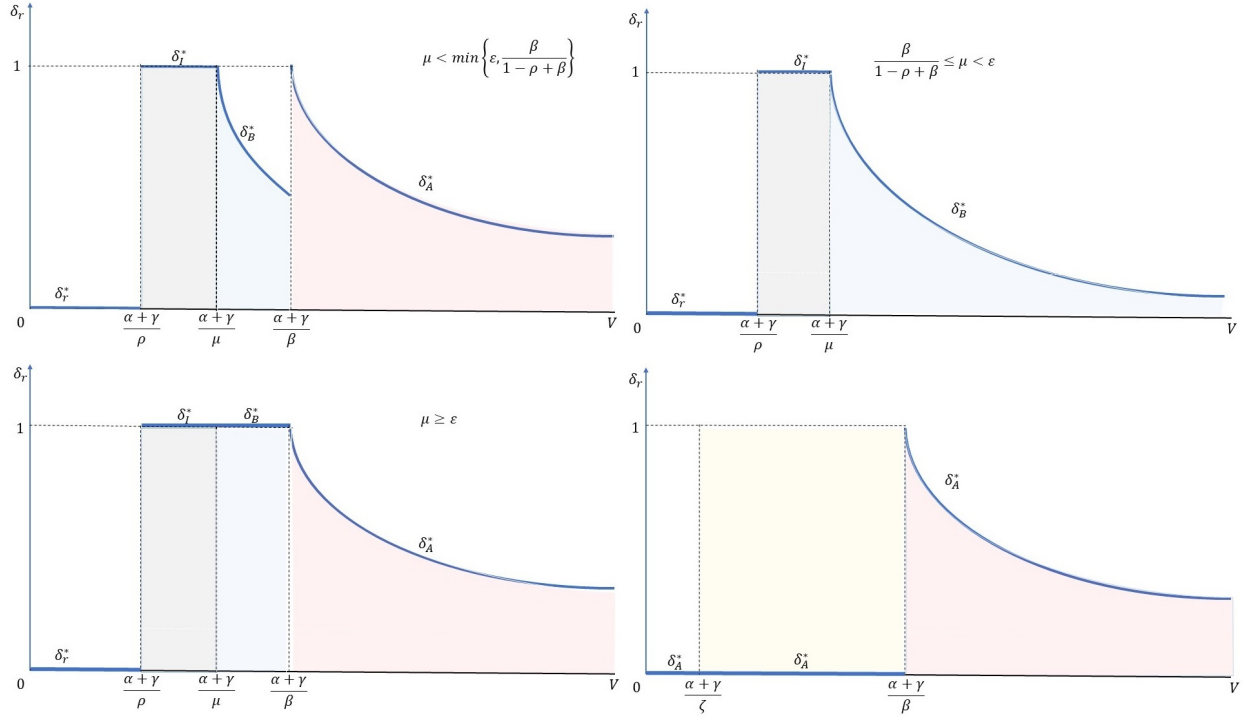
Note: 1. The graphs depict the evolution of the state's fiscal capacity—i.e., *Inclusiveness* and *Capacity*—and intensity of trade potential—i.e., *Trade-Potential*—for the historical regions with smaller than average *Trade-Potential* among those bordering the Mediterranean and their neighbors and for the other units in the same group. Table 2 describes each variable.

Figure 2: State's Fiscal Capacity and Trade Potential Over the Atlantic



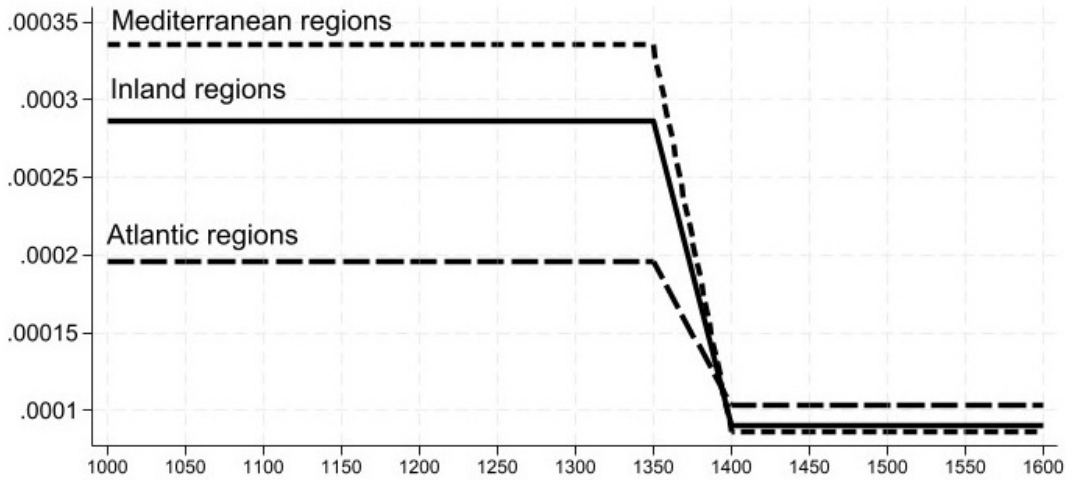
Note: 1. The graphs depict the evolution of the state's fiscal capacity—i.e., *Inclusiveness* and *Capacity*—and the intensity of trade potential—i.e., *Trade-Potential*—for the historical regions with smaller than average *Trade-Potential* among those bordering the Atlantic and their neighbors and for the other observations in the same group. Table 2 describes each variable.

Figure 3: Investment Return, Non-elite's Outside Option and State's Institutional Capacity



Note: 1. While the area below the δ_r^* curve is colored in gray, that below the δ_B^* curve is depicted in light blue, that below the δ_A^* curve is colored in orange and that above the δ_A^* curve is depicted in yellow.

Figure 4: Neighboring Historical Regions' Ease of Access to Key Trade Hubs
Trade-N



Note: 1. The graph depicts the evolution of the neighboring historical regions' ease of access to key trade hubs—i.e., $Trade-N$ —for the sample of units bordering the Mediterranean, that bordering the Atlantic and the inland ones. Table 2 describes $Trade-N$.

Table 2: Summary of Variables

	Variable	Definition and Sources	Statistics
State's institutional capacity:	<i>Political-Institutions:</i>	Dummy turning on if the limitations on the elites' decision-making power were substantial. Source: Boranbay and Guerriero (2019).	0.051 (0.221)
	<i>Inclusiveness:</i>	Indicator equal to 4 if local representatives designed the tax policies; 3 (2) if they were picked by the ruler together with local representatives and the latter had (no) veto power; 1 if tax policies were under the full control of the ruler. Source: see the Internet appendix.	1.807 (1.039)
	<i>Redistributiveness:</i>	Indicator equal to one if a sizable part of the population was partially exempted, and zero otherwise. Source: see the Internet appendix.	0.170 (0.376)
	<i>Autonomy:</i>	Indicator equal to one if the tax rate varied across locations, and zero if it was common to the entire polity. Source: see the Internet appendix.	0.490 (0.500)
	<i>Decentralization:</i>	Indicator equal to zero if the tax revenues were gathered by royal officers and one if they were gathered by local subtaxers. Source: see the Internet appendix.	0.464 (0.499)
	<i>Cooperation:</i>	Indicator equal to zero if the tax revenues financed only military and/or the royal expenses, one if they financed also local public goods. Source: see the Internet appendix.	0.421 (0.494)
	<i>Capacity:</i>	Normalized first principal component extracted from the indices <i>Inclusiveness</i> , <i>Redistributiveness</i> , <i>Autonomy</i> , <i>Decentralization</i> and <i>Cooperation</i> .	0.366 (0.312)
	<i>Complexity:</i>	Indicator equal to one if the taxable value was difficult to estimate, and zero otherwise. Source: see the Internet appendix.	0.359 (0.480)
	<i>Tax-Rate:</i>	Marginal rate of tallages, feudal aids and sale taxes. Source: see the Internet appendix.	0.022 (0.063)
	<i>EQI:</i>	European quality index. Source: European Quality of Government Project, https://www.gu.se/en/quality-government/qog-data/data-downloads	0.050 (0.790)
Investment return:	<i>Trade-Potential:</i>	Urban potential. Source: Bosker et al. (2013).	0.364 (0.521)
	<i>Trade-Potential-C:</i>	Christian urban potential. Source: Bosker et al. (2013).	0.295 (0.442)
	<i>Trade-Potential-M:</i>	Muslim urban potential. Source: Bosker et al. (2013).	0.068 (0.135)
Control variables:	<i>Culture:</i>	Cumulated discounted number of years of activity of Cistercian and Franciscan houses per square km. Source: Boranbay and Guerriero (2019).	0.127 (0.261)
	<i>External-Conflicts:</i>	Share of previous half-century in which the polity was involved in external conflicts. Source: Jaques (2007).	0.151 (0.213)
	<i>Internal-Conflicts:</i>	Share of previous half-century in which the polity was involved in internal conflicts. Source: Jaques (2007).	0.074 (0.156)
	<i>Circumscription:</i>	Ratio of the historical region's value of <i>Trade-Potential</i> to the average of <i>Trade-Potential</i> over the neighboring historical regions. Source: Bosker et al. (2013).	1.363 (2.809)
	<i>LPD:</i>	Log of the population density, in inhabitants per square km, averaged over the cells in the historical region. Source: HYDE 3.1 dataset, ftp://ftp.pbl.nl/hyde/hyde31_final/	2.978 (0.582)
Access to trade routes:	<i>Coast:</i>	Dummy for bordering the Mediterranean between 1000 and 1350 and the Atlantic between 1400 and 1600.	0.274 (0.446)
	<i>Coast-N:</i>	Dummy for bordering the Mediterranean between 1000 and 1350 and the Atlantic between 1400 and 1600, averaged over neighboring historical regions.	0.217 (0.333)
	<i>Trade:</i>	Inverse average sea distance to the most commercially-relevant Mediterranean (Atlantic) hubs between 1000 and 1350 (otherwise).	0.0002 (0.0001)
	<i>Trade-N:</i>	Inverse average sea distance to the most commercially-relevant Mediterranean (Atlantic) hubs between 1000 and 1350 (otherwise), averaged over neighboring historical regions.	0.0002 (0.0001)
Note:	1.	The last column reports the mean value and, in parentheses, the standard deviation of each variable. Both are computed building on the sample used in tables 3 to 7.	

Table 3: State's Fiscal Capacity, Political Institutions and Marginal Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	The dependent variable is <i>Capacity</i>								
<i>Inclusiveness</i>	0.150 (0.009)***								
<i>Redistributiveness</i>		0.400 (0.029)***							
<i>Autonomy</i>			0.415 (0.024)***						
<i>Decentralization</i>				0.498 (0.018)***					
<i>Cooperation</i>					0.507 (0.018)***				
<i>Political-Institutions</i>						0.134 (0.025)***			
<i>Complexity</i>							0.370 (0.034)***		
<i>Tax-Rate</i>								0.056 (0.007)***	
<i>EQI</i>									0.695 (0.239)***
Estimation	OLS.								
Within R ²	0.48	0.53	0.54	0.71	0.66	0.44	0.25	0.33	0.11
Number of observations	3510	3510	3510	3510	3510	3510	3510	1493	88

Notes: 1. Standard errors clustered at the historical regional level (standard errors) in the parentheses of columns (1) to (8) (column (9)). *** denotes significant at the 1% confidence level; **, 5%; *, 10%.
2. Levy, historical region and time fixed effects are included except in column (9) where we only consider country fixed effects.

Table 4: The Origins of the State's Institutional Capacity

	(1)	(2)	(3)
	The dependent variable is:		
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
<i>Trade-Potential</i>	- 0.127 (0.064)**	- 0.487 (0.182)***	- 0.063 (0.021)***
Estimation	Levy, historical region and half-century fixed effects OLS.		
Within R ²	0.18	0.16	0.24
Number of observations	3510	3510	3510
Note:	1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.		

Table 5: Gaining More Insights About Causality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	The dependent variable is:								
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
<i>Trade-Potential-C</i>	- 0.139 (0.061)**	- 0.487 (0.187)**	- 0.062 (0.022)***						
<i>Trade-Potential-M</i>	- 0.564 (0.202)***	- 0.503 (0.434)	- 0.014 (0.049)						
<i>Trade-Potential</i>				- 0.166 (0.087)*	- 0.472 (0.136)***	- 0.063 (0.019)***	- 0.069 (0.045)*	- 0.531 (0.188)***	- 0.069 (0.022)***
<i>Trade-Potential-F</i>				0.041 (0.034)	- 0.016 (0.120)	0.0001 (0.012)			
<i>Culture</i>							- 0.317 (0.074)***	- 0.515 (0.150)***	- 0.056 (0.020)***
<i>External-Conflicts</i>							0.055 (0.018)***	0.028 (0.228)	0.022 (0.023)
<i>Internal-Conflicts</i>							0.059 (0.018)***	- 0.242 (0.177)	- 0.011 (0.020)
<i>Circumscription</i>							- 0.010 (0.004)**	0.041 (0.025)***	0.005 (0.002)**
<i>LPD</i>							0.189 (0.052)***	1.208 (0.281)***	0.254 (0.041)***
Estimation	Levy, historical region and half-century fixed effects OLS.								
Within R ²	0.19	0.16	0.24	0.18	0.16	0.24	0.28	0.19	0.25
Observations	3510	3510	3510	3510	3510	3510	3510	3510	3510
Note:	1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.								

Table 6: Using Selection on Observables to Assess the Bias from Unobservables

	(1)	(2)	(3)
	The dependent variable is		
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
The index is calculated for <i>Trade-Potential</i>	2.1	6.4	9.5
Note:	1. The restricted set of controls includes those employed in the specifications reported in table 4, whereas the “full set” of covariates incorporates those used in the specifications listed in columns (7) to (9) of table 5. The sample size is always 3510.		

Table 7: 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
	The dependent variable is:					
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
<i>Trade-Potential</i>	- 0.085 (0.044)**	- 0.383 (0.204)*	- 0.052 (0.023)**	- 0.077 (0.146)	- 2.092 (0.920)***	- 0.362 (0.205)*
	First-Stage for <i>Trade-Potential</i>					
<i>Trade-N</i>				690.699 (179.914)***	690.699 (179.914)***	690.699 (179.914)***
	OLS	OLS	OLS	2SLS	2SLS	2SLS
F-test of excluded instrument				14.74	14.74	14.74
P-value of Anderson under-identification test				0.00	0.00	0.00
P-value of endogeneity test				0.96	0.02	0.08
Within R ²	0.30	0.20	0.25			
Number of Observations	3510	3510	3510	3510	3510	3510
Notes:	1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.					
	2. All specifications include levy, historical region and half-century fixed effects, <i>Coast</i> , <i>Coast-N</i> , and <i>Trade</i> . Controls used in second-stages are included in the first-stages.					
	3. The endogenous variable is <i>Trade-Potential</i> , and the excluded instrument is <i>Trade-N</i> .					
	4. The null hypothesis of the Anderson underidentification test is that the excluded instrument is uncorrelated with the endogenous variable.					
	5. The null hypothesis of the endogeneity test is that the endogenous regressor can be treated as exogenous.					

APPENDIX (FOR ONLINE PUBLICATION)

I Supplementary Tables

Table I: The Sample — Matching Between NUTS 2 and Historical Regions

<i>Styria-Austria</i> (Burgenland, Niederösterreich, Oberösterreich; Steiermark; Wien); <i>Tyrol - Trentino-Alto Adige</i> (Kärnten, Salzburg, Tirol, Vorarlberg, Bolzano, Trento); <i>Région Bruxelles</i> (Région Bruxelles, Vlaams-Brabant); <i>Région Wallone</i> (Brabant Wallon, Hainaut, Liège, Luxembourg, Namur); <i>Vlaams Gewest</i> (Antwerpen, Limburg, Oost-Vlaanderen, West-Vlaanderen); <i>East Czech Republic</i> (Jihovýchod, Moravskoslezsko, Stredni Morava); <i>West Czech Republic</i> (Střední Čechy, Severozapad, Severovýchod, Jihozapad, Praha); <i>Corse</i> ; <i>East France</i> (Alsace, Franche-Comté, Lorraine, Rhône-Alpes); <i>Île de France</i> ; <i>Mediterranean France</i> (Languedoc-Roussillon, Provence-Alpes-Cote D'azur); <i>North France</i> (Champagne-Ardenne, Picardie, Haute-Normandie, Basse-Normandie, Nord-pas-de-Calais, Pays de la Loire, Bretagne); <i>Paris Basin</i> (Limousin, Centre, Bourgogne); <i>South-East France</i> (Auvergne); <i>South-West France</i> (Midi-Pyrénées); <i>West France</i> (Poitou-Charentes, Aquitaine); <i>Baden-Württemberg</i> (Stuttgart, Karlsruhe, Freiburg, Tübingen); <i>Bayern</i> (Oberbayern, Niederbayern, Oberpfalz, Oberfranken, Mittelfranken, Unterfranken, Schwaben); <i>Brandenburg</i> (Berlin, Brandenburg Nordost, Brandenburg Südwest); <i>Bremen - Hamburg - Niedersachsen</i> (Bremen, Hamburg, Braunschweig, Hannover, Lüneburg, Weser-Ems); <i>Hessen</i> (Darmstadt, Gießen, Kassel); <i>Mecklenburg-Vorpommern</i> ; <i>Nordrhein-Westfalen</i> (Düsseldorf, Köln, Münster, Detmold, Arnsberg); <i>Rheinland-Pfalz - Saarland</i> (Koblenz, Trier, Rheinhessen-Pfalz, Saarland); <i>Sachsen</i> (Chemnitz, Dresden, Leipzig); <i>Schleswig-Holstein</i> ; <i>Thüringen - Sachsen-Anhalt</i> ; <i>Central Hungary</i> (Közép-Magyarország, Észak-Magyarország); <i>Styria-Hungary</i> (Észak-Alföld, Dél-Alföld); <i>West Hungary</i> (Közép-Dunántúl, Dél-Dunántúl, Nyugat-Dunántúl); <i>East Ireland</i> (Southern and Eastern); <i>West Ireland</i> (Border, Midland and Western); <i>Abruzzo - Molise</i> ; <i>Basilicata - Campania</i> ; <i>Calabria</i> ; <i>Emilia-Romagna</i> ; <i>Friuli-Venezia Giulia - Veneto</i> ; <i>Lazio</i> ; <i>Liguria</i> ; <i>Lombardia</i> ; <i>Marche - Umbria</i> ; <i>Piemonte - Valle D'Aosta</i> ; <i>Puglia</i> ; <i>Sardegna</i> ; <i>Sicilia</i> ; <i>Toscana</i> ; <i>Noord Nederland - Groningen</i> (Drenthe, Flevoland, Friesland, Gelderland, Groningen, Noord-Holland, Overijssel); <i>Oost-Nederland</i> (Limburg); <i>West-Nederland</i> (Zeeland); <i>Zuid-Nederland</i> (Noord-Brabant, Utrecht, Zuid-Holland); <i>East Poland</i> (Lubelskie, Mazowieckie, Podlaskie, Warminsko-Mazurskie); <i>North Poland</i> (Łódzkie, Kujawsko-Pomorskie, Pomorskie, Wielkopolskie); <i>South Poland</i> (Malopolskie, Dolnoslaskie, Opolskie, Podkarpacie, Slaskie, Swietokrzyskie); <i>West Poland</i> (Lubuskie, Zachodniopomorskie); <i>Alentejo</i> ; <i>Algarve</i> ; <i>Centro</i> ; <i>Lisboa - Vale do Tejo</i> ; <i>Norte</i> ; <i>East Slovakia</i> (Východné Slovensko, Západné Slovensko, Stredné Slovensko); <i>West Slovakia</i> (Bratislavský Kraj); <i>Carniola</i> (Vzhodna); <i>Styria-Slovenia</i> (Zahodna); <i>Andalucia</i> ; <i>Aragon</i> ; <i>Asturias - Cantabria</i> ; <i>Baleares</i> ; <i>Castilla-La Mancha</i> ; <i>Castilla y León</i> ; <i>Cataluña</i> ; <i>Comunidad Valencian</i> ; <i>Extremadura</i> ; <i>Galicia</i> ; <i>Madrid</i> ; <i>Murcia</i> ; <i>Navarra - Rioja</i> ; <i>Pais Vasco</i> ; <i>North Switzerland</i> (Nordwestschweiz, Zürich, Ostschweiz); <i>South Switzerland</i> (Espace Mittelland, Région Lémanique, Ticino, Zentralschweiz); <i>East Anglia - London</i> (London-Inner, London-Outer, East Anglia, Bedfordshire and Hertfordshire, Essex); <i>East Midlands</i> (Derbyshire and Nottinghamshire, Leicestershire, Rutland and Northamptonshire, Lincolnshire); <i>North-East UK</i> (Tees Valley and Durham, Northumberland and Tyne and Wear); <i>North-West UK</i> (Cumbria, Cheshire, Greater Manchester, Lancashire, Merseyside); <i>North-east Ireland</i> ; <i>Scotland</i> (Eastern Scotland, South Western Scotland, North Eastern Scotland, Highlands and Islands); <i>South-East UK</i> (Surrey, East and West Sussex, Hampshire and Isle of Wight, Kent, Berkshire, Buckinghamshire and Oxfordshire); <i>South-West UK</i> (Dorset and Somerset, Cornwall and Isles of Scilly, Devon, Gloucestershire, Wiltshire and Bristol/Bath area); <i>Wales</i> (Wales-West, Wales-East); <i>West Midlands</i> (Herefordshire, Worcestershire and Warwickshire, Shropshire and Staffordshire, West Midlands); <i>Yorkshire and the Humber</i> (East Yorkshire and Northern Lincolnshire, North Yorkshire, South Yorkshire, West Yorkshire).	
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Note: 1. The names of the present-day NUTS 2 regions are in regular font, and those of the historical regions to which they belonged are in *Italic* type.

Table II: Summary of Variables

	Variable	Definition and Sources	Statistics
State's fiscal capacity:	<i>Inclusiveness-W</i> :	<i>Inclusiveness</i> averaged over historical polities weighted by the contribution of each polity to the historical region. Source: see the Internet appendix.	0.040 (0.185)
	<i>Capacity-W</i> :	<i>Capacity</i> averaged over historical polities weighted by the contribution of each polity to the historical region. Source: see the Internet appendix.	1.820 (0.988)
	<i>Political-Institutions-W</i> :	<i>Political-Institutions</i> averaged over historical polities weighted by the contribution of each polity to the historical region. Source: Boranbay and Guerriero (2019).	0.419 (0.271)
Other: controls:	<i>Farming-Return</i> :	Growing season temperature in Celsius averaged over the previous half-century and each historical region. Source: Guiot et al. (2010).	0.014 (0.268)
	<i>Black-Death</i> :	Black Death mortality rate averaged over the previous half-century and each historical region. Source: Benedictow (2004).	4.539 (15.750)

Note: 1. The last column reports the mean value and, in parentheses, the standard deviation of each variable. Both are computed building on the sample used in tables III to VI.

Table III: Considering the Evolution of the Historical Boundaries

	(1)	(2)	(3)	(4)	(5)	(6)
				The dependent variable is:		
	<i>Political-Institutions-W</i>	<i>Inclusiveness-W</i>	<i>Capacity-W</i>	<i>Political-Institutions-W</i>	<i>Inclusiveness-W</i>	<i>Capacity-W</i>
<i>Trade-Potential</i>	- 0.082 (0.058)	- 0.396 (0.181)**	0.022 (0.016)	- 0.032 (0.039)	- 0.442 (0.194)**	0.019 (0.016)
Estimation	Levy, historical region and half-century fixed effects OLS.					
R ²	0.12	0.16	0.13	0.21	0.19	0.14
Number of observations	3510	3510	3510	3510	3510	3510

Notes: 1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.
2. The specifications in columns (4) to (6) also include *Culture*, *External-Conflicts*, *Internal-Conflicts*, *Circumscription* and *LPD*.

Table IV: Single Components of the State's Fiscal Capacity

	(1)	(2)	(3)	(4)
		The dependent variable is:		
	<i>Redistributiveness</i>	<i>Autonomy</i>	<i>Decentralization</i>	<i>Cooperation</i>
<i>Trade-Potential</i>	- 0.039 (0.014)***	- 0.016 (0.038)	- 0.101 (0.045)**	- 0.001 (0.009)
Estimation	Levy, historical region and half-century fixed effects OLS.			
Within R ²	0.01	0.13	0.23	0.34
Number of observations	3510	3510	3510	3510
Note:	1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.			

Table V: Controlling for the Farming Return and the Severity of the Black Death

	(1)	(2)	(3)	(4)	(5)	(6)
			The dependent variable is:			
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
<i>Trade-Potential</i>	- 0.109 (0.059)*	- 0.418 (0.177)**	- 0.057 (0.021)***	- 0.124 (0.062)**	- 0.482 (0.182)***	- 0.063 (0.021)***
<i>Farming-Return</i>	0.345 (0.078)***	1.309 (0.320)***	0.118 (0.051)**			
<i>Black-Death</i>				0.019 (0.006)***	0.032 (0.020)	0.003 (0.002)
Estimation	Levy, historical region and half-century fixed effects OLS.					
Within R ²	0.22	0.18	0.24	0.19	0.16	0.24
Observations	3510	3510	3510	3510	3510	3510
Note:	1. Standard errors clustered at the historical regional level in parentheses. *** denotes significant at the 1% confidence level; **, 5%; *, 10%.					

Table VI: Allowing for Spatial Correlation

	(1)	(2)	(3)	(4)	(5)	(6)
			The dependent variable is:			
	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>	<i>Political-Institutions</i>	<i>Inclusiveness</i>	<i>Capacity</i>
<i>Trade-Potential</i>	- 0.127 (0.067)*	- 0.487 (0.169)***	- 0.063 (0.025)**	- 0.127 (0.040)***	- 0.487 (0.140)***	- 0.063 (0.016)***
Estimation	Levy, historical region and half-century fixed effects OLS.					
Within R ²	0.18	0.16	0.16	0.40	0.38	0.52
Number of observations	3510	3510	3510	3510	3510	3510
Note:	1. Driscoll-Kraay (Conley's (1999)) standard errors (with Bartlett kernel) in the parentheses of columns (1) to (3) (columns (4) to (6)). The distance beyond which the correlation between error terms is assumed to be zero is 1058 km in columns (4) to (6). *** denotes significant at the 1% confidence level; **, 5%; *, 10%.					