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The Dynamic Consequences of State-Building: Evidence from the French Revolution

Cédric Chambru, Emeric Henry and Benjamin Marx

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Cédric Chambru† — *University of Zurich*

Emeric Henry‡ — *Sciences Po and CEPR*

Benjamin Marx§ — *Sciences Po and CEPR*

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Abstract

How do radical reforms of the state shape economic development over time? In 1790, France's first Constituent Assembly overhauled the kingdom's organization to set up new administrative entities and local capitals. In a subset of departments, new capitals were chosen quasi-randomly as the Assembly abandoned its initial plan to rotate administrative functions across multiple cities. We study how exogenous changes in local administrative presence affect the state's coercive and productive capacity, as well as economic development in the ensuing decades. In the short run, proximity to the state increases taxation, conscription, and investments in law enforcement capacity. In the long run, the new capitals and their periphery obtain more public goods and experience faster economic development. One hundred years after the reform, capitals are 40% more populated than comparable cities in 1790. Our results shed new light on the intertemporal and redistributive impacts of state-building in the context of one of the most ambitious administrative reforms ever implemented.

JEL Classifications: D70, H41, H71, O18, O43

Keywords: State Capacity, State-Building, Administrative Reform, Economic Development

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†Department of Economics. Email: cedric.chambru@econ.uzh.ch.

‡Department of Economics. Email: emeric.henry@sciencespo.fr.

§Department of Economics. Email: benjamin.marx@sciencespo.fr.

1 Introduction

State capacity is considered essential for economic development.[1] History, however, provides many examples of both failures and successes of state-building. Success seems to depend on how the different dimensions of state capacity evolve and expand over time. Historical examples highlight the importance of early investments in coercive capacity, understood as the state's ability to enforce discipline on society and to extract resources from citizens (Besley and Persson, 2010). Ancient Greece, Rome, and imperial China all provide relevant examples. However, the dynamic evolution of these and other functions of the state, such as public goods provision, is not well understood in the literature on state capacity.

We exploit one of history's most ambitious state-building experiments, the administrative reform initiated by the French Revolution, to explore the dynamics of state-building and its consequences for economic development. In February 1790, France's first Constituent Assembly overhauled the administration of the kingdom to set up a radically different organization of the state. In response to widespread grievances about administrative complexity in 1789, the Assembly established new centers concentrating local administrative functions. The main achievement of the 1790 reform was to divide the territory into 83 homogeneous units, known as *départements*, in which citizens would never be more than a day of travel away from their nearest administrative center. After 1800, Napoléon solidified this reform and gave additional relevance to these new local capitals by appointing civil servants and by creating local state institutions which largely survived to the present day.

Our identification strategy exploits a unique feature of the 1790 reform. Facing pressure to design a reform in a few months, the Assembly silenced competing local demands in a number of departments by establishing a rotation (*alternat*) or a division (*partage*) of state functions across multiple cities. Since these solutions proved impractical, the Assembly abolished rotations in September 1791 and ordered the local administration to remain where it was currently located. The rotation design provides a unique setting to study how exogenous variation in local administrative presence affects the state's coercive power, public goods provision, and economic development. We identify causal effects of state-building by comparing final capitals with candidate cities that were not ultimately chosen. We also estimate the impact of distance to both types of cities among neighboring municipalities. In support of our identification strategy, we show that final capitals were indistinguishable from other candidate cities along a range of pre-reform demographic and administrative characteristics.

A second key novelty of our paper is to build comprehensive data at a fine level both in space, at the municipal level, and in time, with a particular focus on the early 19th century. Several data sources allow us to explore the dynamic effects of state-building on different dimensions of state capacity. We estimate short-term effects of the reform on the establishment of municipal cadasters, military conscription, and the construction of prisons and tribunals. We then explore how the reform affected local public goods, including schools and public infrastructure such as railways and telegraph access. To measure impacts on economic activity, we digitized data on the location of industrial establishments in 1839; we also obtained patent registration and local banking activity data spanning the 19th century. Finally, we

[1] In economics, Acemoglu et al. (2015); Becker et al. (2020); Cantoni et al. (2019); Dell et al. (2018); Dincecco and Katz (2014); Gennaioli and Voth (2015); and Johnson and Koyama (2017), among many others, provide recent empirical evidence.

study how the reform affected population growth and employment in the long run. Together, these data sources allow us to characterize, for the first time, the short- and long-term economic impacts of the landmark 1790 reform at the level of cities and villages.

Conceptually, state capacity captures the state's ability to implement policy and its "power to achieve intended outcomes" (Lindvall and Teorell, 2017; Mann, 1984). This includes activities as diverse as tax collection, military recruitment, law enforcement, and public goods provision. Throughout the paper, we categorize these functions into three types. The first is *extractive capacity*, which refers to the state's ability to obtain fiscal or physical contributions from citizens. The second, which relates to Foucault (1975), is *enforcement capacity*—the ability to control the population through prisons and other law enforcement institutions. The third is *productive capacity*, the ability of the state to produce local and global public goods. Consistent with Besley and Persson (2010), we conceptualize extractive and enforcement capacity as inputs in the production of public goods, and we refer to the combination of these inputs as the *coercive capacity* of the state.[2]

Our analysis sheds light on the entire causal chain linking a major administrative reform to these different dimensions of state capacity and subsequent economic development. We first provide a simple model to guide our empirical analysis. This spatial equilibrium model features two cities and introduces dynamics in the form of investments in state capacity. The central government chooses the tax rate and how to allocate revenue raised between local and global public goods, as well as investments in coercive capacity which raise future tax collection potential. Productivity and wages increase in the level of local public goods. Initially, the capital city receives an exogenous shock in coercive capacity.

The model delivers the following dynamics. In the short run, the capital raises more taxes to build additional coercive capacity and to fund global public goods. These taxes drive citizens away, unless the advantage in coercive capacity is so large that it also allows the capital to fund more local public goods. The gap in coercive capacity then grows larger than the initial shock. In the second period, the capital raises more taxes due to its higher coercive capacity. Citizens are attracted by the higher productivity and supply of local public goods in the capital, which experiences population growth in the long run.

In our empirical analysis, we first study the dynamic evolution of the state's extractive capacity. Capitals receive their first cadaster earlier and they pay more business tax per industrial establishment in the country's first industrial census conducted in 1839. These cities also send more men to Napoleonic armies between 1802-1815, despite being no more populated than comparable candidate cities. We also observe a rapid increase in enforcement capacity: capitals have more prisons and tribunals as early as 1820, and they have a larger police force by 1816. Overall, we provide consistent evidence that the gap in coercive capacity between the capital and other candidate cities grows very early in the 19th century.

The impacts of the reform on the state's productive capacity materialize later in the period. Capitals are more likely to have a secondary school, but this effect is only present after 1850. Capitals also provide social services to a greater number of poor individuals later in the period, in 1871. Moreover, capitals are connected to the national telegraph network earlier than comparable candidate cities, and they are more

[2]We categorize investments in law enforcement (police, prisons, and courts) as investments in the coercive capacity of the state, which in turn facilitate the extraction of fiscal and physical resources from citizens. We acknowledge that these investments also deliver local public goods in the form of security and justice.

likely to have a train station by 1870, at the onset of the Second Industrial Revolution. These investments in local public goods likely contributed to subsequent urban growth and private sector activity.

The reform's impacts on economic development are moderate in the medium term and substantial in the long term. While capitals experience greater access to banks in 1840, there is not yet a clear divergence between them and other candidate cities in terms of industrial development by 1839.[3] Overall, tangible benefits of the reform materialize in the second half of the 19th century, perhaps as a result of the larger investments in public goods we observe in this period. More patents are registered by the residents of capital cities starting around 1870. Effects on population growth also become substantial in the late 19th century. On the eve of World War I, capitals are approximately 40% more populated than competing cities in 1790, with civil servants and their families explaining about a third of this difference.

This demographic divergence continues throughout the 20th century. By 1999, department capitals are markedly different in terms of demography and economic activity. We show that capitals attract more public and private employment across a range of different functions of the state. This long-term relationship has been documented in the literature: one of our main contributions is to explore, conceptually and empirically, all the dynamics linking these two endpoints.

These results on the dynamics of state-building and economic development also broadly apply to cities located close to the capital. Proximity to the capital increases fiscal contributions from both citizens (via the cadaster) and industrial establishments in the first half of the 19th century. Though proximity to the capital is not associated with an increase in local public goods provision, more public goods are available at the level of the *canton*, the lowest administrative level above the municipality, if the capital is located inside the canton. There is some evidence that banks and industrial establishments are more likely to locate in the periphery of department capitals. Finally, the population of towns and villages neighboring the capital grows comparatively larger than the population of municipalities located close to other candidate cities, starting in the early 20th century.

Our results provide insights on the recent successes and failures of state-building. History contains many examples of successful states that first built up coercive capacity before they could invest in productive capacity. In the early days of the Roman Republic, in Europe's medieval communes, or in early Ming dynasty China (Szonyi, 2017), mandatory military service was a key dimension of state power, and often a prerequisite for participation in public life. By contrast, fragile states in recent years have faced numerous challenges in establishing coercive capacity. Recent work on the origins of state capacity in low-income settings tends to focus on fiscal capacity (Bergeron et al., 2021; Weigel, 2020), in contexts where the state lacks the ability to provide security and enforce law and order (Sánchez de la Sierra, 2020). France's experience, analyzed through the lens of post-revolutionary state-building, illustrates that coercive and productive capacity must go hand in hand for strong states to emerge in the long run.

We relate to a large literature on state capacity. A first branch of this literature studies the long-term determinants (e.g., Besley and Persson, 2010; Tilly, 1990) and consequences (e.g., Acemoglu et al., 2015; Dincecco and Katz, 2014) of investments in state capacity, broadly defined. In related work, Bai and Jia

[3] We also uncover some evidence of complementarities between investments in state capacity and the pre-existing industrial potential of departments. Leveraging data from Juhász (2018), we show that state capacity has a larger effect on industrial production and innovation in departments with greater industrial potential at the beginning of the period.

(2021) show how changes in political hierarchy across Chinese cities affected population density and urbanization. To our knowledge, our paper is the first in this literature to document how investments in state capacity unfold after a radical administrative reform in the short, medium, and long run. We identify which dimensions of state capacity are most responsive to policy efforts to create a modern state. The unique historical experiment associated with the 1790 reform also allows us to build an original identification strategy exploiting the quasi-random allocation of administrative status.

Other papers in the literature emphasize specific dimensions of state capacity, including extractive, fiscal, enforcement, productive, or administrative capacity. Gennaioli and Voth (2015) show that fiscal capacity is triggered by conflict and responds to technological leaps in warfare. Cantoni et al. (2019) study the rise of fiscal capacity in the Holy Roman Empire and its consequences for the survival of local polities. Dittmar and Meisenzahl (2019) focus on the long-term productive benefits of legal innovations that spurred human capital investments in German cities during the 1500s. Johnson (2015) studies the relationship between fiscal capacity and nation-building in post-revolutionary France. We unbundle empirically these different dimensions of state capacity and we show that state capacity begets more state capacity—in particular, early investments in coercive capacity yield subsequent payoffs in terms of productive capacity and economic development.

A related literature studies the last step of our dynamic analysis: the impact of public goods provision on private sector activity, in environments where coercive capacity is already well established. This literature provides mixed evidence on the extent of complementarities between public and private employment. Most of the literature focuses on the relocation of central administrations producing global public goods (Becker et al., 2021; Faggio et al., 2019). In settings where administrative presence also involves a higher production of local public goods, the link between public and private sector activity appears to be positive (Guillouzouic et al., 2021). In related work, Campante and Do (2014) study how the location of U.S. state capitals affects government accountability. We leverage the fine lens of our data to study how state capacity affects growth across capitals and other cities with comparable potential.

Finally, we contribute to a growing literature studying the economic consequences of the Revolution and the Napoleonic period inside and outside of France (Acemoglu et al., 2011; Finley et al., 2021; Franck and Michalopoulos, 2017; Juhász, 2018; Postigliolaa and Rota, 2021; Squicciarini and Voigtländer, 2016). de Tocqueville (1856) famously argued that the Revolution did not fundamentally disrupt social and political dynamics inherited from the Ancien Régime, since centralizing trends had already been at work under the monarchy. Todd and Le Bras (2012), among many others, argued that the creation of departments shaped modern patterns of spatial inequality. Our paper is the first in this literature to study the consequences of revolutionary reforms at the municipal level. We show that the Revolution set in motion a long-term divergence that benefited newly chosen centers of administrative power, which attracted subsequent investments in state capacity.

The rest of the paper is organized as follows. Section 2 provides background on the administrative reform and the rotation of capitals. Section 3 discusses our conceptual framework. Section 4 describes our data and empirical strategy. Section 5 presents our results on coercive and productive capacity, while Section 6 looks at impacts on economic development and population growth. Section 7 concludes.

2 Historical Background

2.1 Ancien Régime Divisions

On the eve of the Revolution, the French Kingdom was governed through many layers of jurisdictions inherited from Roman and medieval institutions. Various types of administrative entities with non-overlapping boundaries fulfilled state functions at the local level. A complete description of *Ancien Régime* administrative functions is beyond the scope of this paper, but here we provide a brief summary building on the seminal work of Nordman et al. (1995).

First, France was divided into 136 *évêchés* (bishoprics) which broadly mirrored the boundaries of ancient Roman provinces. Being the seat of a bishopric was a source of considerable prestige. These cities concentrated the local functions of the Catholic Church and remained relevant for other basic functions of the state, such as censuses (population was counted at the level of parishes). The royal administration was itself divided into entities known as *généralités* and *subdélégations*, competent for various functions including tax collection and military surveillance of the territory. Within the généralités, tax collection was organized around local centers known as *recettes des finances*. Fiscal rules differed across two types of jurisdictions known as *pays d'élection*, where the local representative of the Crown enjoyed broad powers, and *pays d'états*, where tax collection was governed by local rules and regulated by a representative assembly of the three estates. Judicial functions were mostly fulfilled at the level of *bailliages* (bailiwicks), known as *sénéchaussées* in southern France.[4] These entities were also used for electoral representation purposes. The quotas of local representatives at the Estates General of 1614 and 1789 were determined at the level of the bailiwicks. In 1789, each bailiwick sent between 4 and 40 individuals to Versailles.

Overall, France had approximately 800 local administrative centers before the Revolution. Because the attribution of functions across these centers was complex, and because the boundaries between these various entities were often contested, administrative complexity was a major issue in the *cahiers de doléances* (lists of grievances) drafted ahead of the Estates General of 1789. In practice, a single parish could depend on multiple jurisdictions for different services—"the case of citizens having to visit different towns to face trial and to pay taxes were innumerable" (Nordman et al., 1995).

2.2 The February 1790 Reform

In June 1789, delegates from the Third Estate gathered in Versailles declared themselves the National Assembly, and soon after swore an oath to not disband until a new constitution was drafted for the kingdom. This process led to the creation of a constitutional committee (*Comité de constitution*) composed of eight members. The committee played a key role in the design of the new administrative map of the French kingdom between September 1789 and February 1790.[5]

[4] The judicial hierarchy also included higher courts known as *présidial* as well as the *Parlements* which rendered justice in the name of the King with no possibility of appeal. There were 13 Parlements of unequal size by the end of the Ancien Régime. The largest of these, the Parlement of Paris, had jurisdiction over nearly half of the French territory.

[5] The committee was created on July 6 and initially composed of 30 members. The size of the committee was reduced to 8 members after July 15, and its composition was modified on September 29, 1789. The committee is sometimes referred to as the Sieyès-Thouret committee after its two most influential members: Abbé Sieyès (1748-1836), a Third Estate representative

Through a series of royal decrees culminating in the Decree Relative to the Division of the Kingdom adopted on February 26th 1790, the committee undertook to drastically revamp the French administrative map. The guiding principle of the reform was to break down old provinces and to unify local state functions within a new, pyramidal nomenclature. An early reform design advocated by Sieyès proposed a partition of the kingdom into a perfect grid with 81 equal-sized cells (see Appendix Figure A.1, panel b). In order to facilitate citizen's access to administrative services, newly established local centers (*chefs-lieux de département*) would concentrate all the functions of the local state, including fiscal, judicial, administrative, and police functions.

However, the process of reallocating administrative functions across space was fraught with controversies and lobbying attempts by local elites—the committee examined more than 10,000 letters and met with 1,884 town emissaries (Nordman et al., 1995). The choice of local capitals was particularly sensitive since many long-standing administrative centers feared losing their local status and prominence (Margadant, 1992). In the end, the compromise solution adopted in the 1790 reform was to create 83 new administrative units of approximately equal size, known as departments (*départements*), further divided into *districts* and *cantons*. This solution preserved two founding principles of the initial proposal, namely the centralization of administrative functions and easy access of all citizens to the local administration. The new departments spanned approximately 18 by 18 leagues (approx. 6,400 km^2 in theory, 6,769 km^2 in our data), a size intended to allow citizens to travel to the capital in no more than one day.

2.3 Rotations and Divisions of Administrative Functions

In many of the new departments created in February 1790, no single city stood out as the obvious candidate to become the new capital. This resulted from the fact that many new artificial entities had to be created to reach the objective of equal-sized departments throughout the territory. In these instances, the committee received many competing demands from cities vying to preserve their historical status or to gain new functions. Nordman et al. (1995) describe this scramble for power:

> "Urban rivalries and multiple grievances were delicate to address (...). Resolving these conflicts embarrassed the Committee so much that, seizing upon a proposal by Rabaut Saint-Étienne, several legislative solutions were adopted to circumvent these challenges. On December 9, 1789, the rotation of local assemblies across several cities becomes legally possible; it is also envisioned that different types of public establishments can be based in distinct cities (...). These mechanisms make it possible to hasten the new division [of the kingdom] while silencing competing local claims."
>
> Nordman et al. (1995, Volume 5, p. 54) [authors' translation]

The solution adopted by the committee provides the basis for our identification of the causal impacts of the reform. Following Rabaut Saint-Étienne's proposed design, the February 1790 decree stipulated that in a subset of departments, administrative functions would rotate across different cities. In a small number of other departments, these functions would be shared across the department's major cities. In total, the decree established a rotation (*alternat*) system for 33 departments, specifying the list of rotating

from Paris, and Jacques-Guillaume Thouret (1746-1794), a Third Estate representative from Rouen.

cities for 17 of them, and a division of administrative functions (*partage des établissements*) for a further 7 departments. In some instances, the final choice was ultimately settled by a local vote (see Appendix B). Our analysis focuses on the departments for which candidate cities are explicitly listed in the February 1790 decree. Appendix Table A.1 lists these departments with the corresponding candidate cities.[6]

Rather unsurprisingly, the rotation system proved impractical and expensive. A new decree abolishing rotations was passed in September 1791, with the bill rapporteur stating:

> **"What is more ridiculous and onerous than these wandering administrations, which require the movement of papers, staff, a proliferation of buildings to accommodate them!** Your Constitution has established a direct surveillance over all the points of the Empire, every citizen finds near him an administration that directs him (...). As a result, the exodus of administrations has become not only useless, but also shocking; the time has come to put an end to this abuse."
>
> Preamble to the 11 September 1791 Decree [authors' translation]

Article 2 of this decree stipulated that capitals would "remain fixed in the locations in which they now reside." Precise information on the location of administrations in September 1791 is, to the best of our knowledge, unavailable, and we cannot therefore exclude that in some cases, the final choice corresponded to the first city in the rotation. However, what is essential for our identification is that the candidate cities were similar based on pre-reform characteristics, thus making the order of the rotation irrelevant. In Table 1 and Appendix Table A.3 (discussed in Section 4.3), we provide evidence that final capitals were statistically indistinguishable from other candidate cities along a wide range of baseline characteristics, including population in 1793 and 1800, population growth during the revolutionary period, and the presence of pre-existing administrative functions, police, and schools. Appendix B provides further historical background on the choice of candidate cities and capitals in each department in our sample.

2.4 Local Capitals After 1800

Some uncertainty around the location of new capitals remained throughout the revolutionary period. For example, in the departments of Tarn and Var, the capital was transferred at least twice between 1790 and 1800. In February 1800, Napoléon put an end to this uncertainty by relabelling department capitals as *préfectures* and by simultaneously appointing a new local representative of the central state, called prefect (*préfet*), in each capital. The map of French departments and their corresponding capitals has remained largely unchanged for the following two centuries.[7]

Moreover, Napoléon gave additional relevance to these new administrative units by appointing civil servants and by creating new institutions embodying the local state. These institutions are, for the most part, still in existence today. The prefects sitting in department capitals were given extensive powers as

[6] We do not include in our analysis the department of Rhône-et-Loire (where a rotation was initially envisioned) since this department was broken up into two separate departments in 1793.

[7] The main exceptions to this are the creation of the Tarn-et-Garonne department in 1808, the annexation of Nice and Savoy in 1860, and the boundary changes resulting from the German annexation of Alsace-Lorraine between 1870-1918. In addition, the capital of the Charente-Inférieure department was moved from Saintes to La Rochelle in 1810 and the capital of Var was moved from Draguignan to Toulon in 1974. Our results are robust to dropping these two departments from the sample.

the sole representative of the central state at this level. Napoléon once explained: "the prefects, once they are one hundred leagues away from the capital, have more power than myself" (Reymond, 1978) and later in his life compared the prefects to "emperors with small feet" (de Las Cases, 1824).

Napoléon also rebuilt the local fiscal capacity of the state by creating in each department a fiscal office (*direction du recouvrement des impositions directes*) staffed with a director and tax collectors. In 1807 he launched the project of building municipal cadasters, a task that was only completed in 1850. The cadaster was designed to facilitate the taxation of land property.[8] Finally, Napoléon created France's modern education system, including high schools (*lycées*) created in May 1802.[9] To accommodate these new institutions and new categories of civil servants, a large number of new public buildings were built in capital cities. In our analysis, we use the number of public building projects of various types as a measure of the administrative presence of the state.

3 Conceptual Framework

Section 2 and Appendix B describe how, in some departments, the capital city was quasi-randomly chosen from a pool of otherwise comparable candidate cities. We now present a conceptual framework analyzing how this initial shock affected these different cities in the short and the long run. This framework highlights the main dynamic tradeoffs faced by a central government in the process of building state capacity across space. The model is designed to study the dynamic evolution of coercive capacity, public goods provision, private goods production, and ultimately population.

3.1 Model

Setting. Consider two cities $\{c, r\}$, where c is the chosen capital city and r an initially comparable city without administrative status (r refers to rotation). There are two periods $t \in \{1, 2\}$. In period t, city j is characterized by its level of local public goods $G_{j,t}$ available only to citizens of city j, private goods $Q_{j,t}$, coercive capacity $C_{j,t}$, tax revenue $T_{j,t}$, population $N_{j,t}$, and wages $w_{j,t}$. Global public goods $\bar{G}_t$ are available in both cities. The two cities c and r are perfectly comparable at the beginning of period 1, except that the capital city receives a positive shock in coercive capacity, as described below.

Public and private goods. Private goods are produced according to the following production function:

$$Q_{j,t} = A_{j,t} N_{j,t}$$

where the productivity in city j and period t is given by $A_{j,t} = A(G_{j,t})^{\beta_1}$. This linear production function assumes that local public goods (schools, infrastructure, hospitals) increase the productivity of the city

[8]The idea to create a national cadaster emerged in 1791 in order to help the government to levy a new "property tax distributed by proportional equality on all built and non-built properties" (Clergeot, 2007). From August 1791, communes were authorized to carry out land surveying operations to improve the "knowledge of the economic resources of each administrative unit." These operations were financed by the central government until a 1821 law which transferred this responsibility to departments and municipalities.

[9]Other institutions relevant at the national level, but less so for the local one, were also created at the time. These include, among others, the Central Bank in 1800 and the Civil Code in 1804.

(as in Guillouzouic et al., 2021). The parameter β_1 captures the intensity of this effect. We assume that the private sector is competitive so that workers are paid their marginal product of labor: $w_{j,t} = A_{j,t}$.

Public goods are produced using tax revenues. We denote as $\mu_{j,t}$ the share of revenue allocated to local public goods and $\nu_{j,t}$ the share of revenue allocated to global public goods, where $\mu_{j,t}$ and $\nu_{j,t}$ will be choice variables. The rest of the tax revenue $(1-\mu_{j,t}-\nu_{j,t})$ is spent on building coercive capacity. Local public goods are produced using local tax revenues according to $G_{j,t} = \mu_{j,t}T_{j,t}$. Global public goods are produced combining resources from both cities, $\bar{G}_t = (R_{c,t})^{1/2}(R_{r,t})^{1/2}$, where $R_{j,t} = (\nu_{j,t}T_{j,t})^{\alpha_j}$. This captures the fact that collecting resources from each city requires coercion and is therefore costly. This is the second difference between the capital and the candidate city: we assume $\alpha_c > \alpha_r$.

Coercive capacity and taxes. Raising taxes requires coercive capacity, which here for simplicity we equate with fiscal capacity. We view this coercive capacity as a stock variable $C_{j,t}$ defined at the local level. An increase in coercive capacity allows the government to raise taxes more efficiently. We assume that the final tax revenue available is given by:

$$T_{j,t} = C_{j,t}\tilde{T}_{j,t}$$

where $\tilde{T}_{j,t} = \tau_{j,t}N_{j,t}w_{j,t}$ are the resources extracted in city j (assuming taxes are raised on income), $\tau_{j,t}$ standing for the individual tax rate. Thus, in the absence of coercive capacity ($C_{j,t} = 0$), tax revenue cannot be collected. We discuss this conceptualization of coercive capacity in Section 3.3.

Building coercive capacity requires investments. We assume the following production function for coercive capacity: $C_{j,t} = C_{j,t-1}\left(B_{j,t-1}\right)^{\sigma}$, i.e., coercive capacity increases proportionally to the budget amount allocated to it, where $B_{j,t} = (1-\mu_{j,t}-\nu_{j,t})T_{j,t}$. Before the beginning of the first period, the capital city receives a shock C in coercive capacity, so that $C_{c,1} = C_{r,1} + C$.

Preferences. We consider two types of actors in this environment: the central government and a mass of citizens N. There is no overall population growth. Citizen i in city j maximizes her utility given by:

$$U_j^t(i) = (Q_j^t)^{\gamma_1}(G_j^t)^{\beta_2}(\bar{G}^t)^{\beta_3}e^{\varepsilon_j^t(i)},$$

under the budget constraint $(1-\tau_j^t)w_j^t = Q_j^t$ (the private good is the numeraire). ϵ_{ijt} is an individual taste shock drawn from a type I extreme value distribution. The citizens are fully mobile every period and choose the city that maximizes their log indirect utility. However, we introduce an element of limited rationality: citizens who move in period t decide to move based on current conditions, even though they will face different conditions (taxes, public goods, etc.) in the next period.[10]

In this environment, the log indirect utility can be written:

$$\gamma_1 ln(Q_j^t) + \beta_2 ln(G_j^t) + \beta_3 ln(\bar{G}^t) + \varepsilon_j^t(i) \equiv V_j^t + \varepsilon_j^t(i)$$

so that V_j^t denotes the component of log indirect utility independent of the taste shock.

[10]This does not change the results but simplifies the resolution since the central government in setting taxes does not need to take into account the effect it might have on population in the current period.

Finally we discuss the government's objective. In the baseline model, we assume that a benevolent government maximizes the discounted sum of weighted log indirect utilities of citizens. We show below that the model can accommodate a government seeking to extract rents. The discount factor is given by δ and the government sets weight ξ on the welfare of the capital. Thus the government chooses tax rates and the allocation of tax revenues to maximize:

$$\xi V_{c,1} + (1-\xi)V_{r,1} + \delta\left(\xi V_{c,2} + (1-\xi)V_{r,2}\right).$$

Timing. In each period the timing is the following:

1. The government announces taxes as well as the allocation of tax revenue.
2. Taxes are raised, coercive capacity is realized, and public and private goods are produced.
3. Citizens draw their individual taste shock and make their location choice.

3.2 Predictions

The model yields the following predictions on the dynamic evolution of coercive capacity, public goods, private activity and population:

Proposition 1. *In equilibrium,*

1. *in Period 1,*
    - 1.a. *taxes are strictly higher in city c ($\tau^*_{c,1} > \tau^*_{r,1}$),*
    - 1.b. *if the initial shock in coercive capacity for the capital is not too large, $C < \bar{C}$, city c has fewer local public goods ($G^*_{c,1} < G^*_{r,1}$), the private sector is less productive ($A_{c,1} < A_{r,1}$) and pays lower wages ($w^*_{c,1} < w^*_{r,1}$) in city c; and population migrates from city c to city r ($N^*_{c,1} < N^*_{r,1}$).*
2. *In Period 2,*
    - 2.a. *the gap in coercive capacity has grown ($lnC_{c,2} - lnC_{r,2} > lnC_{c,1} - lnC_{r,1}$),*
    - 2.b. *taxes are higher in city c ($\tau^*_{c,1} > \tau^*_{r,1}$),*
    - 2.c. *if $\beta_3 \leq \bar{\beta}_3$, more local public goods are provided in city c ($G_{c,2} > G_{r,2}$), the private sector is more productive in city c ($A_{c,2} > A_{r,2}$) pays higher wages ($w^*_{c,1} > w^*_{r,1}$) and population migrates to the capital ($N^*_{c,2} > N^*_{r,2}$).*

In period 1, the government chooses the size and the allocation of the budget in both cities. We show in the proof of Proposition 1 that the budget share allocated to coercive capacity is the same in city r and city c (see Appendix C). The intuition is that the decision of allocating funds to coercive capacity amounts to a question of budget allocation across periods and is the same in both cities. This decision depends on the government's discount factor δ and on how fast coercive capacity grows with investments σ, but not on the taste of citizens for public and private goods (i.e., the parameters $\gamma_1, \beta_2, \beta_3$).

The budget allocation between coercive capacity and public goods is the same in both cities, but the size of the budget differs for two reasons. First, because it is easier for the government to recover resources from the capital to fund global public goods, the government sets a higher tax rate in c. Second, the disposable budget is higher in c since, for the same level of taxes, more resources are gathered due to the initial positive shock C in coercive capacity. These choices imply that the gap in coercive capacity grows between the two cities between period 1 and 2, as shown in Proposition 1 (2.a). In period 2, there is no investment in coercive capacity and the budget is spent on financing local and global public goods. Taxes are set higher in the capital to finance these global public goods, for the same reasons as above.

Proposition 1 shows how these choices impact local public goods and population. In period 1, the capital allocates a smaller share of the budget to local public goods. We show in the proof of Proposition 1 that $\mu_{c,1}\tau_{c,1} < \mu_{r,1}\tau_{r,1}$. However, how this translates into actual spending on local public goods depends on coercive capacity. Suppose for instance that the initial level of coercive capacity in city r is close to 0. Then there would be no spending on local public goods. As shown in result 1.b, if the initial shock in coercive capacity is not too large, city r has more local public goods than city c in period 1.

This has implications for population. Citizens decide where to live based on the maximum indirect utility they obtain in each location, taking into account current conditions. The solution to this discrete choice problem determines the probability that a location is chosen. The relative size of the population in city j thus depends on the relative size of indirect utilities obtained in the two cities, $\frac{N_{j,1}}{N_1} = \frac{e^{V_{j,1}}}{e^{V_{c,1}} + e^{V_{r,1}}}$. Thus in period 1, citizens tend to move away from the capital because of the higher taxes and lower levels of local public goods (provided the initial shock C in coercive capacity is not too large). In period 2, taxes are still higher in the capital, but because of increased coercive capacity, citizens can enjoy higher levels of local public goods and higher firm productivity (provided β_3 is not too large).

We derive comparative static results in Appendix D. One striking feature is that in period 1, in both cities, the share allocated to coercive capacity and the tax rate increase in δ and σ, i.e., they are higher if the government cares more about the future and if funds invested in coercive capacity have higher returns. Another parameter of interest is $\tilde{\beta} = \beta_2 + \gamma_1\beta_1$, which captures the direct effect of local public goods on the utility of citizens and the indirect effect through the increased productivity of firms. In both periods taxes and the share spent on local public goods increase in $\tilde{\beta}$.

To summarize, the equilibrium described in Proposition 1 is characterized by the following dynamics. Initially, the capital raises more taxes to build coercive capacity and to fund global public goods. This drives citizens away from the capital, unless the initial advantage in coercive capacity is so large that it allows the capital to also fund more local public goods. The gap in coercive capacity then grows larger than the initial shock. In period 2, the capital raises more tax revenues due to its increased coercive capacity. These resources fund local public goods as well as global public goods. In spite of higher taxes, population moves to the capital, attracted by local public goods and the higher productivity of firms and thus wages, provided not too much of the collected funds are allocated to global public goods.

3.3 Extensions

Rent extraction by the government. The results above are obtained with a benevolent social planner who maximizes the weighted sum of indirect utilities in the two cities. We show in Appendix D that these results naturally extend to the case where the central government also extracts private rents. In the model we propose, rents extracted by the government play the same role in the objective function of the government as the taste for global public goods of citizens. The higher the weight the central government puts on rents, the faster coercive capacity will grow, since this allows the central government to extract more resources in the second period.

Adding the periphery. The framework presented above includes two cities, the capital and another candidate city. In the empirical analysis, we are also interested in cities located in the periphery of both cities. In Appendix D, we extend the model above to include a city p (in the periphery) located at a distance d from the capital. This peripheral city optimally decides taxes and how to allocate revenues, but it does not control its own level of coercive capacity. We assume that city p's coercive capacity is a fraction of the coercive capacity in the capital and is decreasing in distance to the capital.

In this environment, we obtain the following additional results. First, we show that, in both periods, local public goods, productivity, and wages decrease with distance to the capital. The periphery has no choice but to allocate all its budget to local public goods. Furthermore, given it cannot invest in coercive capacity, its problem is the same in both periods. However, an increase in coercive capacity shifts the revenue available for funding local public goods. Thus, cities further away end up having fewer local public goods and being less productive. The second main result is that the capital in the first period sets higher taxes and spends more on coercive capacity when the weight the government puts on the periphery increases. Indeed, when the government allocates its budget in the first period, it takes into account the effects investments in coercive capacity in c will have on the periphery.

Coercive capacity. In the model, coercive capacity is a stock variable that converts the collected funds into revenue available to the government. This captures the idea that coercive capacity structures the interaction between the tax collector and the taxpayer, by limiting bribes, costly negotiations, or uncertainty. An alternative model could be that coercive capacity acts as a bound on the taxes that can be collected (as in Besley and Persson, 2010). In every period this would impose the constraint $\tau_{j,t} \leq C_{j,t}$. In equilibrium this constraint would be met with equality since there is no value in investing in coercive capacity if taxes are going to be set at a lower level.[11]

4 Empirical Framework

Section 3 predicts different dynamics for the capital and candidate cities. Capitals receive higher levels of coercive capacity initially. This gap grows over time relative to candidate cities. In the long run, the capital enjoys more local public goods, has more productive firms paying higher wages, and has a

[11] We did not choose this formulation since this would require specifying additional conditions on the initial shock that determine whether the constraint $\tau_{j,t} \leq C_{j,t}$ binds.

larger population. However, these trajectories are very different in the short run. To build up coercive capacity and to fund global public goods, the capital invests less in local public goods and potentially loses population. We now describe the empirical strategy we use to study these dynamics.

4.1 Data

We draw upon several data sources to explore empirically the evolution of state capacity in the short and long run. The key novelty of our approach is to assemble data at the most granular administrative level, namely the municipality, along a large number of dimensions.

Sample construction. Our sample contains the universe of municipalities (*communes*) across all French departments with a rotation or a division of administrative functions in 1790. The list of municipalities comes from the 18th century topographic map of the French kingdom, known as the Cassini map (Pelletier, 1990, 2002). A research team from EHESS digitized and made publicly available complete data on Cassini villages mapped to contemporary French municipalities. This data includes detailed information on past and present municipality names, administrative identifiers, land area, altitude, latitude and longitude, mergers and splits, and demographic data since 1793 (Cassini & EHESS, 2021).[12]

Using this data, we construct a balanced panel of municipalities covering 1800 to 1914. 80% of municipalities experience no boundary change during this period. For the remaining municipalities, we reconstruct municipal clusters combining towns and villages that either merged or separated from each other between 1800-1914.[13] The departments with a rotation or a division of administrative functions in 1790 include 9,872 municipalities (out of 36,360 French municipalities), including 769 (7.8%) municipal clusters. Our main sample is composed of 7,491 of these communes, as explained in Section 4.3.

Old Administrative Functions and Police Force. Nordman et al. (1995, pp. 74–80) provide city-level information on the location of the four main administrative functions under the *Ancien Régime*: the *évêchés* (bishoprics), the *bailliages* (bailiwicks), the *recettes des finances* (tax centers), and the *subdélégations* (administrative centers). By 1789, there were approximately 136 bishoprics, 425 bailiwicks, 339 tax centers, and 685 administrative centers across the French territory. We rely on these variables for balance checks and we control for the pre-refom presence of administrative functions in all our specifications.

In addition, we separately collected data on the location of police units (known as *maréchaussée* and subsequently *gendarmerie*) and the location of secondary schools in 1789-1790. Originally, the *maréchaussée* was established to oversee royal troops within the French kingdom.[14] Abolished in the early stages of the French Revolution, it was reinstated in 1791 under the name *Gendarmerie Nationale*. We rely on the *Atlas Historique de la Gendarmerie* to collect information on the location of every brigade

[12] More information on the Cassini database is available at: `http://cassini.ehess.fr/fr/html/5_donnees.htm`. We also use the 1793 demographic data to construct indicators of urban potential at the time of the reform (see Section 4.3).

[13] Clusters are named after the absorbing commune (in cases of mergers) or the parent commune (in cases of splits). When a new commune was carved out of two or more communes, the cluster is composed of the child and all the parent communes.

[14] After 1670, the role of the *maréchaussée* expanded to include various security tasks in the countryside, including quelling riots and other disturbances. By 1790, the total force of the *maréchaussée* amounted to approximately 3,700 men scattered across more than one thousand brigades (see Emsley, 1986).

in 1790. We further used the list provided in the *Almanach royal* and the *Almanach impérial* to gather information on the location of gendarmerie brigades in 1816 and 1856.[15]

Coercive capacity. To measure investments in the local coercive capacity of the state, we collected data on the establishment of the cadaster (*cadastre napoléonien*), military conscription between 1802-1815, and the construction of tribunal and prison buildings until 1840.

First, we used the inventories from departmental archives (series P and 3 P) to collect information on the year of the first cadaster established in each commune. Overall, we retrieved cadastral data for 97% of municipalities in our sample. Since the date of the original cadaster is additionally missing for 5% of these municipalities, we do not observe the date of the first cadaster for 619 municipalities (8%) in our baseline sample. As discussed in Section 2.4, the establishment of municipal cadasters took place over a fifty-year period starting in 1807—by 1850, 99.3% of municipalities had their cadaster established.

To measure impacts on military enrollment, we rely on data from the collaborative online project Matricules Napoléoniens (2021). This project digitized enrollment records for conscripts who served in Napoleonic armies between 1802 and 1815. The data was collected on a regiment-by-regiment basis and included more than 950,000 soldiers as of 2021. We use information on departments, villages of birth, and the age of the conscripts, and we aggregate this data to the municipality level.

For prison and tribunal buildings, we rely on project-level data from the *Conseil des Bâtiments Civils* (Conbavil) created in 1795. The council examined all construction, renovation, and maintenance projects of public buildings above a relatively low threshold in costs.[16] We collect the number of approved public projects, focusing in particular on prisons and tribunals, and aggregate this data at the municipality-year level.

Public Goods. We combine various sources to measure the productive capacity of the state, namely its ability to deliver public goods in the aftermath of the administrative reform. First, we collected data on secondary schools at the municipal level in 1812, 1836, and 1866.[17] The data includes information on locally-funded schools (*collèges municipaux*) and centrally-funded schools (*lycées*). We provide additional background on these different types of establishments as part of our discussion of results in Section 5.

Second, we digitized data from Bucquet (1874) on the location and the characteristics of local charity offices (*bureaux de bienfaisance*) in 1871. The charity offices were established by a 1796 law and provided relief and healthcare to the sick and the elderly. Services were funded through donations and organized by each city on a voluntary basis. Bucquet (1874)'s survey includes data for approximately 13,000 thousand offices across all of France (see also Haudebourg, 1998, pp. 145–188).

Third, we created a historical GIS for French communication and transportation networks around the

[15]For the *Atlas Historique*, see `https://atlas-gendarmerie.fr/`. For the *Almanach*, see Bib. nat. fr., Almanach royal pour l'année bissextile M DCCC XVI. Paris, Testu, pp. 546–56, `https://gallica.bnf.fr/ark:/12148/bpt6k2039123`; Almanach impérial pour M DCCC LVI. Paris, Guyot et Scribe, pp. 724–39, `https://gallica.bnf.fr/ark:/12148/bpt6k203923t`.

[16]The threshold for consideration by the council was 5,000 Francs after 1806 and 20,000 Francs after 1821. This threshold approximately corresponds to the cost of a small classroom.

[17]Arch. nat., F 17 6835, Enseignement secondaire, Statistique, 1837-1854. Arch. nat., F 17 8186, Collèges communaux : statistiques. 1862-1866.

mid-19th century. We geocoded the 1863 map of the telegraph network from de Vougy (1863), and use interdepartmental and departemental connections to measure access to the national and local telegraph network. By 1863, 29 cities in our sample had a national connection and 121 had a local connection. We further digitized various historical maps to geocode all French railway stations in 1852 and 1870 (Andriveau-Goujon, 1852; Chaix, 1870), which we link with our dataset of French municipalities.

Financial and Industrial Development. Our data on private sector activity includes information on banks, industrial activity in 1839-47, and patents registered throughout the 19th century. First, we derived information on bank locations from Hoffman et al. (2019).[18] Second, we leverage information from the country's first industrial census conducted between 1839-47. This census provides establishment-level data on profits, workers, and taxes collected (*montant des patentes*) for 14,238 plants across the territory. We use the microdata from Chanut et al. (2000) which includes most variables from this survey. We then digitized information on the location of establishments at the municipality level, which is available for all plants except those spanning multiple cities. Inside rotation departments, this information is available for 2,939 (92%) out of 3,185 industrial establishments.[19] For patents, we rely on data from the National Institute of Industrial Property (INPI) which contains information on the registration date and the municipality of residence of each patent applicant.[20] We compute the aggregate number of patents registered by municipality and by year throughout our study period.

Contemporary Outcomes. We use contemporary measures of public and private employment to evaluate the reform's economic impacts in the very long run. This information is collected from the Déclarations Annuelles des Données Sociales (DADS), a matched employer-employee data provided by the French statistics agency (INSEE). This data is built from mandatory social security contribution records reported by firms based in France over the period 2006-2015. Public sector employment falls into three categories: national public servants (*Fonction Publique de l'État* or FPE), local civil servants (*Fonction Publique Territoriale* or FPE), and hospital workers (*Fonction Publique Hospitalière* or FPH). These three categories represent approximately 50%, 30%, and 20% of the public sector workforce, respectively.

4.2 Empirical Strategy

Our empirical strategy consists of comparing capitals after 1800 with other candidate cities in departments with a rotation or a division of functions in the February 1790 decree. Under the assumption that the choice of the final capital among the candidate cities was exogenous to pre-existing city characteristics and trends, this strategy allows us to estimate the causal impact of administrative presence at the municipality level. We discuss and provide evidence in support of this assumption in Section 4.3.

[18] https://didomena.ehess.fr/concern/data_sets/zp38wd010?. The data contains information on the opening of local bank branches at the city level at regular times intervals.

[19] A second industrial census was conducted in 1860-65. Chanut et al. (2000) provide the microdata for this survey. Unfortunately, we could not locate the corresponding information on the municipality of operation for each industrial establishment.

[20] https://www.inpi.fr/fr/open-data-brevets-19eme.

Exploiting this identification strategy, our baseline equation is the following regression:

$$y_{ij} = \alpha_0 + \alpha_1 C_{ij} + \alpha_2 R_{ij} + \mathbf{X_{ij}}\mathbf{\Omega}' + \delta_j + \varepsilon_{ij} \quad (1)$$

where i denotes a municipality and j a department, R_{ij} is a dummy variable equal to 1 if city i is a candidate city included in the 1790 rotation (including final capitals), and C_{ij} is a dummy equal to 1 if i is the final capital. X_{ij} is a vector of pre-reform geographic, demographic, and administrative controls, and δ_j are department fixed effects included in all specifications. R_{ij} captures the endogeneity associated with potential capital status and its correlates in terms of administrative and market potential. Geographic controls include latitude and longitude, land area and land area squared, minimal and maximal altitude. Pre-reform controls include log population in 1793 and 1800 and four dummy variables indicating the presence of each of the four main administrative functions under the Ancien Régime (bishoprics, bailiwicks, tax centers, and *subdélégations*). In addition, we control for distance to the department centroid, the department border, and the nearest capital outside the department (see Section 4.3). The key parameter of interest α_1 identifies the causal effect of being chosen as the final capital. In all our tables, we also report our estimate of α_2 which is of interest but does not have a causal interpretation.

To estimate the effect of proximity to the nearest administrative center after 1800, we estimate:

$$y_{ij} = \beta_0 + \beta_1 ProximityC_{ij} + \beta_2 ProximityR_{ij} + \mathbf{X_{ij}}\mathbf{\Omega}' + \delta_j + \varepsilon_{ij} \quad (2)$$

where $ProximityR_{ij}$ and $ProximityC_{ij}$ measure the proximity in log kilometers to R_{ij} and C_{ij} respectively, where R_{ij} and C_{ij} are defined as before. We sign these variables so that higher values indicate lower distance/higher proximity. This specification estimates the causal effect of proximity to the final capital conditional on proximity to the nearest candidate city, where the set of candidate cities includes the final capital, analogous to equation (1). This causal effect is captured by β_1. As with equation (1), we report estimates of β_2 in all our tables but this coefficient does not have a causal interpretation.

In equation (2), the effect of proximity to the capital (β_1) is identified based on municipalities whose nearest candidate city is not the final capital. To further understand how proximity to the capital affects outcomes for neighboring localities, in Appendix Tables A.11 through A.17 we also report results aggregated to the administrative level just above municipalities after 1790, known as *cantons*. Our baseline sample is composed of 673 cantons out of slightly more than 3,000 across metropolitan France.[21] This alternative specification estimates the effect of being located in the same *canton* as the final capital, relative to a counterfactual of being located in the canton of a candidate city that was not ultimately chosen.

4.3 Identification

As discussed in Section 2.2, the rotation design was adopted by the Assembly to avoid making difficult choices among comparable cities. This design was chosen to hasten the reform under substantial pressure from local representatives. This interpretation is supported by the comparison of rotation de-

[21] The cantons were initially created in December 1789, suppressed in 1793, and established again in 1795. The cantons do not have any specific administrative functions or budget and are mainly used for electoral purposes.

partments with other departments, presented in Appendix Table A.2. Rotation departments are slightly larger in terms of territory, but are otherwise similar along various characteristics. Two differences however stand out. First, the largest city in rotation departments is, on average, more than twice smaller than the largest city in other departments. Second, the size ratio between the first and second largest city is more than 6 times larger in non-rotation departments. This evidence strongly supports the idea that there was no obvious single candidate city that emerged in rotation departments, relative to others. Appendix B provides additional qualitative evidence supporting this.

One potential concern, already partly dissipated by this evidence, is that the committee members used the rotation design beyond what was strictly necessary, even in cases where a superior candidate city was available. We thus add a further restriction and drop candidate cities with fewer Ancien Régime administrative functions than the final capital. This additional restriction yields 45 candidate cities across 18 departments, out of the 68 candidate cities across 24 departments included in the February 1790 decree. The universe of municipalities inside these departments (7,491 communes) constitutes our main sample for the analysis. In Appendix Tables A.18 through A.24, we show that our results are robust to using the entire list of candidate cities across all 24 departments.

Our identification strategy is further validated by balance checks on a range of pre-determined characteristics. In Table 1, we estimate equation (1) using pre-treatment characteristics as outcome variables, log population in 1793 and 1800 (columns 1-2), population growth between 1793-1800 (column 3), the presence of an *évêché* (bishopric, column 4), a *bailliage* (bailiwick, column 5), a *recettes des finances* (tax center, column 6), and a *subdélégation* (administrative center, column 7). In column 8, we look at the sum of all Ancien Régime functions across these four categories. Column 9 looks at the presence of a police station and column 10 looks at secondary schools in 1789.

Overall, capital cities appear no different from other candidate cities included in the 1790 rotation. Only 1 out of 10 coefficients is significant (at 10%), as one would expect as the result of chance. Indeed, capital cities are slightly more likely to have a tax center, but less likely to have a bishopric or a bailiwick. The average candidate city has three administrative functions, and this is no different for capital cities. The estimate of α_2 is positive and significant for all outcome variables. This is intuitive and indicates that the candidate status is endogenous to city characteristics. We further corroborate these balance checks in Appendix Table A.3, which uses simple t-tests to compare the characteristics of final capitals in 1800 with those of other candidate cities not chosen to be the capital. In panel (b) of Table 1, we also find that conditional on proximity to the nearest candidate city, proximity to the capital is not associated with any of the ten same baseline characteristics.

Nonetheless, there is some evidence that a more central location helped some candidate cities obtain the final capital status at the expense of others. Appendix Table A.4 shows that capitals are located on average closer to the department centroid (column 1) and farther away from the nearest department boundary (column 2). As discussed in Appendix B, historical evidence support this finding for at least some departments. However, as long as departments were not deliberately constructed around one specific city, proximity to the department centroid would not have played a role for economic development in the absence of the administrative reform. In our setting, the exogeneity of capital status follows from the fact that department boundaries were essentially arbitrary for the departments we consider. We show in particular in Appendix Table A.4 that capital cities did not have higher urban potential in 1793.[22] Nevertheless, we control for distance to the department centroid, the department boundary, and the nearest capital outside the department in all our specifications. Including or excluding this set of controls leaves our results unchanged.

5 The Coercive and Productive Capacity of the State

5.1 Overview

Our conceptual framework suggests that state-building efforts such as the 1790 administrative reform can trigger investments in the coercive capacity of the state, before delivering tangible economic benefits. This implies different dynamics for capitals and other candidate cities. The next two sections explore these effects in turn. We estimate impacts on extractive and enforcement capacity: tax collection, conscription, police, and justice (Section 5.2). We then evaluate effects on public goods, including schools, services for the poor, communication, and transportation infrastructure (Section 5.3). In the following section, we explore the short- and long-term impacts of the reform on economic and population growth.

In our exposition of results, all tables report the coefficients of interest from equations (1) and (2) in panels (a) and (b), respectively. In both panels, we also report the p-values from a randomization inference procedure testing the statistical significance of α_1, the treatment effect of capital status, and of β_1, the treatment effect of proximity to the capital.[23] In Appendix Table A.5, we also report simple pairwise comparisons between capitals and other candidate cities for all our main outcomes of interest.

Figure 2 illustrates the dynamic effects of the administrative reform. In this figure, we plot the regression coefficients from a modified version of equation (1) estimated on a panel dataset at the municipality-year level. We control for municipality fixed effects, year fixed effects, and our standard set of controls interacted with year dummies. These different panels summarize the dynamics of state building that we uncover: the process starts with investments in coercive capacity (panel a and b) which translate in the medium run into investments in productive capacity (panel c). Eventually this permeates to the private sector (panel d) and population (panel e). Figures 3 and 4 further illustrate the impacts of the reform on population growth—we discuss these effects in the following section.

5.2 Coercive Capacity

The model in Section 3 suggests that the gap in coercive capacity between the capital and other candidate cities should grow in the short run. In Table 2, we study how capital status and proximity to the capital affect taxation and conscription.

[22] Following Bosker et al. (2013, p. 1423), we define urban potential for city i as the distance-weighted sum of the size of all other French municipalities: $UP_i = \Sigma_j^n [\frac{pop_j}{\max\{D_{ij},1\}}]$, where pop_j is the population of city j in 1793, and D_{ij} is the distance between city i and city j. We compute several versions of this measure, including and excluding city i's own population. Information on 1793 population is missing for 853 municipalities (2.3%). We substitute it with information on population in 1800.

[23] We report the p-value from the "randomization-t" procedure in Young (2018), implemented with 1,000 replications.

Taxation. Municipal cadasters were established between 1807-1850 to facilitate land taxation across France (see Section 2.4). In columns 1-3 of Table 2, we look at a dummy variable measuring whether a city's cadaster has been established by 1815, 1830 and 1850, respectively. Capital cities are 60 percentage points more likely to have their first cadaster established by the end of the Napoleonic period in 1815. Only 21% of municipalities in the sample had their register established before this date. By 1830, capital cities remain 27 percentage points more likely to have a register. As expected, this differential effect vanishes by 1850, at which point (nearly) all municipalities have a register. Panel (a) of Figure 2 shows this dynamic evolution of the cadaster in capital cities, relative to all others. In panel (b), proximity to the capital also increases the likelihood to have a cadaster established by 1815 (column 1) and 1830 (column 2). Municipalities located in the same canton as the capital are also more likely to establish their first cadaster before 1815 (see Appendix Table A.11, columns 1-2).[24]

We then examine the effects of the reform on the amount of business tax (*montant des patentes*) collected from industrial establishments in the country's first industrial census, conducted between 1839-47. Columns 4 and 5 use as dependent variable the total tax collected and the tax collected per establishment, respectively. The reform has a significant impact on both measures. In column 5 (panel a), the state collects 1.4 more francs from each plant in capital cities—a large effect relative to the sample mean. In panel (b), proximity to the capital also increases the taxation of firms. These results imply that industrial firms faced greater exposure to the state's extractive capacity in the vicinity of the new capitals.[25]

Military Conscription. Extractive capacity implies the ability to collect not only financial resources but also physical resources from citizens, in particular during conflicts. Throughout the Napoleonic wars, the local recruitment of conscripts was placed under the direct responsibility of the department prefect. The conscription system was introduced in 1798 and maintained until the end of the Empire.[26] Table 2 shows that this system led to higher conscription for capitals. Overall, candidate cities enroll 58 more men than the rest of the sample. Relative to these cities, capitals enroll an additional 54 men, but this point estimate falls short of statistical significance (panel a, column 6). In column 7, capital cities are significantly more likely to enroll soldiers under the legal threshold of 19 years old, again indicating greater exposure to the extractive power of the state. The estimates on proximity to the capital and proximity to the nearest candidate city are negative, perhaps as a result of data entry errors which assigned citizens from neighboring localities to the candidate cities themselves (panel b, columns 6-7).

Enforcement Capacity. Table 3 reports short-term effects of the reform on police presence and public

[24] Recall that we do not observe the date of the first cadaster for 619 municipalities, which are excluded from this analysis. Attrition is uncorrelated with capital status, but proximity to the capital decreases the likelihood that the date of a municipality's first cadaster is unobserved. When we regress a dummy for missing cadastral information on equation (2), the estimate of β_1 is equal to -0.0227, significant at 1%, as one might expect. Nevertheless, the estimates in panel (b) of Table 2 are very similar when we assume that municipalities with missing cadastral information had not established their cadaster by year t. For example, in column (2) we obtain a point estimate of 0.1305, significant at 1%, compared to the baseline estimate of 0.1249.

[25] The dependent variable in column (3) of Table 2 (total business tax collected at the municipality level) is inverse hyperbolic sine-transformed. In Appendix Table A.6, we find similar results when using the variable in levels (columns 1 and 3). We also examine effects along the extensive margin (columns 2 and 4) The latter effects are positive, non significant for the estimates from equation (1) and positive, significant for the estimates from equation (2).

[26] The draft was viewed with fear in rural communities. Forrest (2012, p. 50) points out that the "achievement of conscription targets would be one of the principal gauges of loyalty and efficiency in the Consulate and Empire, a yardstick by which mayors, sub-prefects and prefects would be judged by the Napoleonic state."

works projects involving prisons and tribunals. More police forces are stationed in capitals in both 1816 and 1856 (columns 1 and 2). Capitals obtain more prison and tribunal buildings as early as 1820 (columns 3 and 6).[27] This gap in enforcement capacity continues to grow until 1840—panel (b) of Figure 2 shows the time path of this divergence until 1840. At the canton level, municipalities located in the capital canton are also more likely to have a police force, a prison, and a tribunal building in their vicinity (Appendix Table A.12). These robust effects illustrate the importance given to law enforcement institutions in the early buildup of state capacity after the Revolution.

Interestingly, Appendix Table A.7 shows that this divergence is much less pronounced for other types of public buildings. There, we look at religious buildings (the most common type of buildings in the Conbavil database, representing 26% of all projects), schools and hospitals. There is no effect of capital status and proximity to the capital on projects involving religious buildings (columns 1-3). Likewise, effects on schools and hospitals often fall short of statistical significance and appear smaller in magnitude than the corresponding coefficients for prisons and tribunals in Table 3.[28]

5.3 Productive Capacity

Coercive power may be used to collect resources necessary to finance local public goods. However, these benefits might be delayed since in the short run, resources are diverted from financing local public goods to building up coercive capacity. We explore this dimension in Table 4 where we report effects of the administrative reform on public goods provision in capitals and their neighboring localities. We examine four types of public goods: secondary schools, services for the poor, communication networks (telegraph), and transportation infrastructure (railway).

We first look at the availability of a secondary school in 1812, 1836, and 1866. We focus on secondary education because primary schooling became nearly universally available during the first decades of the 19th century. By 1833, 27,619 municipalities ran a total of 45,119 primary schools across the country. On the contrary, secondary schooling lacked universal availability.[29] Secondary education included private institutions set up by individuals, *collèges communaux* (municipal colleges) funded by municipalities on a voluntary basis, and a few dozen *lycées* (high schools).[30]

In Table 4, columns 1-3 show that capitals become eventually more likely to host a secondary school, but this effect is only statistically significant in 1866. The takeaways from the canton-level analysis are similar (Appendix Table A.13, columns 1-3): overall, capital cantons are no more likely to host a

[27] There was no specific law regarding the location of judicial courts. For instance, the *cours d'assises* (criminal courts involving a jury trial) were often built in the department capital, but this was neither mandated by law nor systematically the case. In 13 departments, the set of the court of appeal was located outside the capital city. Commercial courts were more numerous, more than 200, and usually located in industrial and commercial cities (Joanne, 1864, pp. CXLIX–CLII).

[28] These projects are measured for the beginning of the 19th century.

[29] The enrollment rate of the school-aged population was about 60 per cent for primary schools and 2 per cent for secondary schools. Between 1815 and 1848, the *lycées* were called *collèges royaux*. For an overview of the structure and the evolution of secondary education during the 19th century, see Grevet (2001) and Savoie (2013).

[30] Only *lycées* offered a full curriculum and prepared pupils for baccalauréat. The decree of 15 November 1811 officially recognised 36 *lycées* across the French territory (Grevet, 2001, pp. 59–81). Between 1830 and 1880, 45 *collèges* were transformed into *lycées*. Although costly, this process generated prestige for municipalities and led to fierce competition between them. In several instances, the *lycée* was not created in the capital city first, but in a competing city—e.g. Saint-Quentin in Aisne or Toulon in Var (Huitric, 2016, p. 94).

secondary school in the short- and the medium-term aftermath of the reform.

Columns 4 and 5 report effects on charity services enumerated in 1871. We look at the number of beneficiaries (column 3) and total expenditure, combining "ordinary" and "extraordinary" expenditures reported in Bucquet (1874)'s survey (column 4). The estimate of α_1 is positive in both columns of panel (a), but the effect on expenditure falls short of statistical significance. Appendix Table A.13 shows that these effects are more robust (significant at 1%) when we estimate equation (1) on the canton-level dataset, suggesting that charity services for the poor spill over to nearby municipalities.

We then explore the impact of capital status on communication and transportation infrastructure. While candidate cities generally have a local telegraph connection by 1863, capitals are substantially more likely to have a national connection allowing them near-direct communication with Paris (columns 6-7). We also look at train stations built by 1852 and 1870. Capitals are substantially more likely to have received a train station by 1870 (column 9). Outside candidate cities, only 4.7% of municipalities have a station built by 1870 and this figure is 41 percentage points higher for capitals. Panel (c) of Figure 2 shows dynamics effects on the construction of train stations starting in 1840.

5.4 Robustness Checks

The takeaways from our analysis are robust to a variety of alternative specifications. Appendix Table A.5 shows simple pairwise t-tests between capitals and other candidate cities for all our main outcomes of interest, without any of the controls and fixed effects included in equation (1). There is a significant difference between capitals and other candidate cities for all but two of our endline outcomes. For 1802-1815 conscripts and secondary schools in 1866, this difference is positive but falls short of statistical significance (with p-values of 0.16 and 0.15, respectively), mirroring the estimates in Tables 2 and 4.

In Appendix Tables A.11 to A.13, discussed throughout the text, we show that similar results obtain when conducting the analysis at the canton level—one administrative level above the municipality. Appendix Table A.18 through A.20 report the results obtained when using the full sample of candidate cities listed in the February 1790 decree. This brings the number of candidate cities to 68 across 24 rotation departments, instead of 45 cities across 18 departments in our baseline estimation. Recall that this adds to the sample candidate cities that had fewer Ancien Régime administrative functions than final capitals. Our estimates of the impact of the reform on cadaster establishments (Table A.18), enforcement capacity (Table A.19), and railway stations (Table A.20) all remain positive and significant when using this alternative sample. In Table A.18, the effect of the reform on conscription gains significance (columns 6-8), while the effect on the business tax (columns 4-5) loses significance, but effect sizes are unchanged.

Appendix Tables A.25 through A.27 show that our results in this section are robust to using alternative approaches to inference. For comparison, we first report the heteroskedasticity-robust standard errors used in the baseline estimation. We then report standard errors adjusted for spatial correlation following Conley (1999) as well as standard errors clustered by department. For the latter, we also report the p-values from a wild bootstrap with 1,000 replications since there are only 18 departments in the baseline sample. Although we lose some power in a few of the panel (b) specifications, our core results are robust to these alternative approaches to statistical inference.

6 State Capacity, Economic Development, and Population Growth

6.1 Overview

We now turn to our exploration of the short- and long-term effects of the reform on economic activity and population. We first explore impacts on banks, industrial development, and innovation (Section 6.2). We then study the long-term impacts on population growth (Sections 6.3 and 6.4) and contemporary employment (Section 6.5). Section 6.6 discusses robustness checks. In Figure 2, panels (d) and (e) illustrate the dynamics effects of the reform on bank establishments and population growth, respectively.

6.2 Economic Outcomes

The gradual buildup of the state's productive capacity might eventually deliver benefits for the private sector. In this section, we shed light on the time horizon over which the capital and neighboring localities collect economic dividends. We explore the dynamic effects of the reform on measures of financial development, industrial development, and innovation in the short and the medium run.

Financial Development. Table 5 explores how capital status and proximity to the capital affect the presence of local bank branches throughout the 19th century. By 1910, 8% of municipalities in our sample have a local bank branch, with the number of branches varying between 1 and 13.

We look at the city-level number of banks in regular times intervals between 1810 and 1910.[31] By 1840, capitals have 1.8 more banks than the rest of the sample. The magnitude of this effect grows throughout the period—the coefficient size is almost twice larger by 1910. Appendix Table A.8 shows that these results are driven by private banks: the estimates are identical when we exclude public banks from the analysis. Figure 2, panel (d) shows the evolution of bank establishments over the 19th century.

Industrial Development and Innovation. Table 6 reports effects on industrial development in the 1839-47 census. While candidate cities host a larger number of plants, capitals do not do so differentially by 1839 (panel a, column 1). In panel (a), effects on the number of workers (column 2) and the annual production value (column 3) are positive but fall short of statistical significance. However, these cities attract significant more establishments and workers in their periphery. In panel (b), proximity to the capital significantly increases the number of workers and the annual production value.

Columns 5 and 6 of Table 6 show that more patents are registered by the residents of capitals (panel a) and neighboring municipalities (panel b) in the second half of the 19th century. The point estimate is positive and significant when looking at patents registered by 1870 (column 6) and by 1914 (column 7). Since patents had to be registered physically in the department capital, the effect we observe could reflect lower travel costs for the capital's inhabitants. However, we believe that this cost is relatively small due to the fact these cities were designed to be easily accessible (see Section 2.2).

Heterogeneity. The lack of a robust positive impact on industrial development by 1839 warrants a deeper exploration of mechanisms. Consistent with the short-term dynamics in our conceptual framework, it could be that investments in coercive capacity stifle local business growth to some extent. Indeed, columns 3 and 4 of Table 2 show that the state collects more business tax (overall and per industrial

[31] The data on local banking activity spans 1801 to 1910, but only two cities in our sample have a bank branch in 1801.

establishment) in capitals in 1839. Alternatively, the ambiguous evidence in panel (a) of Table 6 could reflect the fact that many parts of France had not yet experienced industrialization by this point in time.

By 1839, investments in state capacity may only stimulate industrial growth in combination with a higher baseline production capacity or potential. Appendix Table A.9 explores this hypothesis. In panels (a) and (b), we interact capital and candidate city status (resp. proximity to the capital and the nearest candidate city) with a baseline measure of industrial potential: mechanized cotton spinning capacity. Textile was the key product associated with the First Industrial Revolution and is the dominant sector in the 1839-47 industrial census.[32] We look at the same outcomes as those in Table 6. Specifically, we run the following specification:

$$y_{ij} = \gamma_0 + \gamma_1 C_{ij} \times Cotton_j^{1803} + \gamma_2 R_{ij} \times Cotton_j^{1803} + \mathbf{X_{ij}} \mathbf{\Omega}' + \delta_j + \varepsilon_{ij} \quad (3)$$

where $Cotton_j^{1803}$, our proxy for the baseline industrial potential of each department, is the log number of cotton spindles from Juhász (2018), measured at the department level in 1803. In equation (3), standard errors are clustered by department since cotton spinning capacity varies at this level. We then report the results from a wild-bootstrap with 1,000 replications to correct for any bias arising for the small number of clusters (18 departments in our baseline specification). Finally, we also estimate the analog of equation (3) for equation (2), namely we interact $Cotton_j^{1803}$ with the two terms $ProximityC_{ij}$ and $ProximityR_{ij}$. The results reported in Appendix Table A.9 show that the capital status mattered more for departments that had in 1803 a burgeoning textile industry.

6.3 Population Growth

Although short term gains may be limited, the gradual buildup of state capacity in the capital might eventually translate into urban growth. We thus study the evolution of population size, which we can track finely over time. We look at log population computed from decennial censuses.

The long-term demographic divergence of capitals relative to other candidate cities is illustrated in Figure 3 for four departments in our sample, and in Figure 4, where we use a different empirical approach to compare capitals and candidate cities. In Figure 3, we plot the raw population data across cities. The figure illustrates that all candidate cities are initially comparable in demographic terms. While capitals do not outgrow their rivals in the short run, they take over their rivals during the second half of the 19th century: on average, the population of capitals has increased by about 40% relative to the other candidate cities by 1901. Only about a third of this difference is explained by the presence of civil servants and their families, as described in Section 6.4. Figure 4 further corroborates these results using the synthetic controls approach from Abadie et al. (2010) and Abadie and L'Hour (2021). There, we use the entire list of candidate cities included in the February 1790 decree, and we construct a group of synthetic control cities using our baseline geographic controls (latitude and longitude, land area and area squared, minimal and maximal altitude) and log population in 1793 and 1800 as predictor variables. The

[32]While Juhász (2018) studies the impacts of the Napoleonic blockade between 1803-1815, we use her data from 1803 (instead of 1815) since cotton spinning activity measured in 1815 could already have been affected by the administrative reform.

baseline and bias-corrected synthetic control estimates for log population in 1901 are 0.418 and 0.413, respectively—very close to our estimate of 0.419 in column 6 of Table 7.

Table 7 reports estimates of the short- and long-term demographic impacts of the reform. In panel (a), the estimate of α_1 from equation (1) is positive and only marginally significant by 1841, consistent with what we observed with economic outcomes. This effect becomes large in magnitude and statistically significant from 1881 onwards. By the end of the 19th century, the population of capitals has increased by about 40% relative to the other candidate cities. This divergence continues throughout the 20th century (columns 6-7).[33] The timing of this demographic divergence is identical when we aggregate population at the canton level (Appendix Table A.16). In panel (b), proximity to the capital does not lead to higher population in the 19th century. The estimate of β_1 from equation (2) is in fact negative until 1911. This trend reverses in the 20th century—by 1999, proximity to the capital is positively and significantly associated with log population (column 7). Figure 5 provides two illustrative examples of the evolution of population density within departments between 1800 and 1901.

These differential patterns of population growth reflect the process described in Section 3. Early investments in state capacity involve building up coercive capacity, including the ability to collect taxes, raise armies, and maintain law and order. Thus, there are no positive effects of state-building on economic and population growth in the short run. However, coercive capacity eventually allows the state to collect more resources to fund local public goods. In the longer run, the higher availability of such public goods in capitals makes these cities more attractive for citizens and firms alike. This leads to a long-term divergence between the winners and the losers of the administrative reform.

6.4 Contribution of Civil Servants to Population Growth

How much of the population growth experienced by capitals is driven by civil servants and their families? In the short run, using counts of civil servants available from departmental archives, the demographic impact of civil servants appears to have been negligible. For example, the department of Cantal officially had 340 civil servants in 1817 (0.1% of the department population). Among these, 77 individuals resided in the capital Aurillac and 49 individuals resided in the other candidate city, Saint-Flour—civil servants thus represented 0.8% of the city population in both cities. However, department capitals eventually experienced a steady growth in the number and complexity of local state functions. We collect additional data and present a simple empirical exercise to quantify the share of the population growth that can be attributed to the growth in the number of civil servants, and importantly their families.

First, we derived information on the total population of civil servants and their families across all departments in our sample from the 1886 population census.[34] By this date, the population of capitals is 39% higher than the population of candidate cities (Table 7, column 4). Second, we collected individual data on local civil servants from three departments (Cantal, Jura, and Tarn) to estimate the fraction of all civil servants that resided in the department's capital, candidate cities, and other municipalities in 1886.

[33]In 1999, we lose 447 observations which are municipalities absorbed by other municipalities in our sample after 1914. Thus, the estimate in column 7 captures both natural demographic growth and growth by absorption of neighboring municipalities.

[34]Bib. nat. fr., Résultat du dénombrement de 1886. 1ère partie. Paris, Berger-Levrault, pp. 256–316, https://gallica.bnf.fr/ark:/12148/bc6p06xrtrb.

Across these departments, the average fraction of a department's civil servants located in the capital is 19%. The corresponding fraction for all other candidate cities is 10%. Civil servants located in the capital tend to be employed in the local administration (*administration préfectorale*), secondary education, judicial functions, and civil engineering. Civil servants residing outside the capital tend to work in primary instruction, security forces, railway maintenance, and postal offices.

We then subtract from the population of each city the estimated number of civil servants with their families. For the capital, this estimate corresponds to 19% of the total number of civil servants in the department, using the figure obtained above. For other candidate cities, this estimate is equal to 10% of the same total, divided by the number of candidate cities. Finally, we allocate equally all remaining civil servants across all other municipalities. Finally, we estimate again equations (1) and (2), using as our dependent variable the estimated (log) city population excluding civil servants and their families.

Column 5 of Table 7 reports the corresponding estimates. In panel (a), the effect of capital status on 1886 log population remains large and statistically significant. This point estimate is approximately two-thirds of the size of the estimate obtained in column 4, where we look at 1886 population including civil servants. The estimates in panel (b) are of comparable magnitude to those in column 4. Overall, this exercise implies that civil servants contributed about a third to the higher population growth experienced by local administrative centers by the end of the 19th century.

6.5 Contemporary outcomes

While we emphasize the dynamic evolution of investments in state capacity in the short and the medium run, it is also interesting to examine effects of the administrative reform over a very long time horizon. In Table 8, we estimate equations (1) and (2) using as dependent variables contemporary measures of public and private sector employment observed between 2006–2015 (see Section 4.1).

Column 1 of panel (a) shows that, more than two centuries after the reform, overall employment in the public sector more than doubled in capital cities compared to other candidate cities. This effect is especially large for local public servants (column 3), i.e., for the part of the public sector directly funded at the local level. This increase in public sector employment is accompanied by an increase in private sector employment. For every additional hour worked in the public sector, 0.74 hours are worked in the private sector. Panel (b) shows that proximity to the capital also leads to higher employment. Cities closer to the capital have more hours worked in both the public and the private sector. Appendix Table A.17 shows similar results at the canton level. Finally, Appendix Table A.10 reports effects on a more detailed breakdown of public employment: we look at employees in administrative functions, police and fire departments, primary education, secondary education, health, and social services. Capital status and proximity to the capital have a positive effects on most of these measures.

6.6 Robustness Checks

In the Appendix, we report additional robustness checks for the results presented in Section 6. We present the same set of robustness checks as those described in Section 5.4. Appendix Table A.5 reports pairwise t-test between capitals and other candidate cities. Appendix Tables A.14 through Tables A.17 report results from the analysis at the canton level. Appendix Table A.21 through A.24 report the results obtained when using the full sample of candidate cities. Finally, Appendix Tables A.28 through A.31 show that our results are robust to using alternative approaches to inference. As before, these various checks leave our main results unchanged.

7 Conclusion

One of the first missions entrusted to the members of France's first Constituent Assembly was to revamp the organization of the kingdom and to design a new administrative map reflecting modern principles of efficient government. This process involved choosing between century-old local centers and reallocating administrative functions to some cities at the expense of others. Anticipating that this reform would have major impacts on subsequent growth, the local elites exerted tremendous pressure on the Assembly to ensure that their own cities would be chosen as the new local capitals. This lobbying effort was such that the Assembly, unable to adjudicate between rival urban centers, invented a rotation design where administrative functions would alternate across different cities.

In this paper, we show that the revolutionaries' expectations about the impacts of the reform were correct: differential investments in state capacity profoundly shaped patterns of economic development in the ensuing decades. In the long run, the cities chosen as the new local capitals ended up outgrowing other cities, and these capitals also drove faster growth in their periphery. However, we also show that this long-term divergence only materialized in the medium and the long run. In the immediate aftermath of the reform, citizens residing inside or near the new capitals were more exposed to investments in the coercive capacity of the state, including its ability to extract fiscal and physical resources through taxation and military conscription. Given the turmoil associated with Napoleonic wars until 1815, France's new local capitals paid a hefty price in exchange for becoming focal points of administrative presence.

Using a simple spatial equilibrium model, we show that investments in state capacity have dynamic as well as redistributive effects. Investments in the state's extractive and enforcement capacity must first be made before state-building delivers economic dividends. These investments then shape the spatial distribution of income and population. In the French case, local investments in state capacity paid off and eventually contributed to the rise of the modern state. But the large political economy literature on institutions also shows that the dynamic sequence we observe between the initial administrative reform, investments in state capacity, and economic development may not have unfolded in the same way in other settings, especially if the initial buildup in coercive capacity is so large that it prevents the emergence of a cohesive society and a productive economy. Many other mediating factors, including mechanisms of rent extraction and social conflict, can put sand in the wheels of state-building.

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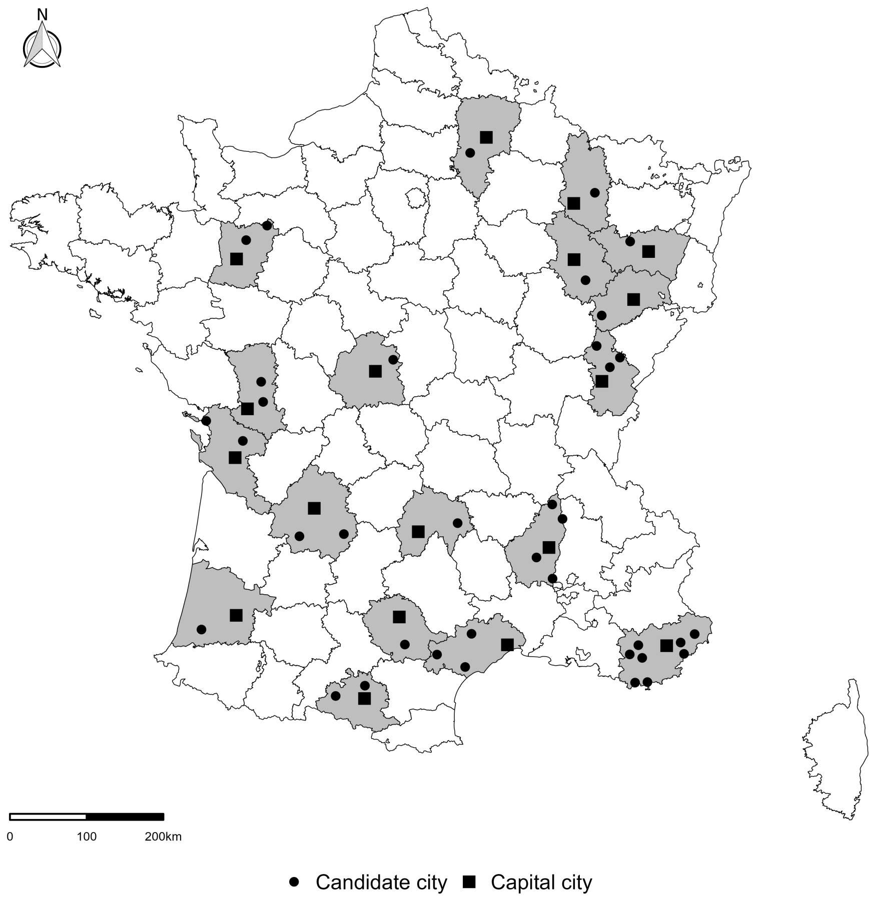
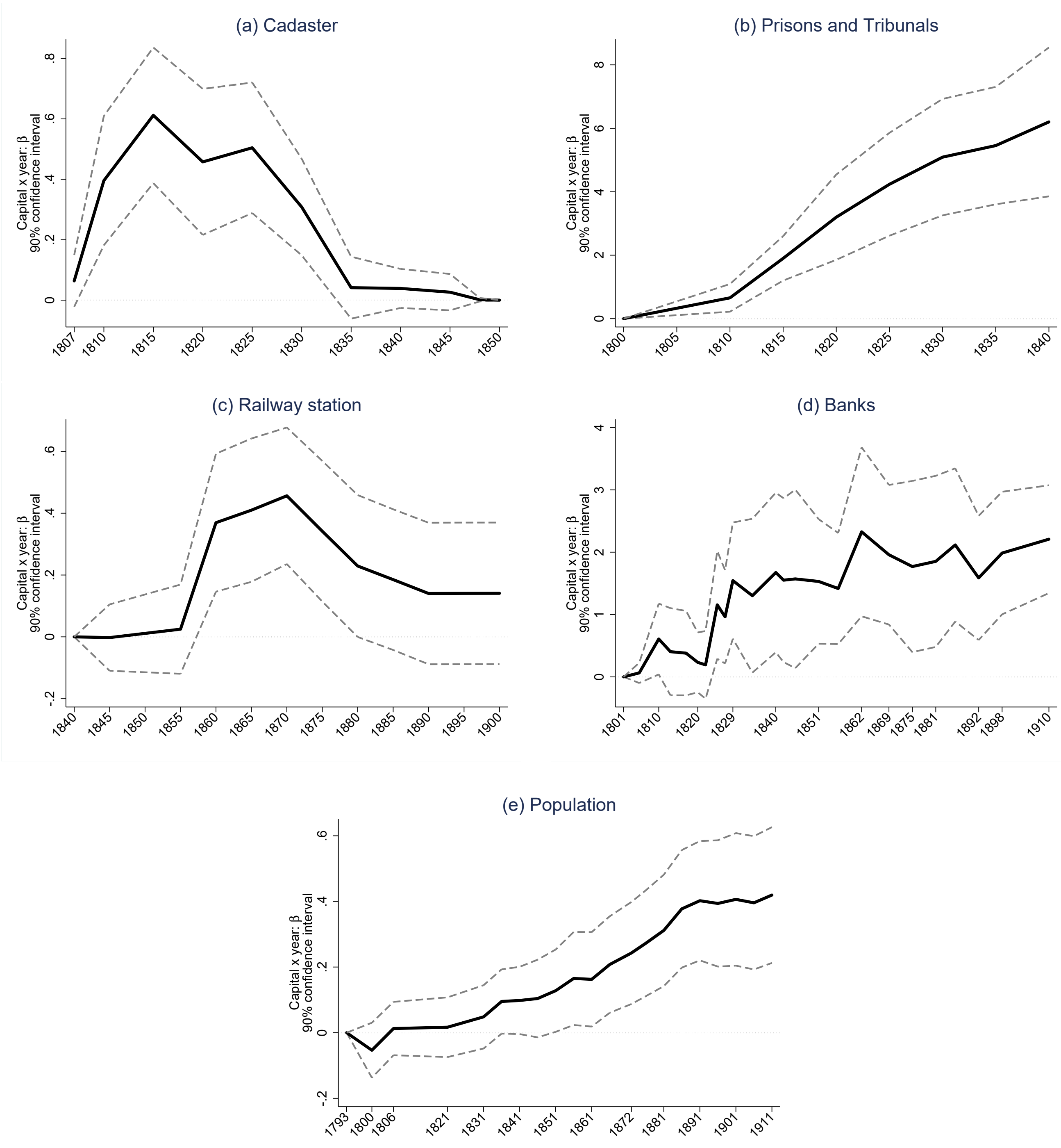
Figures

Figure 1: Departments with a Rotation of Administrative Functions in 1790



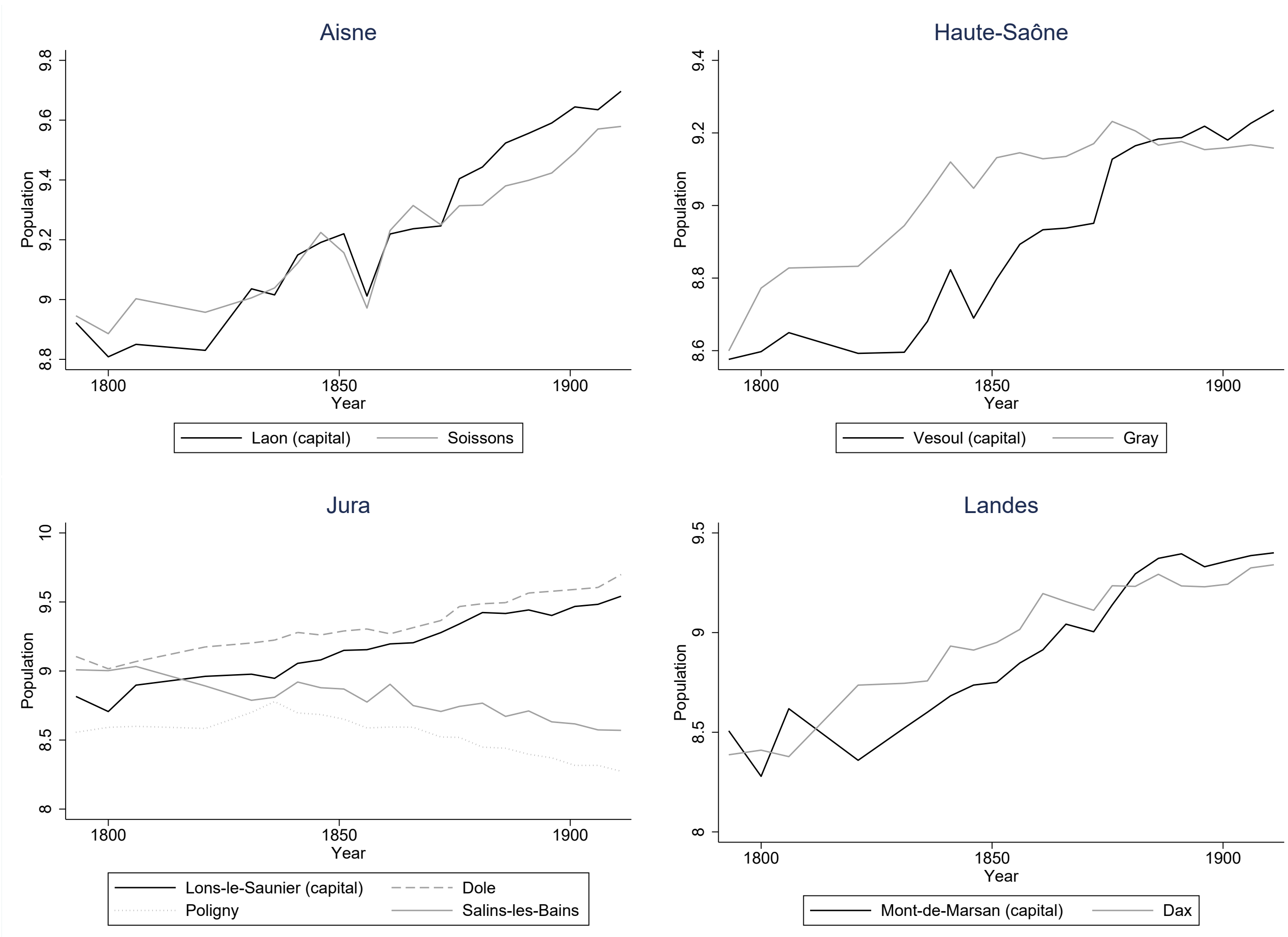
Notes: This map shows the departments (colored in grey) with a rotation or a division of administrative functions in our baseline sample (18 departments). Black lines indicate the boundaries of French departments created in February 1790. Capital cities after 1800 are indicated with a square. Other candidate cities are indicated with a circle.

Figure 2: Dynamic Effects of Capital Status



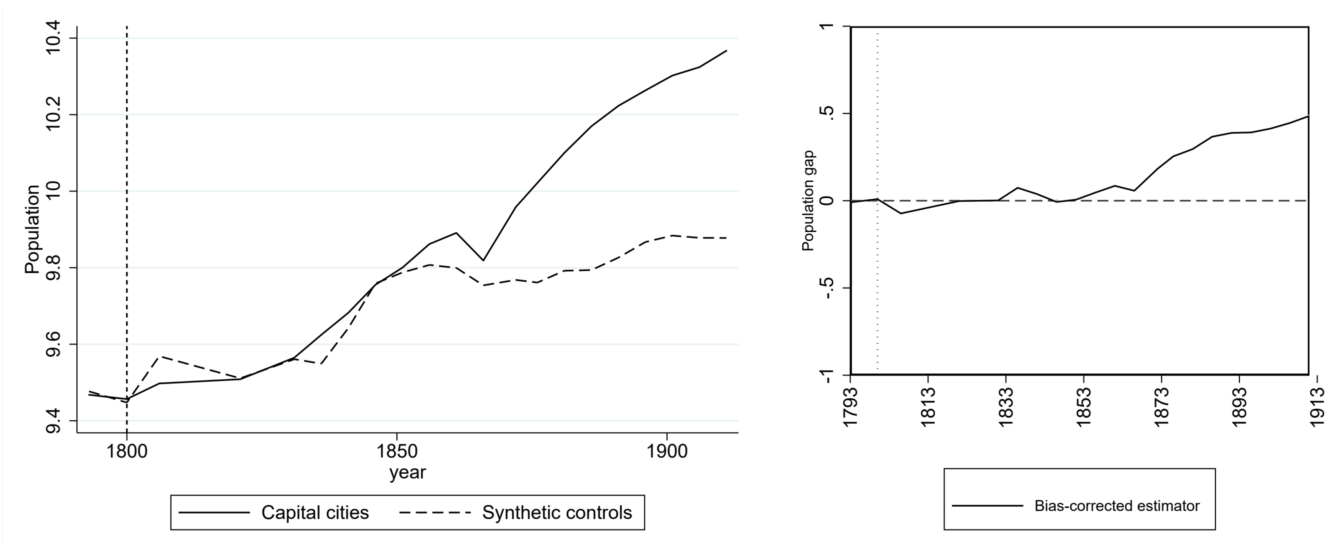
Notes: This figure shows the dynamic effects of the administrative reform during the 19th century. We plot the regression coefficients from a modified version of equation (1) estimated on a panel dataset at the municipality-year level, namely the α_{1t} from the following equation: $y_{it} = \alpha_0 + \sum_t \delta_t(\alpha_{1t}C_i + \alpha_{2t}R_i + \mathbf{X_i}\mathbf{\Omega}') + \delta_t + \delta_i + \varepsilon_{ij}$. We control for municipality fixed effects, year fixed effects, and our standard set of controls interacted with year dummies. The dependent variable is: in panel (a), a dummy variable equal to 1 if a municipality has established a cadaster by year t; in panel (b), the cumulative number of public works projects involving prisons and tribunal buildings by year t; in panel (c) a dummy variable if the municipality has a railway station by year t; in panel (d), the number of banks operating in the municipality in year t; in panel (e), log population measured in year t. Each figure uses as the starting date the year in which the dependent variable is first observed. The dashed lines indicate 90% confidence intervals, with standard errors clustered by municipality.

Figure 3: Demographic Divergence of Capital Cities



Notes: In this figure, we plot the raw population data (in logs) across capital cities and other candidate cities in four departments between 1793 and 1914: Aisne, Haute-Saône, Jura, and Landes.

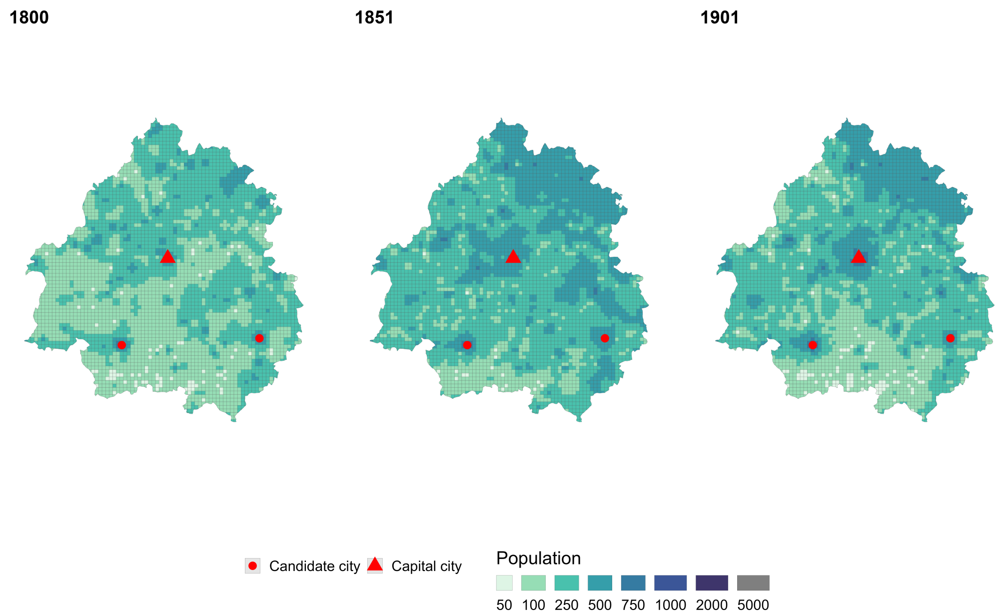
Figure 4: Demographic Divergence of Capitals: Synthetic Controls



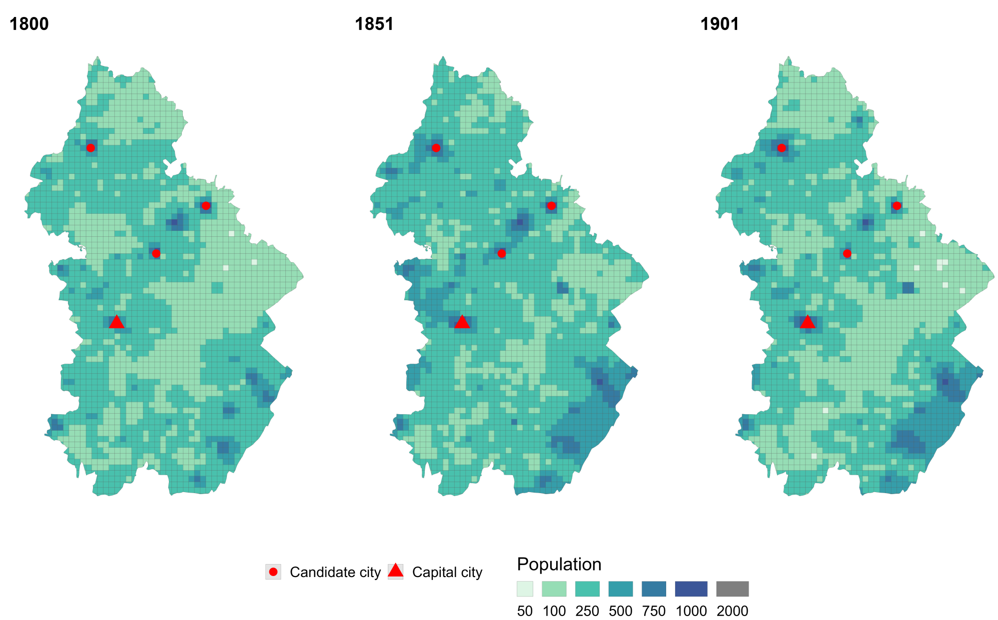
Notes: This figure displays the evolution of log population among capitals and synthetic control cities between 1793 and 1911. Synthetic controls are chosen among all the candidate cities listed in the February 1790 decree (24 departments). We use log population in 1793 and 1800 and our baseline geographic controls (latitude and longitude, land area and area squared, minimal and maximal altitude) as predictor variables. The left-hand side figure uses the baseline approach from Abadie et al. (2010). The right-hand side figure plots the bias-corrected gap in log population between capitals and synthetic control cities, using the estimator from Abadie and L'Hour (2021) and Wiltshire (2021).

Figure 5: Population Density within Departments over Time

(a) Dordogne



(b) Jura



Notes: This figure displays the evolution of population density at a pixel level in the departments of Dordogne and Jura.

Tables

Table 1: Balance on Pre-Reform Population and Administrative Functions

	(1) Pop 1793	(2) Pop 1800	(3) Growth	(4) Bishopric	(5) Bailiwick	(6) Tax center	(7) Admin center	(8) Functions	(9) Police	(10) College
					(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.0115	-0.0294	-0.0409	-0.1328	-0.0599	0.1694*	0.0202	-0.0032	0.0071	0.0207
	(0.2247)	(0.2200)	(0.0489)	(0.1410)	(0.1055)	(0.0954)	(0.0723)	(0.2895)	(0.0677)	(0.0731)
Candidate city	2.2107***	2.2607***	0.0500*	0.4004***	0.8792***	0.7624***	0.8908***	2.9328***	0.8936***	0.8886***
	(0.1894)	(0.1940)	(0.0297)	(0.0942)	(0.0599)	(0.0791)	(0.0500)	(0.2058)	(0.0425)	(0.0507)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	6.117	6.108	-0.008	0.002	0.006	0.004	0.012	0.024	0.014	0.011
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.422	0.401	0.088	0.211	0.412	0.489	0.313	0.514	0.295	0.320
					(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0025	0.0000	-0.0025	-0.0016	0.0016	0.0002	-0.0025	-0.0023	-0.0030	-0.0001
	(0.0149)	(0.0148)	(0.0049)	(0.0012)	(0.0012)	(0.0010)	(0.0020)	(0.0036)	(0.0019)	(0.0019)
Proximity to nearest candidate city	-0.0143	-0.0022	0.0121**	-0.0001	-0.0027**	-0.0043***	-0.0061***	-0.0132***	-0.0080***	-0.0065***
	(0.0144)	(0.0143)	(0.0052)	(0.0014)	(0.0011)	(0.0011)	(0.0019)	(0.0037)	(0.0019)	(0.0018)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	6.117	6.109	-0.008	0.002	0.006	0.004	0.012	0.024	0.012	0.011
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.392	0.368	0.090	0.016	0.013	0.015	0.031	0.027	0.031	0.024

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). Geographic controls include latitude and longitude, land area and land area squared, minimal and maximal altitude. The dependent variables are: log population in 1793 (column 1) and 1800 (column 2), population growth between 1793-1800 (column 3), and a dummy for: bishoprics (column 4), judicial centers known as *bailliages* or bailiwicks (column 5), tax centers known as *recettes des finances* (column 6), and administrative centers known as *subdélégations* (column 7). In column 8, we look at the sum of all *Ancien Régime* functions across these four categories. Column 9 looks at the presence of a police station (*maréchaussée*) in 1790 and column 10 looks at secondary schools (*collèges*) in 1789. * $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table 2: Effects of the Administrative Reform on Extractive Capacity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Cadaster created by:			**Business tax**		**Conscription**	
	1815	1830	1850	Total	per plant	Recruits	$\leq$ 19 y.o.
				(a) Actual vs. Candidate Capitals			
Capital in 1800	0.5971***	0.2737**	-0.0024	1.7098*	1.3593**	54.2015	14.7773**
	(0.1246)	(0.1079)	(0.0068)	(0.9886)	(0.6772)	(36.1064)	(7.1182)
	[0.024]	[0.042]	[0.999]	[0.233]	[0.220]	[0.170]	[0.067]
Candidate city	-0.1687*	0.0212	0.0198	0.7712	-0.0339	57.7306***	8.4636**
	(0.0973)	(0.1229)	(0.0190)	(0.8881)	(0.6859)	(19.3987)	(4.1875)
Number of municipalities	6,872	6,872	6,872	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.212	0.569	0.993	0.557	0.514	13.358	2.295
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.068	0.057	0.018	0.162	0.127	0.635	0.513
				(b) Proximity to Actual and Candidate Capitals			
Proximity to 1800 capital (km)	0.1685***	0.1249***	0.0032	0.1499***	0.1449***	-0.7440**	-0.1339
	(0.0121)	(0.0143)	(0.0023)	(0.0557)	(0.0513)	(0.3609)	(0.0905)
	[0.001]	[0.001]	[0.159]	[0.009]	[0.005]	[0.042]	[0.138]
Proximity to nearest candidate city	0.0009	0.0181	-0.0059**	-0.0934**	-0.0860**	-0.2424	-0.0167
	(0.0096)	(0.0128)	(0.0027)	(0.0417)	(0.0385)	(0.2844)	(0.0672)
Number of municipalities	6,822	6,822	6,822	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.211	0.569	0.993	0.557	0.515	13.355	2.295
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.093	0.068	0.019	0.121	0.106	0.482	0.345

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). In columns 1 through 3, the dependent variable is a dummy variable equal to one if the commune had its first cadaster established by 1815 (column 1), 1830 (column 2), and 1850 (column 3). We do not observe the date of the first cadaster for 619 municipalities (8% of our sample). In column 4, the dependent variable is the total amount of business tax (*montant des patentes*) collected from industrial firms, measured in francs and inverse-hyperbolic-sine (IHS) transformed. In column 5, the dependent variable is the tax collected per industrial establishment. Both variables are constructed using the 1839-47 industrial survey. Column 6 looks at the total number of soldiers recruited in Napoleonic armies between 1802-1815 and column 7 looks at soldiers aged less than 19 (the minimum legal age for being drafted) during the same period. The conscription data is measured at the municipality level using information on places of birth. See Section 4.1 for details. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations*, as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses. Randomization inference p-values reported in brackets.

Table 3: Effects on Enforcement Capacity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Police Force			**Prisons**			**Tribunals**	
	1816	1856	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840
	(a) **Actual vs. Candidate Capitals**							
Capital in 1800	1.5204***	1.4392***	1.6102*	2.8796***	3.9390***	2.1176***	2.7437***	2.7950***
	(0.3933)	(0.3270)	(0.8436)	(0.9705)	(1.3926)	(0.4904)	(0.6156)	(0.5926)
	[0.001]	[0.001]	[0.046]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Candidate city	0.0775	-0.0055	0.7014*	0.7804	0.6290	-0.1480	-0.0706	0.0634
	(0.1759)	(0.1268)	(0.4083)	(0.4927)	(0.5334)	(0.2392)	(0.3507)	(0.3827)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.004	0.004	0.009	0.012	0.014	0.004	0.006	0.008
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.568	0.622	0.429	0.516	0.518	0.487	0.514	0.520
	(b) **Proximity to Actual and Candidate Capitals**							
Proximity to 1800 capital (km)	0.0014	0.0014	-0.0018	-0.0035	-0.0023	0.0016	0.0038	0.0057*
	(0.0010)	(0.0011)	(0.0037)	(0.0039)	(0.0040)	(0.0023)	(0.0027)	(0.0031)
	[0.140]	[0.203]	[0.650]	[0.392]	[0.580]	[0.531]	[0.175]	[0.080]
Proximity to nearest candidate city	-0.0007	-0.0013	-0.0042*	-0.0053**	-0.0059**	-0.0022	-0.0024	-0.0035*
	(0.0008)	(0.0008)	(0.0025)	(0.0027)	(0.0029)	(0.0015)	(0.0017)	(0.0020)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.004	0.004	0.009	0.012	0.014	0.004	0.006	0.008
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.261	0.316	0.172	0.199	0.251	0.133	0.162	0.138

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). In columns 1 and 2, the dependent variable is the number of police functions available at the city level in 1816 an 1856, respectively. In columns 3 through 5, the dependent variable is the number of approved public works projects of prisons in the municipality by 1820, 1830, and 1840, respectively. In columns 6 through 8, the dependent variable is the number of approved public works projects on tribunals in the municipality by 1820, 1830, and 1840, respectively. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations*, as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses. Randomization inference p-values reported in brackets.

Table 4: Effects on Public Goods Provision

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Secondary Schools			**Social protection**		**Telegraph**		**Railway**	
	1812	1836	1866	Beneficiaries	Exp.	National	Local	1852	1870
				(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.1283	0.0924	0.1770*	0.6589**	0.5290	0.7857***	0.0977	0.1332	0.4132***
	(0.0908)	(0.0741)	(0.1006)	(0.2778)	(0.4596)	(0.0942)	(0.0994)	(0.0945)	(0.1136)
	[0.210]	[0.236]	[0.040]	[0.044]	[0.260]	[0.001]	[0.541]	[0.326]	[0.144]
Candidate city	0.2102*	0.2942***	0.2557**	0.1232	-0.1410	0.0925**	0.3043***	-0.0426	0.1364
	(0.1132)	(0.0994)	(0.1056)	(0.3136)	(0.4798)	(0.0467)	(0.1019)	(0.0485)	(0.1123)
Number of municipalities	7,491	7,491	7,491	7,472	7,472	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.004	0.047
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.561	0.613	0.568	0.348	0.319	0.697	0.534	0.063	0.145
				(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	-0.0011	0.0007	-0.0004	-0.0752	-0.1093	0.0024	0.0012	0.0135***	-0.0011
	(0.0019)	(0.0015)	(0.0015)	(0.0466)	(0.0767)	(0.0021)	(0.0028)	(0.0037)	(0.0077)
	[0.587]	[0.629]	[0.821]	[0.097]	[0.143]	[0.365]	[0.703]	[0.001]	[0.908]
Proximity to nearest candidate city	-0.0020*	-0.0018*	-0.0011	-0.0530	-0.0652	0.0006	0.0000	0.0027**	0.0171***
	(0.0012)	(0.0010)	(0.0009)	(0.0385)	(0.0627)	(0.0007)	(0.0015)	(0.0012)	(0.0051)
Number of municipalities	7,436	7,436	7,436	7,417	7,417	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.004	0.047
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.350	0.312	0.256	0.309	0.290	0.018	0.290	0.055	0.093

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). In column 1 through 3, we look at the availability of a secondary school at the municipal level in 1812, 1836, and 1866, respectively. In columns 4 and 6, we look at the number of individuals benefiting from charity services (*bureaux de bienfaisance*) and the total reported expenditure of the charity offices, respectively. Both outcomes are observed in the 1871 survey conducted by Bucquet (1874). There are fewer observations in columns 3-4 because services for the poor are unobserved for communes occupied by Germany. In columns 6 and 7, the dependent variable is a dummy variable equal to 1 if a municipality has a national (*fil interdépartemental*) or local (*fil interdépartemental*) connexion on de Vougy (1863)'s map of the French telegraph network. In columns 8 and 9, the dependent variable is a dummy variable equal to 1 if a municipality has a railway station built by 1852 and 1870, respectively. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions, as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.

* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses. Randomization inference p-values reported in brackets.

Table 5: Effects on Financial Development

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of banks in:					
	1820	1840	1862	1881	1898	1910
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.4125	1.8472*	2.4936***	2.0180**	2.1552***	2.3748***
	(0.3812)	(0.9673)	(0.9609)	(0.9954)	(0.7136)	(0.6146)
	[0.200]	[0.021]	[0.032]	[0.108]	[0.023]	[0.011]
Candidate city	0.2895	0.2080	0.3537	0.2483	1.1221**	0.5452
	(0.1845)	(0.3464)	(0.4212)	(0.4622)	(0.4541)	(0.5547)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.002	0.011	0.028	0.041	0.039	0.053
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.280	0.421	0.534	0.521	0.601	0.584
	(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0016*	0.0016	0.0054	0.0101*	0.0050	-0.0037
	(0.0009)	(0.0034)	(0.0051)	(0.0061)	(0.0066)	(0.0074)
	[0.099]	[0.665]	[0.304]	[0.109]	[0.473]	[0.620]
Proximity to nearest candidate city	-0.0004	-0.0047**	-0.0079*	-0.0165***	-0.0180***	-0.0226***
	(0.0009)	(0.0023)	(0.0041)	(0.0040)	(0.0049)	(0.0063)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.002	0.011	0.029	0.041	0.039	0.053
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.067	0.237	0.319	0.327	0.317	0.351

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variables is the number of banks operating in the municipality in each year. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department. Appendix Table A.8 reports effects excluding public banks.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses. Randomization inference p-values in brackets.

Table 6: Effects on Industrial Development & Innovation

	(1)	(2)	(3)	(4)	(5)	(6)
	1839-47 Industrial Survey				**Patents**	
	Plants	Workers	Prod Value	by 1850	by 1870	by 1914
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.4467	1.1299	2.2308	7.6411	24.2269*	64.7361**
	(0.4958)	(0.8320)	(1.6736)	(7.2080)	(13.6561)	(29.4816)
	[0.467]	[0.304]	[0.271]	[0.340]	[0.072]	[0.024]
Candidate city	0.8765**	0.5914	1.4939	-1.2530	-0.4355	3.4578
	(0.3913)	(0.7160)	(1.5692)	(3.4590)	(9.4728)	(20.5764)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.121	0.416	1.183	0.113	0.366	0.757
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.272	0.176	0.155	0.259	0.350	0.391
	(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0153	0.0901**	0.2683**	0.0381	0.1379**	0.2267*
	(0.0132)	(0.0407)	(0.1125)	(0.0265)	(0.0618)	(0.1213)
	[0.258]	[0.025]	[0.019]	[0.155]	[0.013]	[0.023]
Proximity to nearest candidate city	-0.0172*	-0.0562*	-0.1717**	0.0010	-0.0266	-0.0000
	(0.0098)	(0.0303)	(0.0828)	(0.0166)	(0.0387)	(0.0730)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.121	0.416	1.185	0.113	0.366	0.758
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.162	0.131	0.120	0.173	0.166	0.159

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variables are: the number of industrial establishments (column 1), the number of industrial workers (column 2), and the total annual production value (column 3). We transform these variables using the inverse hyperbolic sine (IHS) function. In columns 5 through 7, we look at the number of patents registered by 1850, 1870, and 1914, respectively. Patents are observed at the level of the municipality of residence of each patent applicant. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses. Randomization inference p-values in brackets.

Table 7: Effects on Population

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Log population in:							
	1821	1841	1861	1886	1886†	1901	1911	1999
	(a) Actual vs. Candidate Capitals							
Capital in 1800	0.0320	0.1080*	0.1766*	0.3890***	0.2563**	0.4194***	0.4299***	0.7163***
	(0.0439)	(0.0586)	(0.0905)	(0.1087)	(0.1266)	(0.1244)	(0.1294)	(0.1709)
	[0.501]	[0.096]	[0.067]	[0.002]	[0.063]	[0.003]	[0.006]	[0.007]
Candidate city	0.0533	0.0069	0.0966	0.0407	-0.0746	0.0575	0.0544	0.1751
	(0.0347)	(0.0526)	(0.0831)	(0.1005)	(0.1031)	(0.1161)	(0.1212)	(0.1596)
Number of municipalities	7,479	7,490	7,490	7,491	7,479	7,491	7,491	7,046
DV mean excl. candidate cities	6.217	6.314	6.286	6.196	6.141	6.098	6.041	5.743
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.963	0.945	0.921	0.884	0.872	0.856	0.839	0.653
	(b) Proximity to Actual and Candidate Capitals							
Proximity to 1800 capital (km)	-0.0100**	-0.0169***	-0.0096	-0.0214**	-0.0337***	-0.0256**	-0.0198	0.1416***
	(0.0046)	(0.0060)	(0.0075)	(0.0096)	(0.0109)	(0.0119)	(0.0129)	(0.0241)
	[0.031]	[0.006]	[0.165]	[0.016]	[0.002]	[0.020]	[0.086]	[0.001]
Proximity to nearest candidate city	0.0048	0.0141***	0.0155**	0.0291***	0.0298***	0.0421***	0.0457***	0.3202***
	(0.0039)	(0.0051)	(0.0060)	(0.0076)	(0.0082)	(0.0101)	(0.0110)	(0.0190)
Number of municipalities	7,425	7,435	7,435	7,436	7,424	7,436	7,436	7,001
DV mean excl. candidate cities	6.218	6.314	6.286	6.195	6.141	6.097	6.041	5.743
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.960	0.941	0.916	0.876	0.865	0.847	0.828	0.652

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variable is log population measured in each relevant year. In column 5, we look at log population excluding civil servants and their families (see Section 6.4). Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses. Randomization inference p-values in brackets.

Table 8: Long-term Effects on Public and Private Employment

	(1)	(2)	(3)	(4)	(5)
			Employees:		
	All public	State	Local	Health	Private
			(a) **Actual vs. Candidate Capitals**		
Capital in 1800	1.3962***	1.4722***	2.0042***	0.9658**	1.0252**
	(0.4635)	(0.3947)	(0.4070)	(0.4060)	(0.4044)
	[0.015]	[0.014]	[0.002]	[0.224]	[0.024]
Candidate city	0.0814	0.6352*	0.0081	1.3372***	0.0947
	(0.3471)	(0.3555)	(0.3021)	(0.5047)	(0.2977)
Number of municipalities	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	1.659	0.799	1.217	0.278	3.446
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.495	0.430	0.484	0.427	0.457
			(b) **Proximity to Actual and Candidate Capitals**		
Proximity to 1800 capital (km)	0.1703***	0.1354***	0.0747*	0.0083	0.2103***
	(0.0484)	(0.0438)	(0.0444)	(0.0298)	(0.0550)
	[0.001]	[0.006]	[0.082]	[0.801]	[0.001]
Proximity to nearest candidate city	0.4609***	0.3255***	0.4330***	-0.0366	0.5949***
	(0.0386)	(0.0339)	(0.0352)	(0.0236)	(0.0456)
Number of municipalities	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	1.653	0.795	1.213	0.272	3.441
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.478	0.382	0.464	0.300	0.455

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variable is the total number of public employees (column 1), the number of public employes in the state (central) administration (column 2), the number of public employees in the local administration (*fonction publique territoriale*, column 3), the number of public employees in the health sector (*fonction publique hospitalière*, column 4), and the number of private sector employees (column 5). All dependent variables are IHS-transformed. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions as well as log distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses. Randomization inference p-values in brackets.

Appendix (For Online Publication)

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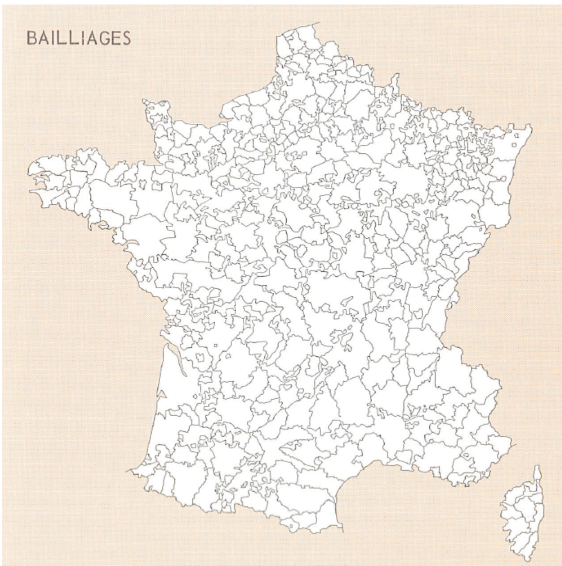
A Additional Results

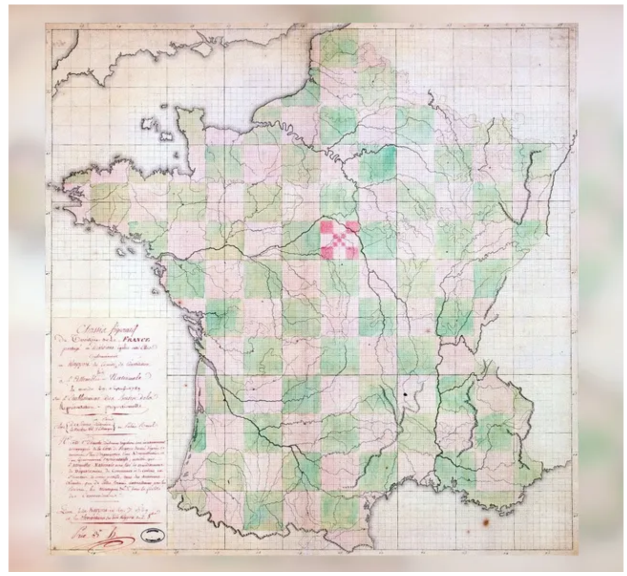
Figures

Figure A.1: Existing and Proposed Administrative Maps in 1789

(a) Bailiwicks in 1789 from Nordman et al. (1995)



(b) The Sieyès Proposal



(c) Final Proposal Adopted in February 1790

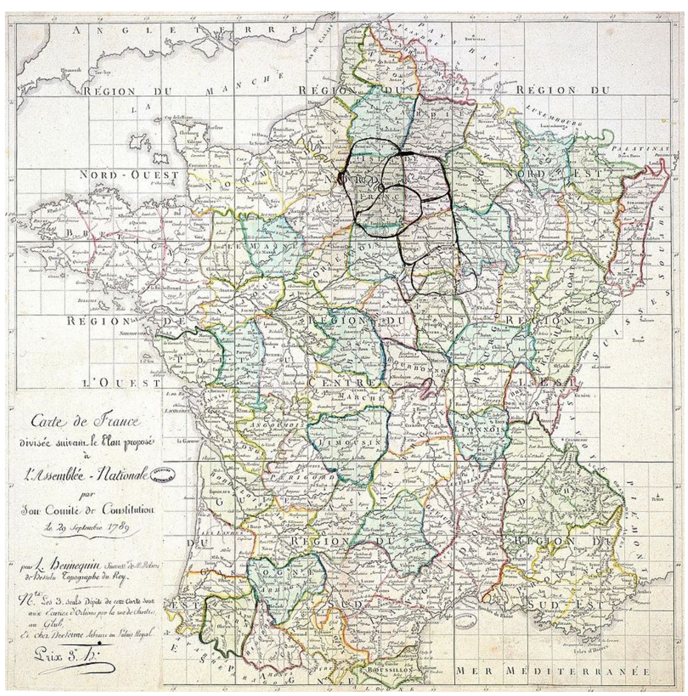
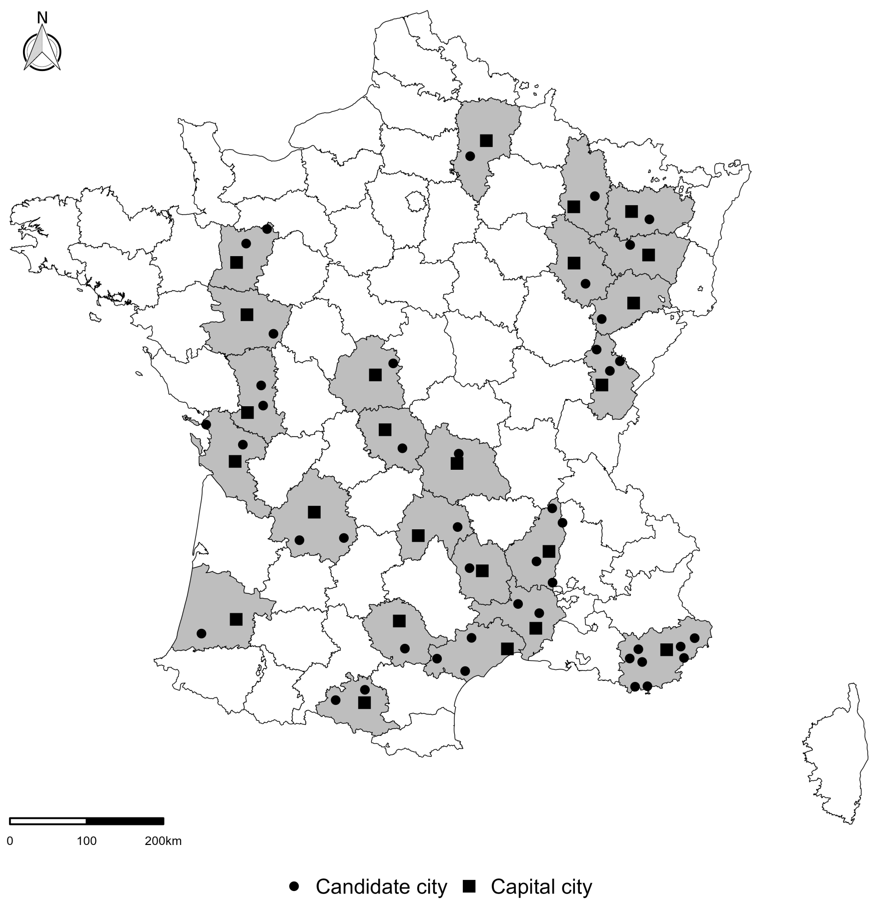


Figure A.2: Rotation Departments, Including Additional Candidate Cities



Notes: This map shows all the departments (colored in grey) with a rotation or a division of administrative functions in the sample including additional candidate cities (the sample used in Appendix Tables A.18 through A.23). Black lines indicate the boundaries of all French departments created in February 1790. Capital cities after 1800 are indicated with a square. Other candidate cities are indicated with a circle.

Tables

Table A.1: List of Candidate Cities

Department	Rotation Cities
Aisne	Laon*, Soissons
Ardèche	Annonay, Aubenas, Bourg-Saint-Andéol, Privas*, Tournon
Ariège	Foix*, Pamier, Saint-Girons
Cantal	Aurillac*, Saint-Flour
Charente-Inférieure	Saint-Jean-d'Angély, La Rochelle, Saintes*
Creuse†	Aubusson, Guéret*
Dordogne	Bergerac, Périgueux*, Sarlat
Deux-Sèvres	Niort*, Parthenay, Saint-Maixent
Gard†	Alès, Nîmes*, Uzès
Haute-Marne	Chaumont*, Langres
Haute-Saône	Gray, Vesoul*
Hérault	Béziers, Lodève, Montpellier*, Saint-Pons-de-Thomières
Indre	Châteauroux*, Issoudun
Jura	Dole, Lons-le-Saunier*, Poligny, Salins-les-Bains
Landes	Dax, Mont-de-Marsan*
Lozère†	Marvejols, Mende*
Maine-et-Loire†	Angers*, Saumur
Mayenne	Château-Gonthier, Laval*, Mayenne
Meurthe†	Lunéville, Nancy*
Meuse	Bar-le-Duc*, Saint-Mihiel
Puy-de-Dôme†	Clermont*, Riom
Tarn	Albi*, Castres
Var	Brignoles, Draguignan*, Grasse, Hyères, Toulon + 4 others
Vosges	Épinal*, Mirecourt

Notes: This table lists the 24 departments that constitute the full sample of departments with a rotation or a division of administrative functions in 1790, along with the corresponding candidate cities. Capitals in 1800 are flagged with an asterisk. In our baseline analysis, we exclude candidate cities with fewer Ancien Régime administrative functions than the final capital. Our baseline sample is composed of all 18 departments that had more than one candidate city after applying this restriction. The candidate cities dropped after this step appear in grey and the departments dropped after this step are flagged with †. In Appendix Tables A.18 through A.24, we report the results obtained using all the candidate cities listed in this table. Appendix B provides detailed historical background on the choice of candidate cities and capitals in each department.

Table A.2: Comparison of Rotation Departments with Others

	Rotation departments (1)	**Other departments** (2)	t-test (p-value) (3)
Total population (thousand), 1793	285.97	337.88	0.15
	(68.49)	(145.79)	
Population density, 1793	0.41	0.68	0.41
	(0.11)	(1.36)	
Population growth (%), 1793-1800	-0.01	-0.01	0.71
	(0.05)	(0.06)	
Land area (km2)	7,257.73	6,614.72	0.12
	(1,681.57)	(1,471.21)	
Size of largest city (thousand)	12.44	38.13	0.23
	(7.31)	(89.34)	
Δ(Largest-2nd largest city)	4.22	28.61	0.25
	(5.07)	(88.86)	
Subdélégations	7.39	8.58	0.30
	(5.16)	(3.95)	
Recettes	3.78	4.22	0.58
	(2.16)	(3.13)	
Bailliages	4.61	5.25	0.42
	(2.99)	(2.91)	
Evêchés	1.61	1.56	0.87
	(1.42)	(1.04)	
Distance to Paris (km)	399.56	339.16	0.24
	(166.93)	(197.13)	
Distance to sea (km)	176.12	157.8	0.57
	(129.91)	(114.96)	

Notes: This table reports sample means for various department-level variables measured across the 18 rotation departments that constitute our baseline sample (column 1) compared to all the departments without a rotation of administrative functions (column 2). Column 3 reports the p-value from a pairwise t-test of the equality of means across the two subsamples.

Table A.3: Comparison of Capitals with Other Candidate Cities: Baseline Characteristics

	Capitals	**Other Candidates**	t-test (p-value)
	(1)	(2)	(3)
Log population in 1793	8.96	8.81	0.39
	(0.60)	(0.56)	
Log population in 1800	8.96	8.84	0.47
	(0.59)	(0.52)	
Population growth, 1793-1800	0.00	0.03	0.52
	(0.17)	(0.15)	
Log urban potential, 1793	11.65	11.60	0.26
	(0.14)	(0.16)	
Largest city in department (0/1)	0.33	0.30	0.80
	(0.49)	(0.47)	
Land area (km2)	3,704.83	4,867.3	0.36
	(2,076.91)	(5,094.38)	
Evêché	0.28	0.41	0.38
	(0.46)	(0.5)	
Bailliage	0.83	0.89	0.60
	(0.38)	(0.32)	
Recette	0.94	0.78	0.14
	(0.24)	(0.42)	
Subdélégation	0.94	0.93	0.81
	(0.24)	(0.27)	
Old functions	3	3	1.00
	(0.91)	(1.11)	

Notes: This table reports sample means for various baseline characteristics measured across the capital cities in our baseline sample (column 1) compared to the remaining candidate cities located in rotation departments (column 2). Column 3 reports the p-value from a pairwise t-test of the equality of means across the two subsamples.

Table A.4: Other Geographic Attributes of Capitals

	(1)	(2)	(3)	(4)	(5)	(6)
	Proximity to:			**Urban potential**		
	Centroid	Border	Other Capital	$\geq$ 10,000	All	Excl. own
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.9811***	-0.9184***	-0.1757***	0.0280	0.0178	0.0073
	(0.1841)	(0.2532)	(0.0522)	(0.1206)	(0.0150)	(0.0086)
Candidate city	-0.0707	-0.0071	0.0162	0.1891***	0.0523***	-0.0078
	(0.0778)	(0.2366)	(0.0448)	(0.0706)	(0.0089)	(0.0071)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	-3.360	-1.929	-3.944	9.292	11.596	11.589
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.040	0.019	0.326	0.861	0.911	0.914
	(b) **Proximity to Capitals**					
Proximity to 1800 capital (km)	0.5963***	-0.6349***	-0.1100***	-0.0098***	0.0060***	0.0064***
	(0.0130)	(0.0223)	(0.0052)	(0.0018)	(0.0008)	(0.0008)
Proximity to nearest candidate city	0.1256***	-0.3795***	-0.0309***	0.0209***	0.0055***	0.0055***
	(0.0079)	(0.0213)	(0.0054)	(0.0016)	(0.0008)	(0.0008)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	-3.360	-1.928	-3.944	9.291	11.595	11.589
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.504	0.267	0.382	0.891	0.914	0.916

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). We include the same set of controls as those in Table 1. In columns 1-3, the dependent variables are proximity to the department centroid (column 1), the department border (column 2), and the nearest capital outside the department (column 3). Proximity is equal to $-\log(distance)$ in kilometers. In columns 4 through 6, we look at three measures of urban potential in 1793, calculated following Bosker et al. (2013) as the log of $UP_i = \Sigma_j^n[\frac{pop_j}{\max\{D_{ij},1\}}]$, where pop_j is the population of city j in 1793. We look at three alternative measures of UP_i taking into account only cities with 10,000+ inhabitants (column 4), all French municipalities (column 5), and all French municipalities excluding city i's own population (column 6). France had 100 cities with more than 10,000 inhabitants in 1793.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.5: Comparison of Capitals with Other Candidate Cities: Endline Outcomes

	Capitals (1)	**Other Candidates** (2)	t-test (p-value) (3)
Cadastre by 1815	0.76	0.17	0.00
	(0.44)	(0.38)	
Cadastre by 1830	1.00	0.71	0.01
	(0.00)	(0.46)	
Business tax, 1839	7.12	5.33	0.09
	(2.87)	(3.64)	
Business tax per plant	4.98	3.55	0.05
	(1.89)	(2.63)	
Conscripts 1802-1815	236.17	184.0	0.16
	(155.25)	(90.13)	
Conscripts $\leq$19, 1802-1815	45.11	31.19	0.07
	(31.42)	(18.34)	
Police force, 1816	2.28	0.74	0.00
	(1.6)	(1.06)	
Prison building projects by 1840	6.11	2.44	0.01
	(5.37)	(3.54)	
Tribunal building projects by 1840	3.89	1.15	0.00
	(2.27)	(2.05)	
Secondary school, 1866	0.89	0.70	0.15
	(0.32)	(0.47)	
Charity beneficiaries, 1871	7.40	6.79	0.07
	(1.06)	(1.10)	
Telegraph connexion, 1871	0.89	0.11	0.00
	(0.32)	(0.32)	
Train station, 1870	0.94	0.56	0.00
	(0.24)	(0.51)	
Banks, 1820	1.00	0.56	0.21
	(1.37)	(0.97)	
Banks, 1910	5.83	3.52	0.00
	(2.26)	(2.05)	
Patents registered by 1850	15.56	8.19	0.23
	(27.61)	(12.62)	
Patents registered by 1914	120.06	58.96	0.04
	(114.6)	(81.39)	
Log population in 1901	9.78	9.30	0.03
	(0.59)	(0.81)	
Log population in 1999	10.31	9.65	0.02
	(0.73)	(1.00)	

Notes: This table reports sample means for various endline outcomes measured across the capital cities in our baseline sample (column 1) compared to the remaining candidate cities located in rotation departments (column 2). Column 3 reports the p-value from a pairwise t-test on the equality of means across the two subsamples.

Table A.6: Effects on Business Taxes (1839-47)

	(1)	(2)	(3)	(4)
	Business tax			
	Levels	Extensive margin	Levels	Extensive margin
Capital in 1800	1105.267*	0.186		
	(658.926)	(0.117)		
Candidate city	-364.264	0.075		
	(614.955)	(0.115)		
Proximity to 1800 capital (km)			21.283**	0.017**
			(8.319)	(0.009)
Proximity to nearest candidate city			-11.766*	-0.013**
			(6.697)	(0.007)
Number of municipalities	7,491	7,491	7,436	7,436
DV mean excl. candidate cities	54.404	0.089	54.477	0.089
Department FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
R^2	0.175	0.142	0.117	0.114

Notes: This table reports robustness checks on the results shown in columns 4 and 5 of Table 2. We report estimates from equation (1) in columns 1-2 and from equation (2) in columns 3-4. In columns 1 and 3, the dependent variable is the total amount of business taxes (*patentes*) collected at the municipality level, measured in Francs and collected in the 1839-47 industrial census. In columns 2 and 4, the dependent variable is a dummy variable equal to 1 if any business tax was collected in the municipality.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.7: Effects on Other Public Buildings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Religious Buildings			**Schools**			**Hospitals**		
	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840
	(a) **Actual vs. Candidate Capitals**								
Capital in 1800	0.6193	0.8697	0.5597	1.1127	1.1716*	1.3270*	0.8420*	0.7161	0.9444*
	(0.6722)	(0.8102)	(1.1480)	(0.7010)	(0.6970)	(0.6908)	(0.4549)	(0.4718)	(0.5736)
Candidate city	0.4213	0.4113	0.1977	0.0449	0.0285	0.1547	-0.0091	0.0300	0.1188
	(0.3175)	(0.6159)	(0.9638)	(0.1640)	(0.1644)	(0.1696)	(0.1886)	(0.2191)	(0.2727)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.037	0.057	0.075	0.011	0.014	0.018	0.003	0.004	0.005
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.169	0.370	0.440	0.164	0.161	0.189	0.259	0.250	0.305
	(b) **Proximity to Actual and Candidate Capitals**								
Proximity to 1800 capital (km)	-0.0065	-0.0119	-0.0062	0.0000	-0.0013	-0.0007	-0.0009	-0.0021	-0.0014
	(0.0089)	(0.0108)	(0.0123)	(0.0037)	(0.0041)	(0.0046)	(0.0018)	(0.0019)	(0.0020)
Proximity to nearest candidate city	0.0196**	0.0120	0.0097	0.0023	0.0031	0.0024	0.0004	0.0007	0.0005
	(0.0077)	(0.0093)	(0.0111)	(0.0026)	(0.0032)	(0.0035)	(0.0018)	(0.0021)	(0.0021)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.038	0.057	0.075	0.011	0.014	0.018	0.003	0.004	0.005
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.034	0.179	0.298	0.024	0.027	0.036	0.098	0.114	0.130

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). In columns 1 through 3, the dependent variable is the number of public works projects involving religious buildings by 1820, 1830, and 1840, respectively. In columns 4 through 6, the dependent variable is the number of projects related to schools of any type. In columns 7 through 9, the dependent variable is the number of projects related to hospitals or hospices. Specification details are otherwise identical to those in Table 3.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.8: Effects on Financial Development: No Public Banks

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of banks in:					
	1820	1840	1862	1881	1898	1910
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.4125	1.8472*	2.3817***	1.3574	1.5441***	1.4206***
	(0.3812)	(0.9673)	(0.9222)	(0.9424)	(0.5871)	(0.5215)
Candidate city	0.2895	0.2080	0.3083	0.2280	1.0234***	0.3564
	(0.1845)	(0.3464)	(0.3916)	(0.4225)	(0.3822)	(0.5019)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.002	0.011	0.028	0.040	0.037	0.049
Randomization inference	0.200	0.021	0.034	0.270	0.059	0.083
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.280	0.421	0.521	0.486	0.569	0.533
	(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0016*	0.0016	0.0054	0.0102*	0.0045	-0.0031
	(0.0009)	(0.0034)	(0.0051)	(0.0060)	(0.0060)	(0.0064)
Proximity to nearest candidate city	-0.0004	-0.0047**	-0.0088**	-0.0169***	-0.0188***	-0.0215***
	(0.0009)	(0.0023)	(0.0041)	(0.0040)	(0.0045)	(0.0059)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.002	0.011	0.028	0.040	0.037	0.049
Randomization inference	0.099	0.665	0.294	0.101	0.461	0.641
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.067	0.237	0.305	0.314	0.302	0.345

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variables is the number of banks operating in the municipality in each year, excluding two types of public banks: *Banque de France* branches and *Comptoirs d'escompte*, a type of limited liability banks created by the French government after 1848 and partially funded by the state. Specification details are otherwise identical to those in Table 5.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.9: Heterogeneity by Industrial Potential

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	1839-47 Industrial Survey				Patents		
	Plants	Workers	Prod Value	Wages	by 1850	by 1870	by 1914
	(a) Actual vs. Candidate Capitals						
Capital × Cotton production capacity (1803)	0.3293**	0.9300***	1.5706***	0.8528***	3.5093	9.4421*	12.4315*
	(0.1344)	(0.2684)	(0.5264)	(0.2454)	(2.7518)	(4.5116)	(6.7332)
Wild bootstrap p-value	[0.08]	[0.02]	[0.06]	[0.02]	[0.18]	[0.05]	[0.08]
Rotation × Cotton production capacity (1803)	-0.4075**	-0.6758***	-1.4703***	-0.5929***	0.3888	-0.4666	4.6102
	(0.1433)	(0.2048)	(0.4361)	(0.1857)	(0.8477)	(2.0158)	(7.2837)
Capital in 1800	0.4916*	1.2195*	2.4078*	1.0574*	7.7499	24.6377**	64.8691***
	(0.2640)	(0.5918)	(1.2213)	(0.5383)	(6.8750)	(11.6075)	(20.6325)
Candidate city	0.8176**	0.4947	1.2824	0.4893	-1.1873	-0.4803	4.1641
	(0.3070)	(0.6858)	(1.3202)	(0.6300)	(3.0398)	(8.4022)	(18.2849)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.136	0.442	1.244	0.359	0.179	0.576	1.254
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.285	0.181	0.158	0.187	0.302	0.384	0.418
	(b) **Proximity to Actual and Candidate Capitals**						
Proximity to capital × Cotton spinning capacity	0.0120	0.0412*	0.1374**	0.0330*	0.0200**	0.0503**	0.0813*
	(0.0070)	(0.0197)	(0.0592)	(0.0159)	(0.0082)	(0.0191)	(0.0412)
Wild bootstrap p-value	[0.10]	[0.05]	[0.02]	[0.05]	[0.01]	[0.00]	[0.02]
Proximity to nearest candidate city × Cotton spin.	-0.0003	-0.0033	-0.0200	-0.0025	-0.0121	-0.0177	-0.0122
	(0.0064)	(0.0207)	(0.0567)	(0.0172)	(0.0085)	(0.0222)	(0.0387)
Proximity to 1800 capital (km)	0.0066	0.0606	0.1721	0.0536	0.0265	0.1054*	0.1699
	(0.0219)	(0.0668)	(0.1767)	(0.0552)	(0.0237)	(0.0544)	(0.1021)
Proximity to nearest candidate city	-0.0207	-0.0673	-0.2049	-0.0533	0.0001	-0.0343	-0.0194
	(0.0167)	(0.0552)	(0.1575)	(0.0454)	(0.0168)	(0.0370)	(0.0867)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.121	0.416	1.185	0.337	0.113	0.366	0.758
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.164	0.133	0.123	0.134	0.173	0.166	0.159

Notes: Panel (a) reports estimates from equation (3). Panel (b) reports estimates from a modified version of equation (2) where we interact $ProximityC_{ij}$ and $ProximityR_{ij}$ with the log number of mechanized cotton spindles in 1803 from Juhász (2018). The dependent variables are defined as in Table 6. We report the p-values from a wild bootstrap with 1,000 replications. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Standard errors clustered by department.

Table A.10: Contemporary Outcomes By Sector

	(1) Admin	(2) Police/Fire	(3) Prim Educ	(4) Sec Educ	(5) Health	(6) Social
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	2.0349***	4.4139***	0.8568***	0.8983**	0.6017	1.9876***
	(0.4082)	(0.5050)	(0.2294)	(0.3642)	(0.5612)	(0.4945)
Candidate city	0.1809	0.3787	0.3187	0.8892**	2.0097***	0.1592
	(0.2994)	(0.5461)	(0.2510)	(0.4057)	(0.5809)	(0.5300)
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	1.138	0.026	0.634	0.363	0.134	0.376
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.496	0.475	0.411	0.395	0.484	0.312
	(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0795*	0.0212	0.1249***	0.0206	0.0340	-0.0237
	(0.0419)	(0.0155)	(0.0355)	(0.0387)	(0.0224)	(0.0382)
Proximity to nearest candidate city	0.4156***	0.0171	0.2950***	0.0244	-0.0407**	0.0743**
	(0.0326)	(0.0106)	(0.0273)	(0.0280)	(0.0166)	(0.0295)
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	1.134	0.024	0.632	0.358	0.128	0.372
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.473	0.112	0.381	0.299	0.297	0.246

Notes: Panel (a) reports estimates from equation (1). Panel (b) reports estimates from equation (2). The dependent variable is the total number of public employees in general administration (column 1), in police or fire (column 2), in primary education (column 3), in secondary education (column 4), in health (column 5) and in social services (column 6). All dependent variables are IHS-transformed. Specification details are otherwise identical to those in Table 8.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.11: Effects on Extractive Capacity:
Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Cadaster created by:			**Business tax**		**Military Conscription**	
	1815	1830	1850	Total	per plant	Recruits	$\leq$ 19 y.o.
Capital in canton	0.4852***	0.2623**	-0.0040	1.5186*	1.5087***	6.4823	12.0213*
	(0.1274)	(0.1177)	(0.0076)	(0.8711)	(0.5784)	(32.8064)	(6.9357)
Candidate city in canton	-0.1548	-0.0451	0.0127	0.7082	0.4963	35.1489*	1.8676
	(0.0971)	(0.1232)	(0.0162)	(0.8159)	(0.5507)	(20.2309)	(5.7197)
Number of municipalities	669	669	669	673	673	673	673
Dependent Variable Mean	0.262	0.605	0.992	3.608	2.130	162.701	28.058
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.153	0.115	0.094	0.339	0.317	0.663	0.543

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 2. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. In columns 1 through 3, the dependent variable is the fraction of municipalities in the canton that had their first cadaster established by 1815 (column 1), 1830 (column 2), and 1850 (column 3). The outcome variables in columns 4 and 5 are computed using the 1839-47 industrial survey. In column 4, the dependent variable is the total amount of business tax (*montant des patentes*) collected from industrial firms inside the canton, measured in francs and IHS-transformed. In column 5, the dependent variable is the average tax collected per industrial establishment, measured in francs and IHS-transformed. Column 6 looks at the total amount of soldiers recruited in the canton between 1802-1815 and column 7 looks at soldiers aged less than 19 (the minimum legal age for being drafted) during the same period. The military conscription data is measured at the municipality level using information on places of birth. See Section 4.1 for details. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.12: Effects on Enforcement Capacity:
Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Police Force			**Prisons**			**Tribunals**	
	1816	1856	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840
Capital in canton	1.4884***	1.3989***	1.6986**	2.9669***	4.0857***	2.0553***	2.6880***	2.7731***
	(0.3884)	(0.3226)	(0.8530)	(0.9789)	(1.4692)	(0.4862)	(0.5919)	(0.5798)
Candidate city in canton	0.1689	0.0649	0.7373*	0.8702	0.7145	-0.0808	0.0214	0.1475
	(0.1800)	(0.1267)	(0.4445)	(0.5429)	(0.5964)	(0.2613)	(0.3731)	(0.4070)
Number of municipalities	673	673	673	673	673	673	673	673
Dependent Variable Mean	0.134	0.123	0.262	0.354	0.412	0.135	0.196	0.238
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.577	0.629	0.431	0.509	0.512	0.484	0.512	0.511

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 3. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. In columns 1 and 2, the dependent variable is the number of police functions available at the canton level in 1816 an 1856, respectively. In columns 3 through 5, the dependent variable is the number of construction projects of prison buildings in the canton by 1820, 1830, and 1840, respectively.In columns 6 through 8, the dependent variable is the number of construction projects of tribunals in the canton by 1820, 1830, and 1840, respectively Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.13: Effects on Public Goods Provision:
Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Secondary Schools			**Social services**		**Telegraph**		**Railway**	
	1812	1836	1866	Beneficiaries	Exp.	National	Local	1852	1870
Capital in canton	0.1015	0.0623	0.1358	2.7877***	3.6917***	0.7807***	0.0994	0.1466*	0.3738***
	(0.0930)	(0.0745)	(0.1016)	(0.6292)	(0.8989)	(0.0938)	(0.1089)	(0.0879)	(0.1144)
Candidate city in canton	0.2381**	0.3333***	0.2889***	1.0586*	1.3553*	0.1002**	0.2730***	-0.0259	0.0729
	(0.1074)	(0.0945)	(0.1045)	(0.5889)	(0.8204)	(0.0492)	(0.1018)	(0.0451)	(0.1194)
Number of municipalities	673	673	673	671	671	673	673	673	673
Dependent Variable Mean	0.131	0.113	0.097	1.654	2.598	0.031	0.140	0.037	0.367
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.549	0.600	0.561	0.560	0.518	0.699	0.529	0.190	0.248

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 4. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton.In column 1 through 3, we look at the availability of a secondary school at the municipal level in 1812, 1836, and 1866, respectively. In columns 4 and 6, we look at the number of individuals benefiting from charity services (*bureaux de bienfaisance*) and the total reported expenditure of the charity offices, respectively. Both outcomes are observed in the 1871 survey conducted by Bucquet (1874). There are fewer observations in columns 3-4 because services for the poor are unobserved for communes occupied by Germany. In columns 6 and 7, the dependent variable is a dummy variable equal to 1 if a municipality in the canton has a national (*fil interdépartemental*) or local (*fil interdépartemental*) connexion on de Vougy (1863)'s map of the French telegraph network. In columns 8 and 9, the dependent variable is a dummy variable equal to 1 if a municipality in the canton has a railway station built by 1852 and 1870, respectively. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department. * $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.14: Effects on Financial Development:
Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of banks in:					
	1820	1840	1862	1881	1898	1910
Capital in canton	0.4295	1.9257*	2.4872**	2.2144**	2.3411***	2.4339***
	(0.3961)	(1.0262)	(0.9910)	(0.9957)	(0.6869)	(0.5896)
Candidate city in canton	0.3159*	0.2595	0.4438	0.3129	1.0548**	0.7116
	(0.1908)	(0.3615)	(0.4041)	(0.4497)	(0.4512)	(0.5280)
Number of municipalities	673	673	673	673	673	673
Dependent Variable Mean	0.071	0.267	0.542	0.703	0.715	0.883
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.297	0.416	0.525	0.511	0.576	0.553

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 5. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. The dependent variables is the number of banks operating in the canton in each year. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.15: Effects on Industrial Development & Innovation: Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)
	1839-47 Industrial Survey				**Patents**	
	Plants	Workers	Prod Value	by 1850	by 1870	by 1914
Capital in canton	0.3804	0.8383	1.6393	8.2663	24.6097*	64.8931**
	(0.4402)	(0.7350)	(1.4814)	(7.5476)	(14.1504)	(30.1059)
Candidate city in canton	0.7189**	0.6114	1.8335	-1.2041	1.1558	4.7623
	(0.3563)	(0.6709)	(1.4100)	(3.3440)	(9.0728)	(19.4145)
Number of municipalities	673	673	673	673	673	673
Dependent Variable Mean	1.089	2.850	7.163	1.996	6.434	14.018
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.365	0.316	0.305	0.291	0.361	0.405

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 6. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. The dependent variables is: the number of industrial establishments (column 1), the number of industrial workers (column 2), the total annual production value (column 3), and the average adult wage (column 4). We transform all dependent variables using the inverse hyperbolic sine function. In columns 5 through 7, we look at the number of patents registered by 1850, 1870, and 1914, respectively. Patents are observed at the level of the municipality of residence of each patent applicant. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.16: Effects on Population:
Results at canton level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Log population in:						
	1821	1841	1861	1881	1901	1911	1999
Capital in canton	0.0108	0.0622	0.1429*	0.2777***	0.3898***	0.4070***	0.7140***
	(0.0392)	(0.0535)	(0.0835)	(0.0922)	(0.1110)	(0.1138)	(0.1282)
Candidate city in canton	-0.0010	-0.0246	0.0289	0.0229	0.0131	0.0203	0.2090*
	(0.0287)	(0.0450)	(0.0680)	(0.0785)	(0.0980)	(0.1013)	(0.1244)
Number of municipalities	669	673	673	673	673	673	665
Dependent Variable Mean	8.857	8.960	8.975	8.960	8.909	8.882	8.877
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.981	0.965	0.931	0.877	0.796	0.772	0.591

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 7. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. The dependent variable is log population measured in each relevant year. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.17: Effects on Contemporary Outcomes:
Results at canton level

	(1) All public	(2) State	(3) Local	(4) Health	(5) Private
Capital in canton	1.3127***	1.2312***	1.7860***	0.5687	1.1068***
	(0.2269)	(0.2700)	(0.2515)	(0.4250)	(0.1802)
Candidate city in canton	0.5427***	0.7076***	0.2634	1.0481**	0.4545**
	(0.2026)	(0.2300)	(0.1919)	(0.4203)	(0.1865)
Number of municipalities	673	673	673	673	673
Dependent Variable Mean	6.289	4.808	5.339	2.881	7.934
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.569	0.484	0.532	0.447	0.542

Notes: This table reports estimates from a modified version of equation (1) estimated at the canton level. The corresponding table in our baseline analysis is Table 8. *Capital in canton* is a dummy variable equal to 1 if the department capital is located inside the canton. *Candidate city* is a dummy variable equal to 1 if at least one candidate city is located in the canton. The dependent variable is the total number of public employees (column 1), the number of public employees in the state (central) administration (column 2), the number of public employees in the local administration (*fonction publique territoriale*, column 3), the number of public employees in the health sector (*fonction publique hospitalière*, column 4), and the number of private sector employees (column 5). All dependent variables are IHS-transformed. Controls include the canton-level averages of log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, and a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations* as well as distance to the department centroid, the department boundary, and the nearest capital outside the department.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.18: Effects on Extractive Capacity:
Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Cadaster created by:			**Business tax**		**Conscription**	
	1815	1830	1850	Total	per plant	Recruits	≤ 19 y.o.
				(a) Actual vs. Candidate Capitals			
Capital in 1800	0.3924***	0.2010**	0.0043	0.8958	0.5374	86.8634**	25.3460***
	(0.1191)	(0.0978)	(0.0050)	(0.8082)	(0.5621)	(43.7489)	(9.4316)
Candidate city	-0.0293	-0.0346	0.0075	2.1966***	1.1449**	48.2438***	5.6496*
	(0.0870)	(0.0969)	(0.0099)	(0.6725)	(0.5482)	(17.1318)	(3.3674)
Number of municipalities	8,761	8,761	8,761	9,746	9,746	9,746	9,746
Dependent Variable Mean	0.221	0.584	0.993	0.506	0.468	13.501	2.308
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.063	0.050	0.016	0.172	0.134	0.594	0.501
				(b) Proximity to Actual and Candidate Capitals			
Proximity to 1800 capital (km)	0.1370***	0.0917***	0.0021	0.1271***	0.1202***	-0.8025**	-0.0592
	(0.0113)	(0.0127)	(0.0019)	(0.0478)	(0.0438)	(0.3191)	(0.0831)
Proximity to nearest candidate city	0.0056	0.0338***	-0.0040**	-0.0209	-0.0198	0.1343	0.0754
	(0.0089)	(0.0112)	(0.0020)	(0.0383)	(0.0352)	(0.2748)	(0.0643)
Number of municipalities	8,686	8,686	8,686	9,664	9,664	9,664	9,664
Dependent Variable Mean	0.221	0.584	0.993	0.507	0.468	13.501	2.309
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.079	0.058	0.017	0.114	0.103	0.477	0.335

Notes: The corresponding table in our baseline analysis is Table 2. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 2.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.19: Effects on Enforcement Capacity:
Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Police Force			**Prisons**			**Tribunals**	
	1816	1856	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840
				(a) Actual vs. Candidate Capitals				
Capital in 1800	1.6928***	1.4494***	1.3695**	2.9316***	4.0352***	2.3787***	3.3754***	3.9349***
	(0.3746)	(0.3019)	(0.6903)	(1.1308)	(1.5021)	(0.5498)	(0.8580)	(1.0953)
Candidate city	0.1112	0.1203	0.8519**	1.2662*	1.1899	0.1644	0.3593	0.4677
	(0.1167)	(0.0985)	(0.3759)	(0.6879)	(0.7630)	(0.2699)	(0.4382)	(0.5355)
Number of municipalities	9,746	9,746	9,746	9,746	9,746	9,746	9,746	9,746
Dependent Variable Mean	0.003	0.004	0.009	0.013	0.015	0.004	0.007	0.009
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.572	0.610	0.373	0.361	0.351	0.511	0.484	0.463
				(b) Proximity to Actual and Candidate Capitals				
Proximity to 1800 capital (km)	0.0012	0.0008	-0.0038	-0.0079	-0.0104	0.0020	0.0033	0.0046
	(0.0008)	(0.0008)	(0.0052)	(0.0077)	(0.0104)	(0.0021)	(0.0025)	(0.0028)
Proximity to nearest candidate city	-0.0021***	-0.0022***	0.0022	0.0052	0.0089	-0.0014	-0.0028	-0.0033
	(0.0008)	(0.0008)	(0.0077)	(0.0123)	(0.0170)	(0.0014)	(0.0018)	(0.0021)
Number of municipalities	9,664	9,664	9,664	9,664	9,664	9,664	9,664	9,664
Dependent Variable Mean	0.003	0.004	0.009	0.013	0.015	0.004	0.007	0.009
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.215	0.259	0.097	0.075	0.066	0.160	0.171	0.151

Notes: The corresponding table in our baseline analysis is Table 3. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 3.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.20: Effects on Public Goods Provision:
Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Secondary Schools			**Social protection**		**Telegraph**		**Railway**	
	1812	1836	1866	Beneficiaries	Exp.	National	Local	1852	1870
				(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.1283	0.0924	0.1770*	0.6589**	0.5290	0.7857***	0.0977	0.1332	0.4132***
	(0.0908)	(0.0741)	(0.1006)	(0.2778)	(0.4596)	(0.0942)	(0.0994)	(0.0945)	(0.1136)
Candidate city	0.2102*	0.2942***	0.2557**	0.1232	-0.1410	0.0925**	0.3043***	-0.0426	0.1364
	(0.1132)	(0.0994)	(0.1056)	(0.3136)	(0.4798)	(0.0467)	(0.1019)	(0.0485)	(0.1123)
Number of municipalities	7,491	7,491	7,491	7,472	7,472	7,491	7,491	7,491	7,491
DV mean excl. candidate cities	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.004	0.047
Randomization inference	0.202	0.214	0.049	0.043	0.289	0.001	0.532	0.341	0.159
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.561	0.613	0.568	0.348	0.319	0.697	0.534	0.063	0.145
				(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	-0.0011	0.0007	-0.0004	-0.0752	-0.1093	0.0024	0.0012	0.0135***	-0.0011
	(0.0019)	(0.0015)	(0.0015)	(0.0466)	(0.0767)	(0.0021)	(0.0028)	(0.0037)	(0.0077)
Proximity to nearest candidate city	-0.0020*	-0.0018*	-0.0011	-0.0530	-0.0652	0.0006	0.0000	0.0027**	0.0171***
	(0.0012)	(0.0010)	(0.0009)	(0.0385)	(0.0627)	(0.0007)	(0.0015)	(0.0012)	(0.0051)
Number of municipalities	7,436	7,436	7,436	7,417	7,417	7,436	7,436	7,436	7,436
DV mean excl. candidate cities	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.004	0.047
Randomization inference	0.590	0.639	0.817	0.105	0.152	0.364	0.669	0.001	0.873
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.350	0.312	0.256	0.309	0.290	0.018	0.290	0.055	0.093

Notes: The corresponding table in our baseline analysis is Table 4. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 4.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.21: Effects on Financial Development: Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of banks in:					
	1820	1840	1862	1881	1898	1910
	(a) **Actual vs. Candidate Capitals**					
Capital in 1800	1.2298**	2.1753***	2.4853***	3.1692***	2.8449***	2.7015***
	(0.4860)	(0.7866)	(0.8156)	(0.9316)	(0.6667)	(0.5662)
Candidate city	0.1691	0.4642*	0.8329**	0.4478	1.1006***	0.8885**
	(0.1507)	(0.2811)	(0.3419)	(0.3850)	(0.3533)	(0.4030)
Number of municipalities	9,746	9,746	9,746	9,746	9,746	9,746
Dependent Variable Mean	0.001	0.009	0.024	0.035	0.034	0.049
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.340	0.468	0.560	0.562	0.603	0.593
	(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	0.0016*	0.0021	0.0053	0.0070	0.0022	-0.0062
	(0.0008)	(0.0025)	(0.0044)	(0.0052)	(0.0060)	(0.0066)
Proximity to nearest candidate city	-0.0002	-0.0050***	-0.0091***	-0.0180***	-0.0149***	-0.0176***
	(0.0008)	(0.0017)	(0.0033)	(0.0035)	(0.0045)	(0.0057)
Number of municipalities	9,664	9,664	9,664	9,664	9,664	9,664
Dependent Variable Mean	0.001	0.009	0.024	0.035	0.034	0.049
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.038	0.188	0.265	0.270	0.252	0.297

Notes: The corresponding table in our baseline analysis is Table 5. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 5.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.22: Industrial Development & Innovation: Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)
	1839-47 Industrial Survey				**Patents**	
	Plants	Workers	Prod Value	by 1850	by 1870	by 1914
			(a) **Actual vs. Candidate Capitals**			
Capital in 1800	0.3805	0.6489	1.1300	15.7494**	54.3885***	128.5831***
	(0.3985)	(0.7216)	(1.3792)	(7.1961)	(18.1127)	(37.3315)
Candidate city	1.2278***	1.7268***	3.6647***	0.1715	-0.4057	-2.6673
	(0.2795)	(0.5690)	(1.2022)	(2.4876)	(6.8701)	(14.6218)
Number of municipalities	9,746	9,746	9,746	9,746	9,746	9,746
Dependent Variable Mean	0.110	0.371	1.074	0.103	0.334	0.700
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.286	0.190	0.162	0.337	0.420	0.459
			(b) **Proximity to Actual and Candidate Capitals**			
Proximity to 1800 capital (km)	0.0182	0.0635*	0.2524***	0.0272	0.1213***	0.2763***
	(0.0115)	(0.0349)	(0.0974)	(0.0216)	(0.0443)	(0.0951)
Proximity to nearest candidate city	-0.0038	0.0074	-0.0410	0.0014	-0.0049	0.0378
	(0.0092)	(0.0289)	(0.0776)	(0.0152)	(0.0326)	(0.0666)
Number of municipalities	9,664	9,664	9,664	9,664	9,664	9,664
Dependent Variable Mean	0.110	0.372	1.076	0.103	0.334	0.701
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.138	0.121	0.114	0.107	0.118	0.124

Notes: The corresponding table in our baseline analysis is Table 6. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 6.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.23: Effects on Population:
Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Log population in:						
	1821	1841	1861	1881	1901	1911	1999
	(a) **Actual vs. Candidate Capitals**						
Capital in 1800	0.0520	0.1019**	0.1899***	0.3166***	0.4081***	0.4235***	0.5828***
	(0.0357)	(0.0473)	(0.0703)	(0.0846)	(0.1015)	(0.1080)	(0.1652)
Candidate city	0.0331	0.0590	0.1181*	0.1033	0.0576	0.0679	0.2126
	(0.0245)	(0.0395)	(0.0615)	(0.0768)	(0.0878)	(0.0932)	(0.1389)
Number of municipalities	9,734	9,745	9,745	9,746	9,746	9,746	9,253
Dependent Variable Mean	6.260	6.355	6.327	6.261	6.153	6.098	5.792
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.963	0.945	0.923	0.889	0.855	0.835	0.652
	(b) **Proximity to Actual and Candidate Capitals**						
Proximity to 1800 capital (km)	-0.0041	-0.0084	0.0055	0.0035	0.0179*	0.0278**	0.2682***
	(0.0040)	(0.0051)	(0.0065)	(0.0084)	(0.0106)	(0.0116)	(0.0213)
Proximity to nearest candidate city	0.0030	0.0089**	0.0075	0.0278***	0.0324***	0.0375***	0.3137***
	(0.0035)	(0.0044)	(0.0054)	(0.0069)	(0.0092)	(0.0102)	(0.0175)
Number of municipalities	9,653	9,663	9,663	9,664	9,664	9,664	9,185
Dependent Variable Mean	6.260	6.356	6.327	6.260	6.152	6.098	5.792
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.960	0.940	0.917	0.881	0.844	0.823	0.656

Notes: The corresponding table in our baseline analysis is Table 7. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 7.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.24: Effects on Contemporary Outcomes:
Results with additional candidate cities

	(1)	(2)	(3)	(4)	(5)
			Employees:		
	All public	State	Local	Health	Private
			(a) **Actual vs. Candidate Capitals**		
Capital in 1800	1.0201***	1.1870***	1.6026***	0.8730**	0.7247**
	(0.3918)	(0.3298)	(0.3532)	(0.3738)	(0.3655)
Candidate city	0.2097	0.7606***	0.2678	1.2810***	0.1109
	(0.2954)	(0.2914)	(0.2618)	(0.4437)	(0.2570)
Number of municipalities	9,746	9,746	9,746	9,746	9,746
Dependent Variable Mean	1.713	0.842	1.250	0.293	3.509
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.484	0.421	0.471	0.406	0.458
			(b) **Proximity to Actual and Candidate Capitals**		
Proximity to 1800 capital (km)	0.4107***	0.3377***	0.3156***	0.0460*	0.4526***
	(0.0425)	(0.0393)	(0.0388)	(0.0279)	(0.0472)
Proximity to nearest candidate city	0.4407***	0.3198***	0.3951***	-0.0255	0.5566***
	(0.0350)	(0.0312)	(0.0319)	(0.0210)	(0.0401)
Number of municipalities	9,664	9,664	9,664	9,664	9,664
Dependent Variable Mean	1.707	0.836	1.245	0.287	3.504
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.468	0.375	0.452	0.270	0.457

Notes: The corresponding table in our baseline analysis is Table 8. Here we include all capitals and candidate cities mentioned in the February 1790 Decree (68 cities across 24 departments; see Appendix Table A.1). The dependent variables and specification details are otherwise identical to those in Table 8.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.25: Effects on Extractive Capacity:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Cadaster created by:			**Business tax**		**Conscription**	
	1815	1830	1850	Total	per plant	Recruits	$\leq$ 19 y.o.
			(a) Actual vs. Candidate Capitals				
Capital in 1800	0.5971	0.2737	-0.0024	1.7098	1.3593	54.2015	14.7773
	(0.1246)***	(0.1079)**	(0.0068)	(0.9886)*	(0.6772)**	(36.1064)	(7.1182)**
	[0.1254]***	[0.1060]***	[0.0060]	[0.6325]***	[0.5825]**	[33.8425]	[6.8257]**
	{0.1179}***	{0.1268}**	{0.0055}	{0.5938}**	{0.4608}***	{35.6583}	{7.0351}*
Wild bootstrap	0.000	0.014	0.521	0.002	0.003	0.152	0.033
Number of municipalities	6,872	6,872	6,872	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.212	0.569	0.993	0.557	0.514	13.358	2.295
Randomization inference	0.02	0.03	0.99	0.21	0.20	0.16	0.07
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.068	0.057	0.018	0.162	0.127	0.635	0.513
			(b) Proximity to Actual and Candidate Capitals				
Proximity to 1800 capital (km)	0.1685	0.1249	0.0032	0.1499	0.1449	-0.7440	-0.1339
	(0.0121)***	(0.0143)***	(0.0023)	(0.0557)***	(0.0513)***	(0.3609)**	(0.0905)
	[0.0394]***	[0.0436]***	[0.0031]	[0.1452]	[0.1398]	[0.4329]*	[0.1658]
	{0.0445}***	{0.0550}**	{0.0036}	{0.1261}	{0.1195}	{0.4461}	{0.1667}
Wild bootstrap	0.001	0.047	0.646	0.252	0.244	0.289	0.969
Number of municipalities	6,822	6,822	6,822	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.211	0.569	0.993	0.557	0.515	13.355	2.295
Randomization inference	0.00	0.00	0.16	0.01	0.01	0.05	0.14
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.093	0.068	0.019	0.121	0.106	0.482	0.345

Notes: The corresponding table in our baseline analysis is Table 2. The dependent variables and specification details are identical to those in Table 2, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* p<0.1, ** p<0.05, *** p<0.01.

Table A.26: Effects on Enforcement Capacity:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Police Force			**Prisons**			**Tribunals**	
	1816	1856	by 1820	by 1830	by 1840	by 1820	by 1830	by 1840
				(a) **Actual vs. Candidate Capitals**				
Capital in 1800	1.5204	1.4392	1.6102	2.8796	3.9390	2.1176	2.7437	2.7950
	(0.3933)***	(0.3270)***	(0.8436)*	(0.9705)***	(1.3926)***	(0.4904)***	(0.6156)***	(0.5926)***
	[0.3802]***	[0.3352]***	[0.8741]*	[1.1641]**	[1.5227]***	[0.4596]***	[0.6180]***	[0.5609]***
	{0.3495}***	{0.3074}***	{0.9193}*	{1.2009}**	{1.5591}**	{0.4288}***	{0.5828}***	{0.5428}***
Wild bootstrap	0.002	0.001	0.098	0.039	0.018	0.000	0.000	0.000
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.004	0.004	0.009	0.012	0.014	0.004	0.006	0.008
Randomization inference	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.568	0.622	0.429	0.516	0.518	0.487	0.514	0.520

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				(b) **Proximity to Actual and Candidate Capitals**				
Proximity to 1800 capital (km)	0.0014	0.0014	-0.0018	-0.0035	-0.0023	0.0016	0.0038	0.0057
	(0.0010)	(0.0011)	(0.0037)	(0.0039)	(0.0040)	(0.0023)	(0.0027)	(0.0031)*
	[0.0008]*	[0.0010]	[0.0030]	[0.0027]	[0.0035]	[0.0018]	[0.0017]**	[0.0020]***
	{0.0009}	{0.0010}	{0.0029}	{0.0030}	{0.0035}	{0.0018}	{0.0019}*	{0.0023}**
Wild bootstrap	0.148	0.201	0.580	0.276	0.531	0.487	0.101	0.044
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.004	0.004	0.009	0.012	0.014	0.004	0.006	0.008
Randomization inference	0.14	0.20	0.63	0.40	0.61	0.51	0.16	0.06
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.261	0.316	0.172	0.199	0.251	0.133	0.162	0.138

Notes: The corresponding table in our baseline analysis is Table 3. The dependent variables and specification details are identical to those in Table 3, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.27: Effects on Public Goods Provision:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Secondary Schools			**Social protection**		**Telegraph**		**Railway**	
	1812	1836	1866	Beneficiaries	Exp.	National	Local	1852	1870
				(a) **Actual vs. Candidate Capitals**					
Capital in 1800	0.1283	0.0924	0.1770	0.6589	0.5290	0.7857	0.0977	0.1332	0.4132
	(0.0908)	(0.0741)	(0.1006)*	(0.2778)**	(0.4596)	(0.0942)***	(0.0994)	(0.0945)	(0.1136)***
	[0.1214]	[0.0907]	[0.0884]**	[0.1967]***	[0.3149]*	[0.1007]***	[0.0664]	[0.0768]*	[0.1307]***
	{0.1234}	{0.0937}	{0.0911}*	{0.1907}***	{0.3203}	{0.1129}***	{0.0705}	{0.0813}	{0.1161}***
Wild bootstrap	0.341	0.427	0.105	0.006	0.095	0.000	0.240	0.116	0.005
Number of municipalities	7,491	7,491	7,491	7,472	7,472	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.017	0.036
Randomization inference	0.21	0.23	0.04	0.05	0.30	0.00	0.57	0.33	0.14
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.561	0.613	0.568	0.348	0.319	0.697	0.534	0.176	0.172
				(b) **Proximity to Actual and Candidate Capitals**					
Proximity to 1800 capital (km)	-0.0011	0.0007	-0.0004	-0.0752	-0.1093	0.0024	0.0012	0.0135	-0.0011
	(0.0019)	(0.0015)	(0.0015)	(0.0466)	(0.0767)	(0.0021)	(0.0028)	(0.0037)***	(0.0077)
	[0.0014]	[0.0013]	[0.0011]	[0.1104]	[0.1801]	[0.0015]	[0.0015]	[0.0075]*	[0.0124]
	{0.0015}	{0.0015}	{0.0011}	{0.1293}	{0.2006}	{0.0016}	{0.0019}	{0.0079}	{0.0122}
Wild bootstrap	0.467	0.631	0.728	0.439	0.467	0.263	0.966	0.143	0.933
Number of municipalities	7,436	7,436	7,436	7,417	7,417	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.007	0.005	0.004	1.058	1.768	0.000	0.007	0.017	0.036
Randomization inference	0.61	0.65	0.82	0.09	0.16	0.36	0.66	0.00	0.88
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.350	0.312	0.256	0.309	0.290	0.018	0.290	0.065	0.094

Notes: The corresponding table in our baseline analysis is Table 4. The dependent variables and specification details are identical to those in Table 4, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.28: Effects on Financial Development:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)
			Number of banks in:			
	1820	1840	1862	1881	1898	1910
			(a) **Actual vs. Candidate Capitals**			
Capital in 1800	0.4125	1.8472	2.4936	2.0180	2.1552	2.3748
	(0.3812)	(0.9673)*	(0.9609)***	(0.9954)**	(0.7136)***	(0.6146)***
	[0.3893]	[1.0138]*	[1.0225]**	[0.8366]**	[0.5792]***	[0.5187]***
	{0.3740}	{1.0193}*	{1.0403}**	{0.9550}**	{0.6842}***	{0.5711}***
Wild bootstrap	0.326	0.095	0.016	0.069	0.008	0.004
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.002	0.011	0.028	0.041	0.039	0.053
Randomization inference	0.21	0.02	0.03	0.12	0.01	0.00
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.280	0.421	0.534	0.521	0.601	0.584
			(b) **Proximity to Actual and Candidate Capitals**			
Proximity to 1800 capital (km)	0.0016	0.0016	0.0054	0.0101	0.0050	-0.0037
	(0.0009)*	(0.0034)	(0.0051)	(0.0061)*	(0.0066)	(0.0074)
	[0.0005]***	[0.0027]	[0.0049]	[0.0061]*	[0.0060]	[0.0050]
	{0.0006}**	{0.0030}	{0.0054}	{0.0062}	{0.0060}	{0.0054}
Wild bootstrap	0.038	0.549	0.251	0.106	0.264	0.972
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.002	0.011	0.029	0.041	0.039	0.053
Randomization inference	0.10	0.65	0.31	0.09	0.45	0.61
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.067	0.237	0.319	0.327	0.317	0.351

Notes: The corresponding table in our baseline analysis is Table 5. The dependent variables and specification details are identical to those in Table 5, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* p<0.1, ** p<0.05, *** p<0.01.

Table A.29: Industrial Development & Innovation:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)
	1839-47 Industrial Survey				**Patents**	
	Plants	Workers	Prod Value	by 1850	by 1870	by 1914
			(a) **Actual vs. Candidate Capitals**			
Capital in 1800	0.4467	1.1299	2.2308	7.6411	24.2269	64.7361
	(0.4958)	(0.8320)	(1.6736)	(7.2080)	(13.6561)*	(29.4816)**
	[0.2859]	[0.7927]	[1.5803]	[6.9592]	[12.3664]*	[21.4876]***
	{0.3346}	{0.7409}	{1.3245}	{7.2752}	{13.0623}*	{22.8385}**
Wild bootstrap	0.170	0.112	0.083	0.375	0.024	0.004
Number of municipalities	7,491	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	0.121	0.416	1.183	0.113	0.366	0.757
Randomization inference	0.44	0.27	0.24	0.33	0.06	0.01
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.272	0.176	0.155	0.259	0.350	0.391
			(b) **Proximity to Actual and Candidate Capitals**			
Proximity to 1800 capital (km)	0.0153	0.0901	0.2683	0.0381	0.1379	0.2267
	(0.0132)	(0.0407)**	(0.1125)**	(0.0265)	(0.0618)**	(0.1213)*
	[0.0244]	[0.0942]	[0.2613]	[0.0242]	[0.0542]**	[0.1054]**
	{0.0248}	{0.0829}	{0.2307}	{0.0246}	{0.0592}**	{0.1108}*
Wild bootstrap	0.518	0.331	0.280	0.375	0.074	0.053
Number of municipalities	7,436	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	0.121	0.416	1.185	0.113	0.366	0.758
Randomization inference	0.24	0.02	0.02	0.15	0.01	0.03
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.162	0.131	0.120	0.173	0.166	0.159

Notes: The corresponding table in our baseline analysis is Table 6. The dependent variables and specification details are identical to those in Table 6, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* p<0.1, ** p<0.05, *** p<0.01.

Table A.30: Effects on Population:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Log population in:			
	1821	1841	1861	1881	1901	1911	1999
				(a) **Actual vs. Candidate Capitals**			
Capital in 1800	0.0320	0.1080	0.1766	0.3229	0.4194	0.4299	0.7163
	(0.0439)	(0.0586)*	(0.0905)*	(0.1043)***	(0.1244)***	(0.1294)***	(0.1709)***
	[0.0412]	[0.0358]***	[0.0649]***	[0.0889]***	[0.1066]***	[0.1148]***	[0.1557]***
	{0.0444}	{0.0452}**	{0.0785}**	{0.0948}***	{0.1117}***	{0.1179}***	{0.1494}***
Wild bootstrap	0.310	0.008	0.018	0.000	0.000	0.000	0.001
Number of municipalities	7,479	7,490	7,490	7,491	7,491	7,491	7,046
Dependent Variable Mean	6.217	6.314	6.286	6.214	6.098	6.041	5.743
Randomization inference	0.50	0.09	0.08	0.01	0.01	0.01	0.00
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.963	0.945	0.921	0.890	0.856	0.839	0.653
				(b) **Proximity to Actual and Candidate Capitals**			
Proximity to 1800 capital (km)	-0.0100	-0.0169	-0.0096	-0.0234	-0.0256	-0.0198	0.1416
	(0.0046)**	(0.0060)***	(0.0075)	(0.0094)**	(0.0119)**	(0.0129)	(0.0241)***
	[0.0096]	[0.0156]	[0.0207]	[0.0310]	[0.0393]	[0.0454]	[0.1049]
	{0.0104}	{0.0154}	{0.0211}	{0.0315}	{0.0388}	{0.0445}	{0.1006}
Wild bootstrap	0.477	0.520	0.664	0.473	0.446	0.603	0.365
Number of municipalities	7,425	7,435	7,435	7,436	7,436	7,436	7,001
Dependent Variable Mean	6.218	6.314	6.286	6.214	6.097	6.041	5.743
Randomization inference	0.02	0.01	0.22	0.01	0.03	0.14	0.00
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.960	0.941	0.916	0.882	0.847	0.828	0.652

Notes: The corresponding table in our baseline analysis is Table 7. The dependent variables and specification details are identical to those in Table 7, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.31: Effects on Contemporary Outcomes:
Alternative approaches to inference

	(1)	(2)	(3)	(4)	(5)
			Employees:		
	All public	State	Local	Health	Private
			(a) **Actual vs. Candidate Capitals**		
Capital in 1800	1.3962	1.4722	2.0042	0.9658	1.0252
	(0.4635)***	(0.3947)***	(0.4070)***	(0.4060)**	(0.4044)**
	[0.3938]***	[0.3024]***	[0.3639]***	[0.2538]***	[0.3353]***
	{0.3481}***	{0.2586}***	{0.3166}***	{0.2884}***	{0.2880}***
Wild bootstrap	0.003	0.000	0.000	0.017	0.008
Number of municipalities	7,491	7,491	7,491	7,491	7,491
Dependent Variable Mean	1.659	0.799	1.217	0.278	3.446
Randomization inference	0.01	0.01	0.00	0.22	0.03
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.495	0.430	0.484	0.427	0.457
			(b) **Proximity to Actual and Candidate Capitals**		
Proximity to 1800 capital (km)	0.1703	0.1354	0.0747	0.0083	0.2103
	(0.0484)***	(0.0438)***	(0.0444)*	(0.0298)	(0.0550)***
	[0.1431]	[0.1390]	[0.1321]	[0.0411]	[0.1735]
	{0.1386}	{0.1429}	{0.1320}	{0.0350}	{0.1656}
Wild bootstrap	0.457	0.520	0.923	0.713	0.384
Number of municipalities	7,436	7,436	7,436	7,436	7,436
Dependent Variable Mean	1.653	0.795	1.213	0.272	3.441
Randomization inference	0.00	0.00	0.10	0.79	0.00
Department FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R^2	0.478	0.382	0.464	0.300	0.455

Notes: The corresponding table in our baseline analysis is Table 8. The dependent variables and specification details are identical to those in Table 8, but here we provide alternative approaches to statistical inference. Heteroskedasticity-robust standard errors are reported in parentheses. Standard errors adjusted for spatial correlation following Conley (1999) are reported in brackets. We use a distance cutoff of 100 kilometers beyond which the correlation between the error term of two observations is assumed to be zero. Standard errors clustered by department are reported in curly brackets. To adjust for the small number of departments, we also report the p-value from a wild bootstrap with 1,000 replications.
* p<0.1, ** p<0.05, *** p<0.01.

B The Creation of Rotation Departments and the Choice of Capitals

Aisne

The Decree specified that local delegates would gather in the neutral town of Chauny to decide which one of two cities, **Laon** or **Soissons**, would become the capital of the new Aisne department. Aisne was a new artificial entity covering parts of three distinct provinces: Champagne, Ile-de-France, and Picardie. The largest cities in the department in 1793 were Saint-Quentin (10,800 inhabitants), Soissons (7,675), Laon (7,500), and Château-Thierry (4,080). In May 1790, Laon defeated Soissons in a 411 to 37 vote to become the new department capital. Most of the delegates from Soissons had withdrawn from the vote to denounce insults made against the grain merchants from Soissons (Margadant, 1992, p. 264).

Ardèche

The Decree established a rotation across five cities: **Annonay**, Tournon (**Tournon-sur-Rhône**), **Aubenas**, **Privas**, and Lebourg (**Bourg-Saint-Andéol**). Among these cities, only three had an administrative function during the Ancien Régime: Annonay (a bailiwick), Aubenas (a *subdélégation*), and Tournon-sur-Rhône (a *subdélégation*). Two pre-existing administrative centers were not included in the rotation: Villeneuve-de-Berg (a bailiwick) and Viviers (a bishopric and a tax center). The three largest cities in 1793 were Annonay (5,800 inhabitants), Bourg-Saint-Andéol (3,598), and Tournon-sur-Rhône (3,300). Privas, the final capital, and Bourg-Saint-Andéol had no administrative function before 1790. Historical sources indicate that the first departmental assembly took place in Privas but the rotation was never actually implemented, leaving Privas as the *de facto* capital (Masson, 1984).

Ariège

The Decree established a rotation across three cities: **Foix**, **Saint-Girons**, and **Pamiers**. All three candidate cities hosted a *subdélégation* in 1790; in addition, Pamiers hosted a bishopric and a bailiwick, Saint-Girons hosted only a bailiwick, and Foix hosted only a tax center. The three largest cities in 1793 were Pamiers (4,954 inhabitants), Mirepoix (3,300) and Foix (3,265). Despite also hosting a bishopric and a tax center, Mirepoix was not included in the rotation. Foix eventually became the department capital instead of Pamiers, even though Pamiers was a more important urban center on the eve of the Revolution and continued to lobby for the capital status in the ensuing years (Margadant, 1992, p. 274).

Cantal

The Decree established a rotation between the towns of **Aurillac** and **Saint-Flour**. Both candidate cities hosted a bailiwick, a tax center, and a *subdélégation* in 1790, but only Saint-Flour had a bishopric. On the other hand, Aurillac was more populated than Saint-Flour in 1793 (10,470 inhabitants as opposed to 5,282 in Saint-Flour). Historical sources document numerous grievances about the accessibility of both cities (Archives Départementales du Cantal, 2021). The town of Vic-sur-Sère tried to capitalize on this uncertainty and used its more central location to lobby for the capital status, in vain. The first round of the rotation was given to Aurillac, which subsequently refused to alternate functions with Saint-Flour, but this rotation was the only one to formally continue after the September 1791 abolition decree, which made an explicit exception for Cantal. The rotation was finally abolished in 1794, and Aurillac was chosen as the capital (Masson, 1984, pp. 212, 292).

Charente-Inférieure

The Decree established a rotation across three cities: **La Rochelle**, **Saint-Jean-d'Angély**, and **Saintes**. The three largest cities in 1793 were La Rochelle (24,013 inhabitants), a town excluded from the rotation called Rochefort (20,874), and Saintes (8,388). Both La Rochelle and Saintes had the same number of Ancien Régime administrative functions (4), while Saint-Jean-d'Angély did not host a bishopric and thus had one fewer function. Saintes received the first round of the rotation despite fierce opposition from La Rochelle's delegates (Masson, 1984, p. 223). This city then formally became the department capital throughout the revolutionary period and was again confirmed as the capital by Napoléon in 1800. The capital was subsequently relocated to La Rochelle in 1810, although the department's main tribunal remained in Saintes. The department was also a hotbed of civil violence during the revolutionary period.

Creuse

The Decree established a rotation between the towns of **Aubusson** and **Guéret** in the department of Creuse. Aubusson was slightly more populated than Guéret (with 4,445 versus 3,379 inhabitants in 1793, respectively), but Guéret was a major administrative center (it hosted a bailiwick, a tax center, and a *subdélégation*) while Aubusson was not—hence we do not include the latter in our baseline list of candidate cities.

Deux-Sèvres

The Decree established a rotation between the cities of **Niort**, Saint-Maixent (**Saint-Maixent-l'École**), and **Parthenay**. Both Niort and Saint-Maixent hosted a bailiwick, a tax center, and a *subdélégation*, while Parthenay only had a *subdélégation*. Margadant (1992, p. 269) reports that heated debates about the choice of the capital continued after the establishment of the rotation: "Parthenay, which enjoyed the advantage of perfect centrality in the department, opposed an alternate [rotation] in the hope of becoming the permanent seat; Saint-Maixent, fearing this ambition, voted the alternate; and Niort abstained. That night, however, delegates from Parthenay and Saint-Maixent joined forces (...). They agreed to eliminate Niort from the alternate and divide the spoils among themselves: Parthenay and Saint-Maixent would rotate the administration (...) Niort would be left with the college." However, delegates from Niort got wind of this alliance, withdrew from local deliberations, and successfully lobbied the National Assembly to officially become the capital in September 1790 (Margadant, 1992, p. 270). Saint-Maixent was promised the tribunal as compensation, but this promise was not kept (Masson, 1984, p. 223).

Dordogne

The Decree established a rotation between the towns of **Bergerac** (11,720 inhabitants in 1793), **Sarlat** (7,877), and **Périgueux** (9,898). This was deemed a good compromise solution for local towns in the old province of Périgord, which had feared being included in the same department as Bordeaux (Masson, 1984, p. 229). Since Bergerac had fewer Ancien Régime administrative functions (2) than Sarlat and Périgueux, we do not consider it as a candidate city in our baseline analysis. Périgueux officially became the department capital in September 1791 when the National Assembly abolished rotations.

Gard

The Decree established a rotation between the city of **Nîmes** and the substantially smaller towns of Alais (**Alès**) and **Uzès**. Among these, only Nîmes hosted a bailiwick. The rotation with Alès and Uzès was suggested by Rabaut-Saint-Etienne who originated from the bailiwick of Nîmes. Gard is not included in our baseline estimation since Nîmes had more functions than the other two towns.

Haute-Marne

The Decree allowed local voters to establish a rotation between the towns of **Chaumont** (5,448 inhabitants in 1793) and **Langres** (8,613). Both cities were important administrative centers in the Ancien Régime, but Langres also hosted a bishopric while Chaumont did not. Local delegates voted to establish the capital permanently in Chaumont, with a fraction of voters siding against Langres because it had refused to sell grain to neighboring municipalities in May 1790 (Margadant, 1992).

Haute-Saône

The Decree established a rotation between the cities of **Gray** (5,429 inhabitants in 1793) and **Vesoul** (5,303). Both cities hosted a bailiwick, a tax center, and a *subdélégation*. Gray was a more important commercial center while Vesoul used its more central position to lobby for the capital status. During the debates preceding the administrative reform, the Constitutional Committee received anonymous letters denouncing the grain merchants of Gray for "forestalling, speculation, and usury" (Margadant, 1992, p. 273). While historical sources disagree about the exact date when the capital was settled in Vesoul, the February 1800 law mentions Vesoul as the department capital.

Hérault

The Decree established a rotation between four cities: **Béziers**, **Lodève**, Saint-Pons (**Saint-Pons-de-Thomières**), and **Montpellier**. In our baseline analysis, we only consider **Béziers** and **Montpellier** as candidate cities since both cities had four administrative functions under the Ancien Régime, compared to only three for Lodève and Saint-Pons. Both Béziers and Montpellier were large cities on the eve of the Revolution (with 12,501 and 32,897 inhabitants, respectively), and both cities hosted a bishopric, a bailiwick, a tax center, and a *subdélégation*. The design of the Hérault department was criticized by delegates from smaller towns: "The plan for this division, which was evidently drafted by the representatives of the bailiwicks from Béziers and Montpellier, seems to plainly contradict the principles that served as a basis for the division of the kingdom" (Masson, 1984, p. 205).

Indre

The Decree allowed local voters to choose whether the capital should be located in **Châteauroux** (7,503 inhabitants in 1793) or rotate with the historical city of **Issoudun** (14,661). Both cities hosted a bailiwick, a tax center, and a *subdélégation*. Despite being the smaller of the two cities, Châteauroux defeated Issoudun in a 262 to 47 vote, with its more central location being a factor (Margadant, 1992).

Jura

The Decree established a rotation between the towns of **Lons-le-Saunier**, **Dôle**, Salins (**Salins-les-Bains**), and **Poligny**. Lons-le-Saunier became the department capital in 1791 when rotations were abolished. The citizens from Dôle (the department's largest city in 1793) were among the fiercest opponents to the abolition of rotations, and continued to request the capital status in the ensuing years: in 1797, "petitioners from Dôle denounced [Lons-le-Saunier] as *a den of cyclops whose walls and pavements are still stained with the blood of innocent Republicans*" (Margadant, 1992, p. 273 and 283).

Landes

The Decree ordered the administration to temporarily settle in **Mont-de-Marsan** (4,950 inhabitants in 1793), but allowed local voters to establish a rotation and required that the department's tribunal would be based in **Dax** (4,390). Mont-de-Marsan hosted a bailiwick, a tax center, and a *subdélégation*; Dax hosted all these functions as well as a bishopric. A fierce rivalry opposed both cities, to the extent that they were initially reluctant to be associated in the same department (Masson, 1984, p. 230). Mont-de-Marsan became the department capital after the abolition of rotations.

Lozère

The Decree initially established a rotation between the Catholic city of **Mende** and the predominantly Protestant town of **Marvéjols**, which was also the historical capital of an area known as *pays du Gévaudan*. Mende hosted all four administrative functions under the Ancien Régime while Marvejols hosted none; hence we do not include it in our baseline sample of candidate cities.

Maine-et-Loire

The Decree initially established a rotation between the cities of **Angers** and **Saumur** in the department of Maine-et-Loire, which was partly carved out of the historical province of Anjou. Angers was a much larger city (with 33,900 inhabitants in 1793, compared to 12,300 in Saumur) and hosted four Ancien Régime administrative functions compared to Saumur's three—hence we do not consider the latter in our baseline sample of candidate cities. Local delegates eventually voted to establish Angers as the capital in a 532 to 104 vote (Margadant, 1992, p. 265).

Mayenne

The Decree envisioned that the department's administration would either be placed in the town of **Laval** or shared with the towns of **Mayenne** and **Château-Gontier**. The potential choice of Laval was controversial because the city was deemed "too close to Brittany" (Masson, 1984, p. 219). Both Laval and Château-Gontier hosted a bailiwick, a tax center, and a *subdélégation* in 1789. Since Mayenne only hosted a tax center and a *subdélégation*, we do not consider it in our baseline sample of candidate cities.

Meurthe

The Decree established a temporary rotation between the cities of **Lunéville** (11,691 inhabitants in 1793) and **Nancy** (29,141). Lunéville hosted a bailiwick, a tax center, and a *subdélégation*; Nancy hosted all these functions as well as a bishopric. After the abolition of rotations, both cities continued to compete for administrative functions. In 1795, Nancy was chosen as the capital while Lunéville received tribunals, but this allocation was later reversed. Eventually Nancy succeeded in obtaining all administrative functions (Margadant, 1992, p. 283). The department of Meurthe was one of the departments most affected by the German annexation of Alsace-Lorraine in 1870, losing the Sarrebourg and Chateau-Salins arrondissements (which were later merged to the Moselle department in 1914) and acquiring the Briey arrondissement (initially located inside Moselle). The department was thus renamed *Meurthe-et-Moselle* in 1870. In our analysis, we consider all the municipalities inside the initial boundaries of Meurthe drawn in 1790.

Meuse

The Decree established a rotation every four years between **Saint-Mihiel** (4,510 inhabitants in 1793) and **Bar-le-Duc** (9,111). Both cities hosted a bailiwick, a tax center, and a *subdélégation*. Bar-le-Duc was additionally the hometown of Pierre-François Gossin, a prominent revolutionary who was the rapporteur of the September 1791 decree abolishing rotations (he was subsequently guillotined in July 1794). The historical city of Verdun, which hosted the department's only bishopric in 1790, was not included in the rotation likely as a result of Gossin's lobbying efforts. Bar-le-Duc eventually became the department capital but Saint-Mihiel retained the tribunal (Masson, 1984, p. 199).

Puy-de-Dôme

The Decree appointed the town of Clermont (**Clermont-Ferrand**) as the department capital, unless a high court was created in this department, in which case the court would be located in Clermont and the rest of the administration would settle in the town of **Riom**. Clermont's population was more than twice larger than that of Riom, but Riom was historically the administrative capital of the Auvergne province (Masson, 1984, p. 212). Since Riom had fewer administrative functions (3) than Clermont-Ferrand (4), we do not consider it as a candidate city in our baseline analysis.

Tarn

The Decree established a rotation between the cities of **Albi** (11,176 inhabitants in 1793) and **Castres** (12,511), whose rivalry dated back centuries (Masson, 1984, p. 206). Both cities hosted a bishopric, a tax center, and a *subdélégation*; Castres was additionally endowed with a bailiwick. Another decree additionally mentioned the town of Lavaur as being included in the rotation, but this town was not mentioned in the February 1790 Decree as Albi and Castres went back on their word to share the administration with this town (Margadant, 1992, p. 249). After the abolition of rotations, Castres was formally the department capital. The Castres representative in the National Assembly, a protestant pastor named Alba Lasource, opposed the deportation of Catholic priests and was subsequently guillotined in October 1793. Suspected of lacking enthusiasm for the Revolution, Castres was eventually stripped of its status and Albi became the department capital in 1797.

Var

The Decree established a rotation among all the district seats in the department, with several viable candidate cities presenting different advantages. Margadant (1992, p. 271) provides a detailed summary: "**Toulon**, a naval port of 26,000 inhabitants that expended more government revenues in a year than the interior of Provence in a decade argued that rotation would violate contemporary customs ... **Grasse** boasted of a population of 12,000, which made it the second-largest town of the Var, and its royal *sénéchaussée* [bailiwick] and bishopric had just been as important as the comparable establishments of Toulon in the old regime ... **Draguignan** was located near the geometrical center of the department, but **Brignoles** was closer to the most densely populated area around Toulon. While delegates from Draguignan used the argument of centrality to seek the provisional headquarters of the department, leaving open the question of permanency or rotation, delegates from Brignoles joined with Toulon in voting against the alternate, but only so they could claim the permanent seat for themselves. The contradictory tactics of these several towns resulted in a statemate (...)." Following a proposal by Pierre-François Gossin, the National Assembly settled in favor of Toulon in September 1790, but the capital was subsequently moved to first Grasse, then Brignoles, then finally Draguignan (Margadant, 1992, p. 274). Toulon allegedly lost its claim on the capital status in late 1793 when a monarchist faction allowed British forces to enter the city. The city was taken back by the revolutionaries in Napoléon's first major military success.

Vosges

The Decree specified that local delegates would select the department capital among two candidate cities, **Épinal** (6,688 inhabitants in 1793) and **Mirecourt** (4,946), further stipulating that the city not chosen as capital would have to receive the tribunal. Both cities hosted a bailiwick, a tax center, and a *subdélégation*. On June 1, 1790, ṕinal defeated Mirecourt in vote (311 vs. 127) to become the capital (Rothiot, 2000).

C Conceptual Framework: Proofs

Period 2. At the start of period 2, coercive capacity is realized, resulting from the investments made in period 1. The indirect utility in city j is given by

$$\ln V_{j,2} = \gamma_1 \ln(Q_{j,2}) + \beta_2 \ln G_{j,2} + \beta_3 \ln \bar{G}_2.$$

Introducing the budget constraint: $Q_{j,2} = (1-\tau_{j,2})w_{j,2} = (1-\tau_{j,2})A(G_{j,2})^{\beta_1}$, we have:

$$\ln V_{j,2} = \gamma_1 \ln(1-\tau_{j,2}) + \gamma_1 \ln A + \gamma_1\beta_1 \ln G_{j,2} + \beta_2 \ln G_{j,2} + \beta_3 \ln \bar{G}_2.$$

The objective of the central government in the second period can be expressed as follows:

$$\xi V_{c,2} + (1-\xi)V_{r,2} = \gamma_1 \ln A + \beta_3 \ln \bar{G}_2 + \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \ln G_{j,2}\right],$$

where we use the notation $\tilde{\beta} = \beta_2 + \gamma_1\beta_1$, which captures the direct effect of local public goods on the utility of citizens and the indirect effect through the increased productivity of firms.

In the second period, there is no investment in coercive capacity, since this is the last period of the game, and the quantity of public goods is determined by $G_{j,2} = \mu_{j,2}T_{j,2}$ and $\bar{G}_2 = ((1-\mu_{c,2})T_{c,2})^{\alpha_c}((1-\mu_{c,2})T_{c,2})^{\alpha_r}$. We can thus rewrite the government's period 2 objective as:

$$\begin{aligned}\xi V_{c,2} + (1-\xi)V_{r,2} &= \gamma_1 \ln A + \sum_j \xi_j \left[\alpha_j\beta_3 \ln(1-\mu_{j,2}) + \alpha_j\beta_3 \ln T_{j,2}\right] \\ &+ \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \ln \mu_{j,2} + \tilde{\beta} \ln(T_{j,2})\right].\end{aligned}$$

Furthermore $T_{j,2}$ is given by

$$\ln(T_{j,2}) = \ln \tau_{j,2} + \ln C_{j,2} + \ln N_{j,2} + \ln A + \beta_1 \ln G_{j,2}.$$

Given that $G_{j,2} = \mu_j T_{j,2}$, we have:

$$\ln(T_{j,2}) = \frac{1}{1-\beta_1}\left[\ln \tau_{j,2} + \ln C_{j,2} + \ln N_{j,2} + \ln A + \beta_1 \ln \mu_{j,2}\right] \tag{C.1}$$

Replacing the expression (C.1), the objective function of the government can be expressed as

$$CST + \alpha_j\beta_3 \ln(1-\mu_{j,2}) + \beta_3 \frac{\beta_1}{1-\beta_1} \ln \mu_{j,2} + \xi_j \left[\tilde{\beta} \ln \mu_c + \tilde{\beta}\frac{\beta_1}{1-\beta_1} \ln \mu_{c,2}\right]$$

where CST is a term that does not depend on $\mu_{c,2}$. Note that coercive capacity $C_{j,2}$ and population $N_{j,2}$ are given at the start of period 2 and not affected by the choices of $\mu_{j,2}$ and $\tau_{j,2}$, for $j \in c, r$.

The first order conditions with respect to $\mu_{c,2}$, imply that the optimal choice $\mu^*_{c,2}$ is characterized by:

$$\mu^*_{c,2} = \frac{\xi_j \tilde{\beta} + \alpha_j \beta_3 \beta_1}{\xi \tilde{\beta} + \alpha_j \beta_3}.$$

Similarly, the objective function can be expressed as a function of $\tau_{j,2}$

$$CST + \alpha_j \beta_3 \frac{1}{1-\beta_1} \ln \tau_{c,2} + \xi_j \left(\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \frac{1}{1-\beta_1} \ln \tau_{j,2} \right). \tag{C.2}$$

The First Order Conditions yield:

$$\tau^*_{j,2} = \frac{\Psi}{\xi_j \gamma_1 + \Psi},$$

where $\Psi = \alpha_j \beta_3 \frac{1}{1-\beta_1} + \xi \tilde{\beta} \frac{1}{1-\beta_1} = \frac{\alpha_j \beta_3 + \xi \tilde{\beta}}{1-\beta_1}$

Thus $\tau^*_{j,2}$ is increasing in α_j, which establishes result 2.b.

Period 1. By backwards induction we now solve for period 1 choices. In period 1, the central government maximizes

$$\xi V_{c,1} + (1-\xi) V_{r,1} + \delta \left[\xi V_{c,2} + (1-\xi) V_{r,2} \right]. \tag{C.3}$$

In the first period, city j invests a portion $\mu_{j,1}$ of resources in the local public good, a share $\nu_{j,1}$ in global public goods and the remaining share $1 - \mu_{j,1} - \nu_{j,1}$ in coercive capacity. We can thus rewrite the government's period 1 objective as:

$$\begin{aligned} \xi V_{c,1} + (1-\xi) V_{r,1} &= \gamma_1 \ln A + \sum_j \xi_j \left[\alpha_j \beta_3 \ln(\nu_{j,1}) + \alpha_j \beta_3 \ln T_{j,1} \right] \\ &+ \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,1}) + \tilde{\beta} \ln \mu_{j,1} + \tilde{\beta} \ln T_{j,1} \right] \end{aligned}$$

The choice of tax rates and the use of revenues in period 1 has implications for period 1 taxes that are used to fund an increase in coercive capacity. Taxes are given by

$$T_{j,1} = \tau_{j,1} C_{j,1} A (G_{j,1})^{\beta_1} N_{j,1}.$$

Given that $G_{j,1} = \mu_{j,1} T_{j,1}$, we have

$$T_{j,1} = \frac{1}{1-\beta_1} \left[\ln \tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1 \ln \mu_{j,1} \right].$$

Coercive capacity in period 2 is given by:

$$\begin{aligned}\ln C_{j,2} &= \ln(C_{j,1}) + \sigma \ln((1-\mu_{j,1}-\nu_{j,1})T_{j,1}) \\ &= \ln(C_{j,1}) + \sigma \ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma \frac{1}{1-\beta_1}\left[\ln \tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1 \ln \mu_{j,1}\right].\end{aligned}$$

Using these results, and the fact that in period 2, $\tau_{j,2}$ and $\mu_{j,2}$ do not depend on $\tau_{j,1}$, $\mu_{j,1}$ or $\nu_{j,1}$, we can reexpress the objective (C.3) keeping the terms that depend on $\mu_{j,1}$:

$$CST + \xi_j \tilde{\beta} \ln \mu_{j,1} + \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \frac{1}{1-\beta_1} \ln C_{j,2}$$
$$CST + \xi_j \tilde{\beta} \ln \mu_{j,1} + \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \frac{1}{1-\beta_1} \left(\sigma \ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma \frac{\beta_1}{1-\beta_1} \ln \mu_{j,1}\right)$$

Keeping the terms that depend on $\nu_{j,1}$, the government's objective can be rewritten:

$$CST + \alpha_j \beta_3 \ln \nu_{j,1} + \delta\left(\alpha_j \beta_3 + \xi \tilde{\beta}\right) \frac{1}{1-\beta_1} \ln C_{j,2}$$
$$CST + \alpha_j \beta_3 \ln \nu_{j,1} + \delta\left(\alpha_j \beta_3 + \xi \tilde{\beta}\right) \frac{1}{1-\beta_1} \left(\sigma \ln(1-\mu_{j,1}-\nu_{j,1})\right)$$

The first order conditions for these two problems yield

$$\frac{\Phi_\mu}{\mu_{j,1}} = \frac{\Lambda}{1-\mu_{j,1}-\nu_{j,1}}$$
$$\frac{\alpha_j \beta_3}{\nu_{j,1}} = \frac{\Lambda}{1-\mu_{j,1}-\nu_{j,1}},$$

with $\Phi_\mu = \xi_j \tilde{\beta} + \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \frac{1}{1-\beta_1}\left(\sigma \frac{\beta_1}{1-\beta_1}\right)$ and $\Lambda = \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \frac{\sigma}{1-\beta_1}$
Thus

$$\mu_{j,1} = \frac{\Phi_\mu}{\Lambda + \Phi_\mu + \alpha_j \beta_3}$$
$$\nu_{j,1} = \frac{\alpha_j \beta_3}{\Lambda + \Phi_\mu + \alpha_j \beta_3}$$

Similarly, for taxes in c, the objective can be expressed as

$$CST + \xi_j \gamma_1 \ln(1-\tau_{j,1}) + \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \frac{1}{1-\beta_1} \ln C_{j,2}$$
$$CST + \xi_j \gamma_1 \ln(1-\tau_{j,1}) + \delta\left(\alpha_j \beta_3 + \xi_j \tilde{\beta}\right) \left(\frac{1}{1-\beta_1}\right)^2 \left(\sigma \ln(\tau_{j,1})\right)$$

Taking first order conditions, we have:

$$\tau_{j,1}^* = \frac{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right)}{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right) + \xi_j\gamma_1(1-\beta_1)^2}$$

Thus $\tau_{j,1}^*$ increases in α_j, implying that $\tau_{c,1}^* > \tau_{r,1}^*$ This establishes result 1.a.

We compare the values in the rotation city and in the capital

We have

$$\mu_{j,1}^* = \frac{\xi_j\tilde{\beta}\left[(1-\beta_1)^2 + \delta\sigma\beta_1\right] + \delta\sigma\alpha_j\beta_3\beta_1}{(\alpha_j\beta_3 + \xi_j\tilde{\beta})\left[(1-\beta_1)^2 + \delta\sigma\right]}.$$

Since $\mu_{j,1}^*$ is decreasing in α_j, we have:

$$\mu_{r,1}^* \geq \mu_{c,1}^*.$$

Furthermore we have

$$\begin{aligned}
\mu_{j,1}^* + \nu_{j,1}^* &= \frac{\xi_j\tilde{\beta}\left[(1-\beta_1)^2 + \delta\sigma\beta_1\right] + \delta\sigma\alpha_j\beta_3\beta_1 + \alpha_j\beta_3(1-\beta_1)^2}{(\alpha_j\beta_3 + \xi_j\tilde{\beta})\left[(1-\beta_1)^2 + \delta\sigma\right]} \\
&= \frac{\left(\xi_j\tilde{\beta} + \alpha_j\beta_3\right)\left((1-\beta_1)^2 + \delta\sigma\beta_1\right)}{\left(\xi_j\tilde{\beta} + \alpha_j\beta_3\right)\left((1-\beta_1)^2 + \delta\sigma\right)} \\
&= \frac{(1-\beta_1)^2 + \delta\sigma\beta_1}{(1-\beta_1)^2 + \delta\sigma}
\end{aligned}$$

Overall this implies that both cities assign the same share of their budget to building coercive capacity versus current spending. Given that tax rates are higher in city c, and that coercive capacity is initially higher, the gap in coercive capacity grows. We have:

$$\ln C_{j,2} = \ln(C_{j,1}) + \sigma\ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1\ln\mu_{j,1}\right],$$

so that

$$\begin{aligned}
\ln C_{c,2} - \ln C_{r,2} &= \ln C_{c,1} - \ln C_{r,1} + \sigma\left(\ln(1-\mu_{c,1}-\nu_{c,1}) - \ln(1-\mu_{r,1}-\nu_{r,1})\right) \\
&+ \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{c,1} - \tau_{r,1}\right] + \sigma\frac{1}{1-\beta_1}\left[\ln C_{c,1} - C_{r,1}\right] \\
&+ \sigma\frac{1}{1-\beta_1}\beta_1\left[\ln\mu_{c,1} - \ln\mu_{r,1}\right] \\
&> \ln C_{c,1} - \ln C_{r,1}.
\end{aligned}$$

This proves result 2.a.

Population. Citizens decide where to live based on the maximum indirect utility that they obtain in each location given their individual idiosyncratic taste shock, taking into account current conditions. The solution to this discrete choice problem determines the probability that a location is chosen by each worker. We have $\frac{N_{j,1}}{N_j} = \frac{e^{V_{j,1}}}{e^{V_{c,1}}+e^{V_{r,1}}}$, so that the relative size of the two cities can be expressed as:

$$\ln N_{c,1} - \ln N_{r,1} = \gamma_1 \left(\ln(1-\tau_{c,1}) - \ln(1-\tau_{r,1})\right) + \tilde{\beta}\left(\ln(\mu_{c,1}T_{c,1}) - \ln(\mu_{r,1}T_{r,1})\right).$$

$\mu_{c,1}$ and $\mu_{r,1}$ are independent of C, the initial shock in coercive capacity, while $T_{c,1}$ is an increasing function of C. Therefore there exists $\bar{C}$, such that $\mu_{c,1}T_{c,1} < \mu_{r,1}T_{r,1}$ if and only if $C \leq \bar{C}$, i.e fewer local public goods are produced in city c, and as a consequence $A_{c,1} < A_{r,1}$. This also implies that if $C \leq \bar{C}$, $lnN_{c,1} - lnN_{r,1} < 0$, as stated in result 1.b.

In the second period, the relative size is given by

$$\ln N_{c,2} - \ln N_{r,2} = \gamma_1 \left(\ln(1-\tau_{c,2}) - \ln(1-\tau_{r,2})\right) + \tilde{\beta}\left(\ln G_{c,2} - \ln G_{r,2}\right).$$

Using the expression for $G_{j,2}$, we obtain

$$\ln G_{c,2} - \ln G_{r,2} = \frac{1}{1-\beta_1}\left[\ln\mu_c + (\ln\tau_{c,2} - \ln\tau_{r,2}) + (\ln C_{c,2} - \ln C_{r,2}) + (\ln N_{c,2} - \ln N_{r,2})\right]$$

When $\beta_3 \to 0$, we can show that $\mu_c \to 1$, $\tau_{c,2} \to \tau_{r,2}$ and

$$\ln G_{c,2} - \ln G_{r,2} \to \frac{1}{1-\beta_1}\left(\ln C_{c,2} - \ln C_{r,2}\right) > 0$$

which implies that

$$\ln N_{c,2} - \ln N_{r,2} > 0$$

and

$$\ln G_{c,2} - \ln G_{r,2} > 0$$

which proves result 2.c.

D Conceptual Framework: Extensions

D.1 Comparative Statics

We can derive some comparative results on the main choice variables characterized in Proposition 1.

Proposition 2. *In equilibrium,*

1. *in Period 1,*

   1.a. *The shares of resources allocated to the funding of local public goods $\mu^*_{c,1}$ and $\mu^*_{r,1}$ decrease with δ and σ. In addition $\mu^*_{c,1}$ decreases with β_3.*

   1.b. *Taxes $\tau^*_{c,1}$ and $\tau^*_{r,1}$ are increasing in δ, σ and $\tilde{\beta}$ and decreasing in γ_1. In addition $\tau^*_{c,1}$ is increasing in β_3 and ξ.*

2. *In Period 2,*

   2.a. *The share of resources allocated to the funding of local public goods in the capital city $\mu^*_{c,1}$ increases with $\tilde{\beta}$ and ξ and decreases with β_3.*

   2.b. *Taxes $\tau^*_{c,2}$ and $\tau^*_{r,2}$ are decreasing in γ_1, increasing in $\tilde{\beta}$ and β_1. In addition $\tau^*_{c,2}$ is increasing in β_3 and ξ.*

Proof: These comparative statics follow directly from taking derivatives of the expressions derived in the proof of Proposition 1 and listed below.

Period 1.

$$\mu^*_{j,1} = \frac{\xi_j\tilde{\beta}\left[(1-\beta_1)^2+\delta\sigma\beta_1\right]+\delta\sigma\alpha_j\beta_3\beta_1}{(\alpha_j\beta_3+\xi_j\tilde{\beta})\left[(1-\beta_1)^2+\delta\sigma\right]}$$

$$\tau^*_{j,1} = \frac{\delta\sigma\left(\alpha_j\beta_3+\xi_j\tilde{\beta}\right)}{\delta\sigma\left(\alpha_j\beta_3+\xi_j\tilde{\beta}\right)+\xi_j\gamma_1(1-\beta_1)^2}$$

Period 2.

$$\mu^*_{j,2} = \frac{\xi_j\tilde{\beta}+\alpha_j\beta_3\beta_1}{\xi_j\tilde{\beta}+\alpha_j\beta_3}$$

$$\tau^*_{j,2} = \frac{\alpha_j\beta_3+\xi_j\tilde{\beta}}{\alpha_j\beta_3+\xi_j\tilde{\beta}+\xi\gamma_1(1-\beta_1)}$$

D.2 Rent Extraction

We modify the objective of the government to become

$$\theta\left[ln(R_1) + \delta ln(R_2)\right] + (1-\theta)\left[\xi V_{c,1} + (1-\xi)V_{r,1} + \delta\left[\xi V_{c,2} + (1-\xi)V_{r,2}\right]\right] \tag{D.1}$$

where R_i are the rents extracted in period i. We assume for simplification that the rents are extracted solely from the resources available in the capital city c.

Proposition 3. *In equilibrium, investments in coercive capacity in period 1 are increasing in θ, the weight the central government puts on private rents in its objective.*

Proof

we solve the model in the case where the taste for global public goods is set to zero. The problem is then exactly identical to the baseline model replacing parameter β_3 by $\frac{\theta}{1-\theta}$. We can show that the level of coercive capacity decreases in θ.

$$\ln C_{c,2} \quad = \quad \ln(C_{c,1}) + \sigma\ln(1-\mu_{c,1}-\nu_{c,1}) + \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{c,1} + \ln C_{c,1} + \ln N_{c,1} + \ln A + \beta_1\ln\mu_{c,1}\right]$$

$(1-\mu_{c,1}-\nu_{c,1})$ and $\tau_{c,1}$ have been shown to increase in β_3 in the main model, and thus by equivalence increasing in θ.

D.3 Adding the Periphery

We extend the model to include, in addition to cities c and r, a city p located at a distance d of the capital city c. We assume that this city p can choose taxes and allocation of the budget, but cannot invest in coercive capacity. Furthermore we suppose that the coercive capacity in city p depends on coercive capacity in the capital and is decreasing in the distance to the capital. Specifically we assume that $C_{p,t} = \frac{C_{c,t}}{d}$

The central government assigns weights ξ_j, $j \in \{c, r, p\}$ to each city, so that its objective is to maximize

$$\sum_j \xi_j V_{j,1} + \delta\sum_j \xi_j V_{j,2}.$$

In this environment, we obtain the following result:

Proposition 4. *In equilibrium,*

1. *Local public good provision, productivity and wages in city p decrease in the distance to the capital city in both periods ($G_{p,t}, A_{p,t}, w_{p,t}$ decrease in d).*

2. *In city c, taxes in period 1 are increasing in the weight put on the periphery city (ξ_p) while the share of resources allocated to local public goods is increasing in ξ_p.*

3. *Choices and conditions in city r are independent of the weight put on the periphery city (ξ_p).*

Proof

Period 2. The objective of the central government in the second period can be expressed as follows:

$$\sum_j \xi_j V_{j,2} \quad = \quad \gamma_1 \ln A + \beta_3 \ln \bar{G}_2 + \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \ln G_{j,2}\right]$$

The solutions for city c and city r are identical to those of the baseline model. The problem for city p corresponds to the case where $\alpha_p = 0$, i.e. the periphery city does not contribute to the financing of the public good. Overall, this yields, for cities c and r

$$\mu^*_{j,2} \quad = \quad \frac{\xi_j \tilde{\beta} + \alpha_j \beta_3 \beta_1}{\xi_j \tilde{\beta} + \alpha_j \beta_3}$$

$$\tau^*_{j,2} \quad = \quad \frac{\alpha_j \beta_3 + \xi_j \tilde{\beta}}{\alpha_j \beta_3 + \xi_j \tilde{\beta} + \xi \gamma_1 (1-\beta_1)}$$

and for city p

$$\tau^*_{p,2} \quad = \quad \frac{\tilde{\beta}}{\tilde{\beta} + \gamma_1(1-\beta_1)}$$

Period 1. In period 1, city p can invest only in local public goods and there is no tradeoff between period 1 and 2 (no investment in coercive capacity), so that the problem of city p is identical to the problem in the second period, so we have

$$\tau^*_{p,1} \quad = \quad \frac{\tilde{\beta}}{\gamma_1(1-\beta_1) + \tilde{\beta}}$$

Taxes and allocation of the budget are independent of the distance d from the capital city. However, the level of coercive capacity, for the same allocation and tax level, shifts the resources allocated to local public goods. Thus, as stated in result 1, the level of local public goods decreases with d and as a consequence, so does productivity and wages.

The problem for city r is unaffected compared to the proof of Proposition 1. On the contrary, city c when it invests in coercive capacity has to take into account the impact of its decision on city p in period

2. This modifies the problem as follows. The objective, keeping the terms that depend on $\mu_{c,1}$ becomes:

$$CST + \xi_c\tilde{\beta}\ln\mu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\ln C_{r,2}$$
$$CST + \xi_c\tilde{\beta}\ln\mu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\left(\sigma\ln(1-\mu_{c,1}-\nu_{c,1}) + \sigma\frac{\beta_1}{1-\beta_1}\ln\mu_{c,1}\right)$$

Keeping the terms that depend on $\nu_{c,1}$:

$$CST + \alpha_c\beta_3\ln\nu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\ln C_{r,2}$$
$$CST + \alpha_c\beta_3\ln\nu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\left(\sigma\ln(1-\mu_{c,1}-\nu_{c,1})\right)$$

Solving this system yields

$$\mu^*_{c,1} = \frac{\xi_c\tilde{\beta}(1-\beta_1)^2 + \delta\sigma\beta_1\left[\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right]}{(\beta_3+\xi_c\tilde{\beta})(1-\beta_1)^2 + \delta\sigma\left[\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right]}$$
$$\tau^*_{c,1} = \frac{\delta\sigma\left(\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)}{\delta\sigma\left(\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right) + \xi_c\gamma_1(1-\beta_1)^2}$$

This proves result 2. $\tau^*_{c,1}$ is increasing in ξ_p while $\mu^*_{c,1}$ is decreasing in ξ_p.