

# ENLIGHTENMENT AND THE LONG-TERM PERSISTENCE OF THE HABSBURG ADMINISTRATIVE TRADITION\*

GIULIO CAINELLI  
ROBERTO GANAU\*\*  
NADIIA MATSIUK

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We study the long-term, persistent effects of the Enlightenment-inspired administrative reform introduced by the Habsburg Monarchy in 1755 to analyze current administrative efficiency differentials in Northern Italy. We exploit exogeneity in the frontier established in 1748 by the Treaty of Aix-la-Chapelle between the Habsburg-ruled Duchy of Milan and the neighboring territories ruled by the Savoy House. The Habsburgs extended to all land taxpayers—through the *Convocato* institute—the right of nominating local civil servants and deciding on taxation and public spending, while maintaining the external control through a state representative. By contrast, the municipalities ruled by the Savoy House were subject to a highly centralized system in which local civil servants were nominated by—and were under the control of—the *Intendente*, who was appointed directly by the King. Using spatial regression discontinuity and employing an original dataset combining current and historical municipality-level data, we find a persistent positive effect of the Habsburg reform on current administrative efficiency. Our evidence shows that Habsburg-ruled municipalities provide more public goods and services while spending as much as Savoy House-ruled ones. We interpret our results through a model of persistence of an administrative tradition driven by a within-institution “bureaucracy enculturation” mechanism. We model the transmission over time of administrative values, norms, and practices within an institution without the need of differences in cultural values within the underlying population. *JEL Codes*: D73, N43, N44, P00.

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\*\* Corresponding author: Department of Economics and Management “Marco Fanno,” University of Padova, Via del Sant 33, 35123 Padova, Italy; Department of Geography and Environment, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, United Kingdom; E-mails: roberto.ganau@unipd.it; r.ganau1@lse.ac.uk.

## I. INTRODUCTION

The idea that past institutions have long-lasting effects and may explain economic growth differentials is now a well-recognized empirical fact (Acemoglu et al. 2001; Nunn 2009, 2020; Tabellini 2010; Michalopoulos and Papaioannou 2013; Spolaore and Wacziarg 2013; Guiso, Sapienza, and Zingales 2016).<sup>1</sup> This body of research has analyzed a variety of potential mechanisms to explain the role of history and its long-term effects (Nunn 2009, 2020; Voth 2021). Some of these mechanisms operate through the evolution and persistence over time of some “initially implemented” historical institutions, such as the legal (La Porta et al. 1997, 1998) or fiscal (Berger 2009) systems of the colonizer countries during the colonization process, or the Napoleonic codes introduced by the French revolutionary armies in some European countries (Acemoglu, Johnson, and Robinson 2011). An alternative view postulates that past institutions can have persistent, long-term effects on current cultural norms, beliefs, civic capital (Putnam 1993; Nunn 2009; Tabellini 2010; Alesina and Giuliano 2015; Guiso, Sapienza, and Zingales 2016; Lowes et al. 2017; Bazzi, Fisbein, and Gebresilas 2020) and preferences (Alesina and Fuchs-Schündeln 2007; Becker, Mergele, and Woessmann 2020), and on the interaction between citizens and current institutions (Becker et al. 2016). Studies on the Habsburg Empire (Grosfeld and Zhuravskaya 2015; Becker et al. 2016), the Italian free city-states during the Middle Ages (Guiso, Sapienza, and Zingales 2016) and the effects of the separation and reunification processes in Germany (Fuchs-Schündeln and Schündeln 2005; Alesina and Fuchs-Schündeln 2007; Becker, Mergele, and Woessmann 2020; Laudenbach, Malmendier, and Niessen-Ruenzi 2020) well document the mechanisms through which people’s norms of collective action, civic capital, attitudes, preferences and values may persist over time.

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1. The impact of European colonialism (Engerman and Sokoloff 1997; La Porta et al. 1997, 1998; Acemoglu et al. 2001), Latin American mining *mita*—i.e., a forced labor system instituted by the Spanish Crown in Peru and Bolivia from 1573 to 1812—(Dell 2010), pre-colonial ethnic institutions in Africa (Michalopoulos and Papaioannou 2013) and historical state administrative institutions in Vietnam (Dell, Lane, and Querubin 2018) are only examples of a broad literature showing the role and the importance of historical institutions in explaining present-day socio-economic outcomes. Historical evidence supporting these insights concerns also the presence of (relatively) non-absolutist institutions when some European countries gained access to the Atlantic Ocean (Acemoglu, Johnson, and Robinson 2005) and the effect of Africa’s slave trade (Nunn 2008).

A limitation of this literature is that it has paid little attention to the long-term effects and persistence of some historical institutions on the functioning and outcomes of present-day institutions and the mechanisms behind these phenomena. Basically, this relevant topic in social sciences remains a “black box” whose “inside” mechanisms are not clearly understood (Nunn 2009). An interesting mechanism for explaining the long-lasting effects of past institutions on the outcomes of current ones has been suggested recently by the comparative public administration literature (Ongaro 2008; Peters 2008, 2021; Meyer-Sahling and Yesilkagit 2011). This mechanism is mainly based on the concept of administrative tradition, generally defined as a “historically-based” set of traits, such as values, norms, structures and practices concerning the functioning of national and local institutions in a country or in a “family of nations” (Ongaro 2008; Peters 2008, 2021; Meyer-Sahling and Yesilkagit 2011).<sup>2</sup> However, a set of administrative values, norms and practices may persist over time only if there exists a within-institution channel driving its transmission. Needless to say, values and norms are transmitted over time through subsequent generations of bureaucrats (Meyer-Sahling and Yesilkagit 2011; Peters 2021). Therefore, only the presence of a within-institution “bureaucracy enculturation” mechanism may explain the “reproductive capacity” of values and norms over time and, therefore, the persistence of an administrative tradition.

The objective of this paper is to analyze the long-term effects of some “initially implemented” historical institutions on current institutions by adopting the concept of administrative tradition. We do this by exploiting the Enlightenment-inspired administrative reform introduced by the Habsburg Monarchy in 1755 as a natural experiment to analyze current administrative efficiency differentials in Northern Italy between the municipalities that belonged to the Habsburg-ruled Duchy of Milan and the neighboring ones ruled by the Savoy House.<sup>3</sup> We define administrative

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2. A widely investigated case-study is represented by the Napoleonic tradition in the public administration of countries such as France, Greece, Italy, Portugal, and Spain (Ongaro 2008; Peters 2008). Other important administrative traditions are the Germanic, the Scandinavian, and the Anglo-American ones (Peters 2021).

3. Italy is well known for its North-South divide concerning both socio-economic and institutional dimensions (Putnam 1993). Nevertheless, administrative efficiency differences can also be spotted within Northern Italy.

efficiency as the internal efficiency of a municipal administration in managing available resources and its effectiveness in providing public goods and services to the local community with respect to its needs.

The main goal of the administrative reform introduced by Maria Theresa of Austria in 1755—entitled *Riforma al governo e amministrazione delle comunità dello Stato di Milano*—was to increase the tax base, given the large public debt accumulated by the Habsburgs during the Succession Wars, which occurred in the first half of the 18<sup>th</sup> century (Rotelli 1975; Mozzarelli 1982; Capra 1987, 2014; Meriggi 2002). One of the innovations of this reform was to attribute to all land taxpayers of a local community—through the *Convocato Generale* (or *Assemblea*) *degli Estimati* (i.e., an assembly form of self-administration at the municipality level)—the power of (i) nominating a *Deputazione* (i.e., the municipal council) of five members, (ii) approving the municipal budget, (iii) deciding and managing the public spending composition, and (iv) deciding on the level of local taxation and some other general-interest matters. According to the land tax survey of 1733, approximately 20% of the population owned lands (Klang 1977).<sup>4</sup> After the 1755 Habsburg administrative reform, all these individuals—including a significant share of non-aristocratic landowners—had the possibility to participate in the decision-making process of their local community by becoming members of the *Convocato Generale degli Estimati* (Riley 2003). Moreover, the 1755 reform established the presence in each district (i.e., an administrative unit of approximately 10 municipalities) of the so-called *Cancelliere Delegato del Censo*, an official representing the central government who was assigned many complex functions, including: (i) keeping the maps and cadastral registers of each municipality; (ii) receiving from and transmitting to the central government any complaint; and, importantly for our analysis, (iii) checking the

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4. In the mid-18<sup>th</sup> century, the total population of the Duchy of Milan was estimated to be around 700,000 and 800,000 inhabitants (Capra 1987). Moreover, the share of landowners was higher in the mountains and hills, where land ownership was very fragmented. In these areas, most landowners owned lands with a surface of less than five hectares. In other words, these geographical areas were dominated by small agricultural property and non-aristocratic landowners (Rotelli 1975; Capra 1987).

regularity of the municipal elections and annual municipal budgets and, in case, reporting abuses and (financial) irregularities to the central authorities (Capra 1987).<sup>5</sup>

This “double” mechanism of governance, monitoring and control—“internal” through the *Convocato Generale degli Estimati* and “external” through the *Cancelliere Delegato del Censo*—concerning budget formation and general-interest decision-making processes at the municipality level deeply shaped the Habsburg administrative tradition of the Duchy of Milan. This reform—that took place in the period of the Habsburg-ruled Duchy of Milan between 1755 and 1796 and, in a slightly different version (Rotelli 1975), in the period of the Habsburg-ruled Kingdom of Lombardy–Venetia between 1816 and 1859—influenced not only the administrative structure of Habsburg-ruled municipalities, but also the values, norms and practices of the local bureaucracy. Inspired by Enlightenment values and principles (Venturi 1954), Maria Theresa of Austria’s reform introduced the idea that administrative efficiency and public welfare—the so-called “*pubblico bene*” (Mozzarelli 1975)—should be the main goal of a bureaucracy (Rotelli 1975; Capra 1987). In 1783, Emperor Joseph II—who ruled the Habsburg lands between 1780 and 1790—reinforced this idea: he issued the famous *Lettere Pastorali* to civil servants to strengthen their love for the “general good of the state” and stigmatize “self-interest as the bane of public affairs and the most unforgivable crime in those who serve the state” (Capra 1987, p. 359, our translation).<sup>6</sup>

In this sense, the Habsburg administrative tradition seems to have developed a greater sensitivity for the “*pubblico bene*” (Mozzarelli 1975) and the “*felicità pubblica*” (Muratori 1749) in the bureaucracy of the Duchy of Milan (Rotelli 1975; Capra 1987, 2014; Meriggi 2002) by “mobilizing and channeling” (Gorski 1995, p. 786) the energies of civil servants towards these public goals.<sup>7</sup> Moreover, the presence of the *Convocato Generale degli Estimati*—as a form of

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5. Before the 1755 Habsburg administrative reform, the *Cancelliere* was usually an agent of the most powerful landowner of the local community (Riley 2003). After the 1755 reform, the *Cancelliere Delegato del Censo* was the representative of the central government and, particularly, of the *Tribunale del Censo*, that was the most important financial institution in the Duchy of Milan (Rotelli 1975).

6. *Dispaccio di S.M. l'Imperatore ai capi dei Dipartimenti sul modo di trattare gli affari pubblici* (1783) in Capra (1987, p. 359).

7. The bureaucracy of the Duchy of Milan was composed mainly of members of the Lombard Enlightenment; by contrast, the leading figures of the French Enlightenment did not participate in the administrative and bureaucratic life in France. As Venturi (1954, p. 264, our translation) suggests, the “reformers constituted an Enlightened ruling

local self-administration—resulted in a “comparatively” better alignment between the provision of local public goods and services and the general interests of local communities. In other words, it is reasonable to assume that the *Convocato Generale degli Estimati* was able to meet the needs of the local population much better than any other more centralistic local administrative structure.<sup>8</sup> Finally, the public spending of Habsburg-ruled municipalities was constrained by the level of local taxation. In fact, those who decided on the amount and the composition of expenses (i.e., the *Estimati*) were also those who had to pay taxes (Capra 1987). Moreover, municipalities could not make extraordinary expenditures or accumulate debts. Indeed, the budget of these local institutions had to be balanced; otherwise, the *Cancelliere Delegato del Censo*—with her functions of monitoring and control—would have intervened (Capra 1987).

We argue that the new set of values, norms and practices characterizing the Habsburg administrative tradition—based on a greater sensitivity towards the public good and the general interests of the society—together with a “relatively” better capacity to meet the needs of the local population—through the *Convocato* institute—were absorbed into the administrative culture of the bureaucracy, and have persisted over time through an “enculturation” transmission channel.<sup>9</sup>

At the same time, the neighboring municipalities ruled by the Savoy House were subject to a highly centralized administrative system in which the mayor and the members of the *Consiglio Ordinario* (i.e., the municipal council) were appointed by the *Intendente* and, therefore, were indirectly nominated by and under the control of the King. The *Intendente* had functions of monitoring and control, and was the instrument used by the King to increase his government power over local communities. As suggested by Salvemini (1961, p. 108, our translation), this local administrative order was the “most reactionary in Europe” as “the electoral principle was reduced to a minimum, the heads of the administrations were royal appointees, and furthermore the

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class. The Philosophes a new political party. Can you imagine Diderot and Rousseau as high officials? Beccaria and Verri were.”

8. Some recent studies have shown how local democratic institutions are generally beneficial for local public goods provision through mechanisms such as competition, monitoring, and accountability (Schiel et al. 2022).

9. Not surprisingly, bureaucracy is generally considered—together with the army and the court aristocracy—one of the pillars of the Habsburg Monarchy (Magris 1963).

administrations had no autonomy.” Therefore, while the *Cancelliere Delegato del Censo* and the *Intendente* had “similar” supra-municipal functions of monitoring and control on behalf of the central government, the *Convocato Generale degli Estimati* and the *Consiglio Ordinario* had different characteristics in terms of self-administration, autonomy, and capability to meet the needs of the local population.

We test these ideas by examining current administrative efficiency measures of the municipalities that belonged to the Habsburg-ruled Duchy of Milan and those ruled by the Savoy House. We rely on spatial regression discontinuity and employ an original dataset combining current and historical municipality-level data partially drawn from a 1751 census. We exploit exogeneity in the frontier between the Habsburg-ruled Duchy of Milan and the Savoy House’s territories. This frontier, established in 1748 by the Treaty of Aix-la-Chapelle, was the result of more than 40 years of war that saw the enlargement of the Savoy House at the expense of the Duchy of Milan. Given that this frontier was simply the result of the relative military strength of the Habsburgs and the Savoy House, it is not surprising that it does not coincide with any previous border.

Our empirical results support our expectations. We find a long-term, persistent, positive effect of the 1755 Habsburg reform on current administrative efficiency. Specifically, our main results point to an overall administrative efficiency premium for Habsburg-ruled municipalities compared to those ruled by the Savoy House. We document that such a premium is driven by a relatively higher efficiency in providing public goods and services. By contrast, we do not find evidence of differences in current administrative efficiency related to budget management. In other words, municipalities exposed to the Habsburg reform tend to provide more public goods and services to their citizens while spending as much as the neighboring municipalities that, in the second half of the 18<sup>th</sup> century, were ruled by the Savoy House.

Our results are robust to a variety of robustness and falsification tests. Moreover, we support our main findings in different ways. First, we find suggestive evidence that investment in public

goods in the second half of the 18<sup>th</sup> century—captured by the opening of public-use libraries—tends to amplify the long-term, persistent effect of the Habsburg reform on current administrative efficiency, especially in terms of public goods and services provision. Second, differences in public goods and services provision can be traced back to 1884 municipal budget data: we document that, in the aftermath of the Italian unification process (occurred in 1861), Habsburg-ruled municipalities tended to spend relatively more on discretionary expenses than municipalities ruled by the Savoy House.<sup>10</sup> In particular, we find evidence of higher discretionary expenses in education, whereas no difference emerges when we consider discretionary expenses in infrastructures. Finally, we test for differences in public goods provision by considering the case of authorized nursery places in 2013. We find that Habsburg-ruled municipalities tend to provide more nursery places per 100 children aged 0–2 years than municipalities ruled by the Savoy House.

We interpret this evidence through the lens of a simple theoretical model allowing us to explain the persistence of the Habsburg administrative tradition. This model identifies a within-institution mechanism of transmission over time of values, norms and practices of an administrative tradition based on an “bureaucracy enculturation” channel. It is interesting to note that our model allows persistence of traits within institutions even if the initial differences in the relative trait endowments are “small.”<sup>11</sup>

Our paper contributes and is related to different streams of literature. First, we add to the literature analyzing the long-term effects and persistence of history on current economic, political,

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10. The political and administrative debates occurred immediately after the annexation of the Duchy of Milan to the Savoy House-ruled Kingdom of Sardinia (occurred in 1859) highlight how the Habsburg municipal administrative system was considered much more efficient than the Savoy House one. The first evidence refers to Carlo Cattaneo’s criticism of the Municipal and Provincial Law No. 3702 of 23 October 1859 (the so-called Rattazzi Law). In July 1860, Cattaneo wrote in the *Politecnico* how the municipal regulation of the Savoy House was inferior to that of the Habsburgs (Rotelli 1975). Cattaneo confirmed his position in four letters published in the newspaper *Il Diritto* after the promulgation of the Law No. 2248 of 20 March 1865 (the so-called Lanza Law). Another confirmation that the political and administrative elites considered the Habsburg administrative tradition better than the Savoy House one can be found in the documents produced by the Giulini Commission set up by Cavour in May 1859 (Pavone 1964). Cavour’s idea was to maintain the administrative system based on the *Convocato Generale degli Estimati*, that had been so highly praised in the early 19<sup>th</sup> century. However, things turned out differently and the government of the Kingdom of Sardinia decided to extend the administrative system of the Savoy House to the annexed territories (Rotelli 1975).

11. In other words, an infinitesimal difference in the initial conditions can result in diverging outcomes in the long term in the presence of unstable equilibria.



and institutional outcomes (Putnam 1993; Nunn 2020; Acemoglu, Egorov, and Sonin 2021; Voth 2021). Indeed, we provide evidence of persistence of “initially implemented” historical institutions (Nunn 2009; Nunn and Wantchekon 2011) on current institutions. Specifically, we focus on the long-term effect of an Enlightenment-inspired administrative reform on the efficiency of modern-day institutions. Second, we contribute to study the mechanisms behind the concept of administrative tradition (Ongaro 2008; Peters 2008, 2021; Meyer-Sahling and Yesilkagit 2011) by developing a simple theoretical model. Our model allows us to describe a plausible within-institution mechanism of transmission over time of administrative values, norms, and practices based on a strong “bureaucracy enculturation” process. In this way, we can explain how a set of traits may persist over time, thus producing effects on the current outcomes of modern (public) institutions. Moreover, our model allows us to disentangle the effects of transmission over time of administrative values, norms, and practices within an institution from those associated with the transmission of cultural values within a population. Indeed, our theoretical model allows for the establishment of a persistent difference in the set of administrative values and norms characterizing local institutions without the need for a similar persistent difference in cultural values of the underlying local populations. In other words, values and norms are transmitted over time within institutions and not through mechanisms concerning the general population. We exclude this latter mechanism empirically: we do not find statistically significant differences in civic capital, referendum voting preferences, and the political orientation of the ruling municipal government between the Habsburg- and the Savoy House-ruled municipalities. Third, and more generally, our paper is related to the literature focused on the importance of the values and norms of bureaucracy for institutional development (Berman 2003; Becker, Pfaff, and Rubin 2016). The key idea of this body of literature is that the administrative efficiency of a bureaucracy is determined not only by its organizational structure, but also by its capacity of “mobilizing and channeling individual energies towards collectively-defined ends” (Gorski 1995, p. 786). Similarly to the literature on Protestantism that has demonstrated how the Reformation played a fundamental role in shaping the

“spirit of bureaucracy” (Gorski 1995),<sup>12</sup> we show that this result can be extended to the Enlightenment: its values and principles—that is, a greater sensitivity for the “*pubblico bene*” (Mozzarelli 1975) and the “*felicità pubblica*” (Muratori 1749)—deeply influenced the administrative and bureaucratic apparatus of the Duchy of Milan.

The rest of the paper is organized as follows. We briefly present the historical background in Section II. In Section III, we describe the study region, the municipality-level data on current administrative efficiency, the sample, the empirical model, and the identification strategy. In Section IV, we discuss the main empirical results and present robustness and falsification tests. We analyze possible sources of heterogeneity in Section V. In Section VI, we provide additional evidence concerning public goods provision over three different historical periods. In Section VII, we explore the possible underlying theoretical and empirical mechanisms. We conclude with some remarks and policy implications in Section VIII.

## II. HISTORICAL BACKGROUND

The 18<sup>th</sup> century was a period of reforms inspired by the ideas, values, and principles of the Enlightenment (Meriggi 2002). Particularly relevant were the administrative reforms that played a fundamental role in the process of state and nation building in many European countries (Peters 2021). These administrative reforms generated new sets of administrative values, norms, practices, and structures (Ongaro 2008; Peters 2008, 2021). Pre-unitary Italian states were invested in this reform process of the administrative system (Meriggi 2002).

Particularly interesting for our analysis are the administrative reforms introduced in Northern Italy by the Habsburg Monarchy and the Savoy House. These reforms share some common characteristics. Both reforms introduced, within the territories under their respective domains, a homogeneous administrative system by standardizing functions, elective mechanisms, and the

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12. Some studies have demonstrated that Calvinist confessional states were characterized by a better administration and a more efficient bureaucracy (Gorski 1995, 2000, 2003). This evidence has been interpreted focusing on the role played by the Protestant ethic (Gorski 1995).

composition of local administrative bodies. Indeed, before the period of administrative reformism occurred in the second half of the 18<sup>th</sup> century, local administrative functions and institutions were characterized by high heterogeneity, even within the same state (Capra 1987). However, despite this common element, the reforms implemented by the Habsburgs in the Duchy of Milan and by the Savoy House had important differences. In fact, the Savoy House's reform introduced a centralist system of governance and administration, whereas the reform implemented by the Habsburgs in the Duchy of Milan—based on the *Convocato Generale degli Estimati*—resulted in a “comparatively” better alignment between local public goods provision and local community needs. We describe in detail some characteristics of the two administrative reforms in the next two subsections.

### *II.A. Reform of Local Administrations in the Savoy House's Territories*

The main goal of the administrative reform, first introduced by Victor Amadeus II and then by Charles Emmanuel III, was to increase control and power over local communities. This reform process began in 1717 when Victor Amadeus II promulgated the Edict of 1717, and was completed in 1775 with the promulgation of the *Regolamento per le amministrazioni de' pubblici nelle città, borghi, e luoghi dei regi stati in terra ferma di qua dei monti*. These two reforms overcame and reordered the variety of pre-existing laws and institutions characterizing central and local public administration by providing a new centralistic administrative system.

The 1717 Edict introduced the *Intendente* as the instrument used by the King to increase his control over local communities. The Edict of 29 April 1733 by Charles Emmanuel III on the *Buon reggimento delle città e comunità del Piemonte* was the first law on municipal administration that defined both the administrative functions assigned to each municipality and the composition of the municipal bodies. The main goal of this reform was to create municipal bodies that could be easily controlled by the *Intendente*, who, in turn, was appointed directly by the King. This edict accentuated the intervention and control of the central government and, therefore, of the King—

through the *Intendente*—in the administrative life of municipalities. Indeed, Article 7 provided for the abolition of any type of municipal assembly “which serves only to cause confusion and stir up factions” (our translation).

In 1775, the *Regolamento per le amministrazioni de' pubblici nelle città, borghi, e luoghi dei regi stati in terra ferma di qua dei monti* was promulgated to further increase the King's centralizing power over local administrations. It attributed to the *Consiglio Ordinario*—consisting of seven, five, or three members, including the mayor—the administration of the municipality. The day-by-day administration of the municipality was carried out jointly with the *Intendente*, who had extensive powers of control and supervision over the *Consiglio Ordinario*. Indeed, the *Intendente* could (i) increase or decrease the number of municipal councilors, (ii) remove municipal councilors, (iii) settle disputes regarding municipal appointments and elections, and (iv) annul decisions made by the *Consiglio Ordinario*. The 1775 legislation was made compulsory for all municipalities in the territories ruled by the Savoy House, thus cancelling all forms of municipal autonomy. Therefore, the reforms implemented by the Savoy House in 1717–1775 homogenized the local administrative system, and their main goal was to centralize the power in the hands of the King. The King appointed the *Intendente*, who had monitoring and control functions over the *Consiglio Ordinario*; in turn, this municipal body was appointed by the *Intendente* and had only limited administrative powers.

## *II.B. Reform of Local Administrations in the Habsburg-Ruled Duchy of Milan*

The Enlightenment-inspired administrative reform introduced by Maria Theresa of Austria on 30 December 1755 in the Habsburg-ruled Duchy of Milan, entitled *Riforma al governo e amministrazione delle comunità dello Stato di Milano*, had different goals compared to Savoy House's administrative reformism. Maria Theresa's 1755 reform—a direct consequence of the cadastral reform—was based on three elements.

First, the reform introduced, for the very first time, a homogeneous administrative model in the Duchy of Milan, compared to the previous system characterized by strong administrative heterogeneity generally related to the old municipal statutes. The variety of forms of local government subject to the influence of a few powerful people—very often, the Feudal Lord—was replaced by a uniform model of local administration.<sup>13</sup> In this sense, this process of “administrative standardization” responded to the political need to eliminate the feudal and fiscal privileges of the aristocracy (Riley 2003).

Second, the reform provided the municipalities with a local institute of self-administration (i.e., the *Convocato Generale degli Estimati*) based on the participation of all the *Estimati* of a local community—that is, all citizens appearing in the Cadastral Register for any amount as holders of non-exempt landed property (Rotelli 1975). Meeting at least twice a year, the *Convocato Generale degli Estimati* had the power to (i) nominate a *Deputazione* of five members (i.e., the municipal council), (ii) approve the municipal budget, (iii) decide the composition of public spending, (iv) manage public spending, and (v) decide on the level of local taxation, as well as on other general-interest matters. At the first meeting, held in January of each year, the *Convocato* was required to determine the yearly level of taxes. At the second meeting, held in autumn of each year, it was required to elect the *Deputazione*, which was composed of three deputies representing the *Estimati* (one of whom had to be chosen from among the three largest *Estimati*), one deputy representing all citizens paying the personal tax (*imposta personale*), and one deputy representing all citizens paying the mercantile tax (*imposta mercimoniale*). The deputies representing the landowners were in the majority (three out of five), and they were also the only ones with decision-making powers. The other two deputies—the staff deputy and the mercantile deputy—had only advisory powers.

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13. Before the 1755 Habsburg reform, local institutions in many municipalities of the Duchy of Milan were limited to councils or assemblies where a reduced number of landowners nominated and monitored local civil servants. Responsibility for local government was, therefore, in the hands of few men: usually, the largest landowners or their procurators (i.e., the *Cancellieri*). In these municipalities, collective participation was very modest in favor of an oligarchic-type power structure. In some municipalities, public interests were under the control of the first *Estimato*; in others, of the first two, three, or four *Estimati*. Other municipalities, by contrast, were characterized by the absence of a council-type decision-making body, and local civil servants were simply contracted by public auctions. In addition, many municipalities were under the control of a Feudal Lord, who had almost unlimited power—exerted through a *Cancelliere* appointed directly by her—over administrative matters.

The *Deputazione* appointed a mayor and a consul. The mayor acted on the delegation of the *Deputazione* to ordinary public affairs, whereas the consul had police and local administration tasks. In this sense, one of the main consequences of this reform was to “raise the social level of local administration, making local administrators less subject to the very largest landholders and more self-governing” (Riley 2003, p. 201).

Finally, the 1755 reform introduced the *Cancelliere Delegato del Censo*, a state official who represented the power of the central government within each district. The *Cancelliere Delegato del Censo*, who was expected to have a high level of education (Capra 1987),<sup>14</sup> had numerous tasks. She was responsible for (i) presiding over and dissolving the summonses, (ii) keeping the maps and cadastral registers of each municipality of competence, (iii) receiving from and transmitting to the central government any complaints related to the municipalities of competence, (iv) checking the regularity of the deputies’ elections and the annual municipal budgets, (v) reporting any abuse to the central government, and (vi) providing for the administration of the local communities. It thus emerges clearly how the roles and functions assigned to the *Cancelliere Delegato del Censo* by the Habsburgs were “similar” to those attributed to the *Intendente* by the Savoy House.

Furthermore, it is worth noting how the Habsburg administrative reform was implemented with some margin of heterogeneity within the Duchy of Milan—something that we will explore empirically later in the paper. On the one hand, the 1755 administrative reform was initially implemented in the Milanese territories of the Duchy of Milan, whereas it was extended to the Habsburg-ruled Mantuan territories of the Duchy of Milan—which were previously part of the former Duchy of Mantua—only in 1784 (Dispatch of 5 November 1784). On the other hand, some municipalities of the Habsburg-ruled Milanese territories of the Duchy of Milan were granted a certain degree of administrative autonomy through ad hoc edicts beyond the 1755 general administrative system. In fact, between January 1756 and February 1758, the Habsburg ruler

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14. The *Cancelliere Delegato del Censo* had to be either a doctor, a notary, an engineer, or a public land surveyor (*agrimensore*), and this requirement was introduced to guarantee that the *Cancelliere* did not hold her position from one of the powerful landowners of the local community (Capra 1987). In this sense, the *Cancelliere* was the representative of the Habsburg State (Riley 2003).

promulgated a series of specific edicts targeting selected municipalities to account for local specificities and peculiar conditions related to their size or specific needs in providing public services to the local community. These edicts were promulgated to grant the targeted municipalities additional administrative autonomy or the possibility of maintaining pre-existing local statutes, but provided that such norms were not—and should not be—in contrast with the 1755 general municipal administrative system, and, specifically, with the *Convocato* institute. Indeed, the *Convocato Generale degli Estimati* represented the baseline rule for local governance.

### III. EMPIRICAL FRAMEWORK

#### *III.A. Habsburg and Savoy House Territories After the Treaty of Aix-la-Chapelle*

Our study region includes Northern Italian municipalities that, since the signing of the Treaty of Aix-la-Chapelle in 1748, were ruled by either the Habsburg Monarchy or the Savoy House. This region, as depicted in Figure I, includes 2,302 municipalities belonging to the current regions of Aosta Valley, Emilia Romagna, Liguria, Lombardy, Piedmont, and Veneto—corresponding to level 2 of the *Nomenclature des Unités Territoriales Statistiques* (NUTS). Municipalities ruled by the Savoy House represent 63.03% of the study region, whereas the remaining municipalities were part of the Duchy of Milan under Habsburg domination.<sup>15</sup>

On the one hand, the Habsburg-ruled Duchy of Milan comprehended territories that, before the beginning of the Succession Wars in the 1701–1748 period, were part of the Duchy of Mantua, the Duchy of Milan, the Duchy of Modena and Reggio, the Duchy of Parma and Piacenza, and the Swiss Bailiwicks Beyond the Mountains. On the other hand, the dominions of the Savoy House comprehended territories that, at the beginning of the 18<sup>th</sup> century, were part of the Duchy of Milan, the Duchy of Montferrat, the Duchy of Parma and Piacenza, the *Gouvernement de Dauphiné*, the Principality of Masserano, the Principality of Piedmont, and the Republic of Genoa.<sup>16</sup>

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15. Online Appendix Table A1 reports the distribution of municipalities in the study region by current NUTS-2 region and dominant state after the signature of the Treaty of Aix-la-Chapelle in 1748.

16. The Principality of Masserano was a papal feud that, starting from 1741, fell under the control of Charles

This political configuration lasted between 1748 and 1796, when the French Army led by Napoleon conquered Northern Italy. The territories ruled by the Savoy House became part of the First French Republic—later renamed the French Empire in 1804. Those ruled by the Habsburgs became part of the Cisalpine Republic—later renamed the Republic of Italy (1802–1805) and then the Kingdom of Italy (1805–1814)—, a dictatorial republic established by Napoleon that was under the control of the First French Republic and then of the French Empire. During the 1797–1814 period, the territories that were ruled by the Savoy House and the Habsburgs before Napoleon’s Italian Campaigns underwent a process of administrative and institutional homogenization that involved the imposition of the French administrative model and body of laws to replace pre-existing ones.

However, this political configuration lasted until the signature of the Final Act of the Congress of Vienna (9 June 1815), whose main goal was to restore pre-Napoleonic boundaries. Indeed, both the Habsburg Monarchy and the Savoy House were restored to their pre-1797 Italian dominions, and the frontier established in 1748 by the Treaty of Aix-la-Chapelle was identified again as the border between the Habsburgs and the Savoy House in Northern Italy. In addition, the Congress of Vienna provided for the Habsburgs to enlarge their dominions in Northern Italy towards the east by gaining control over the former Republic of Venice—that, together with the already Habsburg-ruled Duchy of Milan, was renamed as the Kingdom of Lombardy–Venetia—and the Savoy House to enlarge their dominions towards the south by gaining control over the entire Republic of Genoa. During the Restoration Order, which started with the Congress of Vienna in 1815, both the Habsburgs and the Savoy House re-established the administrative setups predating the Napoleonic experience. In other words, the municipality-level administrative systems

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Emmanuel III of Savoy, who was nominated papal vicar of the Principality by Pope Benedetto XIV. The Principality of Masserano was formally ceded to the Savoy House in 1753. Online Appendix Figure A1 maps the study region by highlighting the Principality of Masserano under the Savoy House and the Milanese and Mantuan territories under Habsburg domination. Indeed, as discussed in Subsection II.B, the 1755 Habsburg administrative reform was initially implemented in the Milanese territories of the Duchy of Milan, whereas it was extended to the Habsburg-ruled Mantuan territories of the Duchy of Milan only in 1784.



characterizing the Habsburg- and Savoy House-ruled territories before the French occupation were restored after the Congress of Vienna.

Such heterogeneity in administrative systems lasted until 1859, when the Savoy House annexed most territories of the Kingdom of Lombardy–Venetia to the Kingdom of Sardinia. Indeed, at the end of the Second Italian War of Independence (27 April to 12 July 1859), the Savoy House—with the support of the French Army—annexed the Habsburg-ruled Duchy of Milan except for Mantua—that was later annexed in 1866, together with the Habsburg-ruled former territories of the Republic of Venice (Treaty of Vienna, 3 October 1866). This represented the first step of the Italian unification process and was characterized by the extension of the administrative system, institutional setup, and bulk of laws of the Savoy House’s Kingdom of Sardinia to the previously Habsburg-ruled territories of the Duchy of Milan.

### *III.B. Measuring Current Administrative Efficiency*

Our intent is to assess whether differences in current administrative efficiency exist between the municipalities that were ruled by either the Habsburg Monarchy or the Savoy House in the second half of the 18<sup>th</sup> century. In other words, we aim to assess whether the municipalities that experienced the Enlightenment-inspired administrative reform implemented by the Habsburgs exhibit a premium in terms of current administrative efficiency—especially in terms of public goods and services provision—compared to those that underwent the highly centralized administrative system implemented by the Savoy House.

To this aim, we rely on municipality-level public administration efficiency indicators provided by Solutions for the Economic System (SOSE)—an Italian company owned by the Italian Ministry of Economy and Finance and the Bank of Italy that provides data analysis on tax, government, and corporate matters—through the web-portal *OpenCivitas*. SOSE relies on data (provided by municipal governments) on actual expenditure and public services provided—related to those functions and services under municipalities’ remit—to estimate municipalities’ standard

expenditure needs and standard levels of services by considering their geographical and socio-demographic characteristics.<sup>17</sup>

Specifically, SOSE computes two synthetic municipality-level indexes capturing the expenditure and services provision dimensions of administrative efficiency, respectively, plus an overall index combining these two. The index capturing the expenditure dimension of administrative efficiency—defined as the “expenditure gap”—is calculated as the difference between a municipality’s actual expenditure and its estimated standard expenditure need. It can be considered an input-oriented index of administrative efficiency, as it captures the internal efficiency of a municipal government in managing available resources. The index that captures the services provision dimension of administrative efficiency—defined as the “output gap”—is calculated as the difference between a municipality’s actual level of services provided and the estimated standard level of services it should provide to the local community. It can be considered an output-oriented efficiency index, as it captures the effectiveness of a municipal government in providing public goods and services with respect to its needs. The two indexes are then converted to a 1–10 scale: a higher value of the expenditure administrative efficiency index denotes a lower efficiency of the municipality in managing the budget; by contrast, a higher value of the services provision administrative efficiency index denotes a higher efficiency of the municipality in providing public services to the local community. Therefore, a municipality recording a value of five on the 1–10 scale of the services provision administrative efficiency index is in line with the services provided to the local community with respect to other municipalities with similar characteristics.

SOSE also calculates an “overall” index of municipality-level administrative efficiency as the weighted average of expenditure administrative efficiency (with weight equal to 0.4) and services provision administrative efficiency (with weight equal to 0.6). Therefore, a municipality

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17. Municipalities’ standard expenditure needs and standard levels of services are estimated by considering, among others, population and demographic characteristics, the level of services provided (e.g., assistance to children with handicaps), geographical features (e.g., earthquake risk, altitude), input prices (e.g., rental housing index), social hardships (e.g., number of families in absolute poverty), traffic and vehicles, tourism (e.g., number of museum visitors), and the investments carried out over the past five years.

recording a value of five on the 1–10 scale of the overall administrative efficiency index is in line with either the services provided to the local community or the average expenditure with respect to other municipalities with similar characteristics.<sup>18</sup>

We capture municipalities' overall, expenditure, and services provision dimensions of administrative efficiency by relying on the available data from 2013.<sup>19</sup> In particular, we consider the original indexes capturing the overall administrative efficiency and the services provision administrative efficiency as provided by SOSE. By contrast, and for the sake of interpretation, we rescale the expenditure administrative efficiency index to have a higher value of the index denoting a higher efficiency of the municipal government in managing the budget.

Overall, municipality-level administrative efficiency data from 2013 are available for 6,311 Italian municipalities belonging to the ordinary-statute NUTS-2 regions. By contrast, data are completely unavailable for municipalities belonging to special-statute NUTS-2 regions, namely, Aosta Valley, Friuli-Venezia Giulia, Sardinia, Sicily, and Trentino-South Tyrol.

### *III.C. Estimation Sample*

Considering our study region and the abovementioned constraints on administrative efficiency data availability, we restrict our estimation sample to 2,093 municipalities, which represent 90.92% of the population of municipalities in the study region and which are mapped in Figure II.

Overall, missing data refer to 48 Habsburg-ruled municipalities and 161 Savoy House-ruled municipalities. We lack administrative efficiency data for all Savoy House-ruled municipalities

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18. See Brunello, Porcelli, and Stradiotto (2015) for details on the methodology employed by SOSE.

19. The Law No. 95 of 6 July 2012—entitled *Disposizioni urgenti per la revisione della spesa pubblica con invarianza dei servizi ai cittadini*—increased from six to 10 the number of functions managed by municipalities. However, the 2013 data we employ still refer to pre-2012 variations provided by the Law No. 95/2012. In particular, the administrative efficiency indexes calculated by SOSE for 2013 are based on the following functions of municipalities: (i) general administrative, management, and control functions (including tax office, technical office, civil registry office and other general services); (ii) local police (including municipal and local administrative police); (iii) education (including school construction and the organization and management of school services); (iv) transport (including roads and local public transports); (v) land use and environmental functions (including land management and planning, environmental protection, and waste management); and (vi) social care (including child care and other social services excluding child care).

belonging to the special-statute NUTS-2 region of Aosta Valley and for some municipalities belonging to the ordinary-statute NUTS-2 regions of Liguria (two out of 54 Savoy House-ruled municipalities), Lombardy (six out of 138 Savoy House-ruled and 48 out of 796 Habsburg-ruled municipalities) and Piedmont (79 out of 1,182 Savoy House-ruled municipalities).<sup>20</sup>

### III.D. Empirical Modeling

We test for current differences in local administrative efficiency between the municipalities that belonged to the Duchy of Milan under Habsburg domination and those ruled by the Savoy House by assessing discontinuities across the 1748 frontier established between the two territories with the Treaty of Aix-la-Chapelle. We specify the following spatial regression discontinuity (RD) equation:

(1)

$$Y_{mbrs} = \alpha + \beta T_{mbrs} + g(\text{geographical location}_m) + \gamma_b + \delta_r + \zeta_s + \sum_{k=1}^K \theta_k X_{mbrs}^k + \varepsilon_{mbrs}$$

where  $Y_{mbrs}$  denotes the log-transformed dependent variable for administrative efficiency (either the overall, the expenditure, or the services provision measure) in 2013 referring to municipality  $m$  located along segment  $b$  of the frontier, within current NUTS-2 region  $r$ , and that belonged to dominant state  $s$  in year 1700 (i.e., before the beginning of the Succession Wars in 1701–1748).<sup>21</sup> The term  $\alpha$  is a constant. The term  $T_{mbrs}$  denotes the binary treatment variable that takes a value of one for municipalities that belonged to the Duchy of Milan (both Milanese and Mantuan

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20. Online Appendix Table A2 reports the distribution of estimation sample municipalities by current NUTS-2 region and dominant state after the signature of the Treaty of Aix-la-Chapelle in 1748. Online Appendix Table A3 reports the distribution of estimation sample municipalities by dominant state in 1700 (i.e., at the beginning of the Succession Wars 1701–1748 period) and dominant state after the signature of the Treaty of Aix-la-Chapelle in 1748.

21. We apply a logarithmic transformation to the three dependent variables for current administrative efficiency—as well as to the continuous control variables—to interpret the coefficient of the treatment dummy variable as a (semi-)elasticity. However, as shown later in the paper, our main results do not change when we do not apply a logarithmic transformation to either the dependent or control variables.

territories) under Habsburg domination and a value of zero for Savoy House-ruled municipalities, with  $\beta$  being the associated parameter of our interest.

The term  $g(\text{geographical location}_m)$  denotes the one-dimensional RD polynomial controlling for smooth functions of geographical location. We first specify the RD polynomial as an interacted linear polynomial of the form  $g(\cdot) = \pi D_{mf} + \rho(T_{mbrs} \times D_{mf})$ , where  $D_{mf}$  denotes the forcing variable capturing the distance between the centroid of municipality  $m$  and the closest point on the frontier  $f$  (Grosfeld and Zhuravskaya 2015; Gonzalez 2021). We then test for alternative specifications of  $g(\cdot)$  by relying on (interacted and non-interacted) quadratic and cubic one-dimensional RD polynomials (Becker et al. 2016; Oto-Peralías and Romero-Ávila 2017; Oto-Peralías 2020; Gonzalez 2021), as well as on linear, quadratic, and cubic two-dimensional RD polynomials in latitude and longitude that use the absolute geo-location of a municipality as a forcing variable (Dell 2010; Dell, Lane, and Querubin 2018).

The right-hand side of equation (1) also includes: (i) the vector  $\boldsymbol{\gamma}_b$ , consisting of six boundary segment fixed effects (FE)—with a municipality assigned to the boundary segment that is the closest one to its centroid—to ensure that we are comparing municipalities lying within the same segment of the frontier, and thus to control for heterogeneity along the frontier; (ii) the vector  $\boldsymbol{\delta}_r$  of current NUTS-2 region FEs to control for unobservable factors common to all the municipalities belonging the same region, under the rationale that Italian NUTS-2 regions have some degree of autonomy in administrative and government functions attributed by the Italian Constitution; and (iii) the vector  $\boldsymbol{\zeta}_s$  of pre-Spanish Succession War FEs to control for heterogeneity among municipalities that belonged to different dominant states in 1700 and, thus, that were subject to different administrative setups and institutional frameworks before the war period that ultimately ended with the establishment of the 1748 frontier.

We also include the vector  $X_{mbrs}^k$  of municipality-level control variables in equation (1). This vector consists of three sets of variables. First, we consider a set of historical variables referring to the pre-1748 period, which includes: (i) a dummy variable capturing whether a municipality has

been the seat of a bishop to control for the presence of first forms of political and institutional organization and coordination (Guiso, Sapienza, and Zingales 2016); (ii) a dummy variable capturing whether a municipality has been a commune (i.e., a free city-state) in the 1000–1300 period—representing the most relevant period for the communal movement in Northern-Central Italy (Wickham 1981; Cardini and Montesano 2006)—to control for the early presence of socio-economic and institutional forms of self-organization of municipalities based on local participatory government through the direct involvement of private citizens in the administration of the city (Belloc, Drago, and Galbiati 2016; Guiso, Sapienza, and Zingales 2016; Serafinelli and Tabellini 2022); (iii) a dummy variable capturing whether a municipality has been granted the right to hold a market (i.e., a fair) by the state authority in the 1196–1721 period to control for early experiences of local economic activity formalization (Cantoni and Yuchtman 2014); (iv) a dummy variable capturing whether a municipality recorded a population of at least 10,000 inhabitants during the 1300–1700 period to control for the early presence of a large city (Bosker, Buringh, and van Zanden 2013); and (v) a variable capturing the distance (in kilometers, log-transformed) between a municipality’s centroid and the closest ancient Roman road, under the rationale that a closer proximity to ancient commercial routes could have favored the growth of a city as a main trading, political, and administrative center (Oto-Peralías and Romero-Ávila 2017). Second, we account for first-order geographical and administrative differences among municipalities through the following variables: (i) altitude (log-transformed); (ii) terrain ruggedness (log-transformed); (iii) minimum distance to the sea coast (log-transformed); (iv) land area (in square kilometers, log-transformed); (v) distance between a municipality’s centroid and the centroid of its own current NUTS-2 region capital city (log-transformed); and (vi) a dummy variable capturing whether a municipality is the capital city of its own current NUTS-3 region. Third, we consider a set of demographic and economic variables to account for current socio-economic differences among municipalities, namely: (i) income per taxpayer in 2010 (log-transformed) to control for average wealth; (ii) population density in 2011 (population per square kilometers, log-transformed) to control for

relative size; (iii) the share of foreign population to total population in 2011 to control for the “cosmopolitan” nature of a municipality; (iv) the share of illiterate population to total population in 2011 to control for low-level development; (v) the share of tertiary-educated population to total population in 2011 to control for human capital endowment; (vi) unemployment rate in 2011 to control for conditions of the local labor market; and (vii) the shares of primary (agriculture, fishery, forestry, extraction), manufacturing, and services employment, respectively, to total employment in 2011 to control for the economic structure of a municipality.<sup>22</sup>

Finally,  $\varepsilon_{mbrs}$  denotes the error term. We estimate equation (1) via Ordinary Least Squares (OLS) and correct standard errors for spatial dependence of unknown form a la Conley (1999). We estimate our spatial RD specification by selecting the bandwidth (i.e., the neighborhood of municipalities around the frontier making up the estimation sample) to reconcile two conditions (Lee and Lemieux 2010): first, the bandwidth has to be small enough to give us a sufficiently good fit to the forcing variable; second, it has to be large enough to include a sufficiently large number of municipalities for statistical power reasons. We choose a bandwidth of 30 km around the frontier (i.e., we select municipalities whose centroids fall within 30 km on either side of the frontier) as a baseline and employ a distance cut-off value of 60 km beyond which we assume spatial correlation to be zero.<sup>23</sup> This bandwidth provides us with a sample of 657 municipalities, 371 of which belong to the treatment group (and all of them belonging to the Milanese territories of the Habsburg-ruled Duchy of Milan). The 30 km bandwidth sample includes municipalities belonging to the current NUTS-2 regions of Emilia Romagna, Lombardy, and Piedmont.<sup>24</sup> We then test our baseline

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22. Online Appendix Table A4 provides the definition and data source of the dependent variables and the control variables included in the vector  $X_{mbrs}^k$ . Online Appendix Table A5 presents some descriptive statistics of the same variables for both the whole sample of municipalities and the subsample of municipalities lying within 30 km on either side of the frontier. Online Appendix Tables A6 and A7 report the correlation matrix of the control variables included in the vector  $X_{mbrs}^k$  for the whole sample of municipalities and the subsample of municipalities lying within 30 km on either side of the frontier, respectively.

23. We consider a distance cut-off of 60 km around each municipality as sufficiently large, given that municipalities lying within 30 km on either side of the frontier have, on average, a size of approximately 13.4 km<sup>2</sup>.

24. Online Appendix Figure A2 maps the estimation sample of municipalities lying within 30 km on either side of the frontier. Considering dominant states at the beginning of the Succession Wars 1701–1748 period, the 30 km bandwidth estimation sample includes 371 treated municipalities that belonged to the Duchy of Milan, 266 control municipalities that belonged to the Duchy of Milan, six control municipalities that belonged to the Duchy of Parma and Piacenza, five control municipalities that belonged to the Principality of Masserano, and nine control municipalities

specification using both alternative bandwidths and alternative cut-off values for the spatial dependence structure.

### *III.E. Identification Strategy*

Our identification strategy relies on two assumptions: (i) the exogeneity of the 1748 frontier between the Habsburg-ruled Duchy of Milan and the Savoy House's territories; and (ii) the absence of substantial differences in pre-1748 characteristics between the municipalities at the two sides of the frontier.

The first assumption concerns the strict exogeneity of the frontier. We are confident that the 1748 frontier is exogenous, being the result of a period of wars, military occupations, and political treaties that started in 1701 with the Spanish Succession War, passed through the Polish Succession War during the 1730s, and finished with the signature of the Treaty of Aix-la-Chapelle in 1748 ending the Austrian Succession War (Pugliese 1924; Guichonnet 1950; Anceschi 2021). Indeed, the Duchy of Milan was geographically much wider towards west and south-west at the outset of the Spanish Succession War compared to its 1748 extension and included several territories that were later annexed by the Savoy House. By contrast, the Savoy House was ruling a limited number of territories compared to its 1748 dominations, as several municipalities were under different dominant states in the first half of the 18<sup>th</sup> century—namely, the Duchy of Milan, the Duchy of Montferrat, the Duchy of Parma and Piacenza, the Principality of Masserano, and the *Gouvernement de Dauphiné*.<sup>25</sup> In addition, the exogeneity of the 1748 frontier is further reinforced

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that belonged to the Principality of Piedmont.

25. First, the Spanish Succession War (1701–1714) caused a severe territorial dissolution of the Duchy of Milan in favor of the Savoy House. According to the Treaty of Turin (1703), the Savoy House—which first allied with the French Crown against the Habsburg Monarchy—had promised the Duchy of Montferrat and the territories of Novara, Val d'Ossola, Valsesia, and Lomellina (that were part of the Duchy of Milan). At the end of war, the Treaty of Utrecht (1713) sanctioned the annexation of the Duchy of Montferrat, the Milanese cities (and relative countryside) of Valenza and Alessandria, and parts of the Milanese territories of Lomellina and Valsesia to the Savoy House, whereas the Habsburg Monarchy refused to give up for the other promised territories, which later underwent a period of severe turbulence and instability due to continuous military occupations by the Savoy House army. By contrast, with the Treaty of Rastatt (1714), the Habsburg Monarchy obtained the remaining part of the Duchy of Milan and the Duchy of Mantua. Second, the political geography of Northern Italy changed significantly during the Polish Succession War (1733–1738). The Duchy of Milan also became an object of contest and battleground during the 1730s, as the Savoy House and French armies occupied the cities of Pavia, Vigevano and Milan and the territories of Novara and Val



by the fact that the Habsburg Monarchy did not implement any type of administrative reform in the Milanese and Mantuan territories of the Duchy of Milan before December 1755. For all these reasons, we can reasonably expect the frontier exogeneity assumption to hold.<sup>26</sup>

The second identification assumption concerns the absence of deep differences between treated and control municipalities before the establishment of the 1748 frontier. We empirically test whether this assumption holds with respect to the set of historical control variables previously presented. Formally, we consider municipalities lying within 90, 60, and 30 km on either side of the frontier, and we regress each historical variable on the treatment dummy variable ( $T_{mbrs}$ ) plus a constant term. Table I reports the results of this exercise, which clearly point to the absence of statistically significant differences between Habsburg- and Savoy House-ruled municipalities included in the 30 km bandwidth sample that we have chosen as a baseline. The differences are almost zero in magnitude in the case of historical institutional characteristics, such as the presence of a bishop, the communal experience, and the right to hold a market. This evidence suggests that, on average, bandwidth municipalities lying on the two sides of the 1748 frontier entered the second half of the 18<sup>th</sup> century with very similar past local-level institutional experiences, such that we

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d'Ossola between 1733 and 1736, thus inducing “institutional uncertainty” over these territories. The Polish Succession War ended with the signature of the Treaty of Vienna (1738), according to which the occupied Milanese territories of Novara, Tortona, Langhe, and Siccomario (in the Lomellina area) were officially annexed to the Savoy House, whereas the remaining part of the occupied territories of the Duchy of Milan was given back to the Habsburg Monarchy, which also obtained the Duchy of Parma and Piacenza from the Spanish Crown. Third, the final geo-political setup characterizing Northern Italy emerged only after the Austrian Succession War (1740–1748), which was characterized by a similar scenario of military and political instability. The cities of Pavia and Milan, as well as many other territories of the Duchy of Milan, were occupied in 1745, which led Austrian Empress Maria Theresa to establish a provisional government in Mantua in contraposition to that of Milan. With the Treaty of Worms (1743), the Habsburg Monarchy lost the territories of Val d'Ossola and Oltrepò Pavese in favor of the Savoy House. Then, with the Treaty of Aix-la-Chapelle (1748), the Habsburg Monarchy also lost the territories of the former Duchy of Parma and Piacenza in favor of the Spanish Crown, and the Milanese territories of Vigevano and Bobbio in favor of the Savoy House. Therefore, it was not until the 1748 Treaty of Aix-la-Chapelle that the river Ticino became the frontier between the Habsburg-ruled Duchy of Milan and the Savoy House—a frontier later confirmed with the Treaty of Milan in 1751. We present a series of (historical) maps depicting the political scenario of the study region between the year 1700 and the signature of the Treaty of Aix-la-Chapelle in 1748 in Online Appendix Figures A3 to A9.

26. We have also conducted a manipulation test to check for potential sorting around the cut-off of the distance-to-the 1748 frontier variable by relying on the robust bias-correction approach proposed by Calonico, Cattaneo, and Farrell (2018) and Cattaneo, Jansson, and Ma (2018). We could not reject the null hypothesis of no discontinuity of the density at the cut-off, as the test gave a  $p$ -value of .18 when considering the whole sample of municipalities, and a  $p$ -value of .34 when restricting the sample to those municipalities lying within 30 km on either side of the frontier. Therefore, we did not find statistical evidence of systematic manipulation of the running variable.

would expect differences in current administrative efficiency to be the time-persistent result of the administrative reform process that occurred after the 1748 Treaty of Aix-la-Chapelle.<sup>27</sup>

## IV. EMPIRICAL RESULTS

According to the historical narrative previously discussed, we could reasonably hypothesize that the 1748 frontier between the Habsburg- and Savoy House-ruled territories has created a long-lasting divide in terms of local-level administrative efficiency as a consequence of the administrative tradition that resulted from the Enlightenment-inspired administrative reform implemented by the Habsburg Monarchy in the Duchy of Milan compared to the Savoy House's authoritarian and highly centralized administrative system. We test our hypothesis empirically by assessing whether differences in current administrative efficiency exist between the municipalities lying on the two sides of the 1748 frontier.

### *IV.A. Main Results*

We start our analysis by presenting preliminary evidence based on a standard RD-type plot with observations sorted along the distance to the frontier and expressed as local averages of each outcome variable by partitioning the distance to the frontier by 5 km bins. Figure III plots the non-parametric locally weighted relationship between each of the three variables for administrative efficiency and the distance to the 1748 frontier. We find a clear jump in both overall administrative efficiency and efficiency in providing public goods and services, and detect a discontinuity that is larger for the latter than for the former variable. By contrast, there is no evidence of discontinuity at the frontier in the variable for expenditure administrative efficiency. This preliminary graphical evidence suggests an administrative efficiency premium—especially related to public goods and

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27. Online Appendix Table A8 reports the results of the test for cross-frontier differences concerning the sets of geographical, demographic, and economic control variables included in the vector  $X_{mbrs}^k$ . We consider the subsample of municipalities lying within 30 km on either side of the frontier and regress each variable on the treatment dummy ( $T_{mbrs}$ ) plus a constant term with standard errors corrected for spatial dependence with a cut-off value of 60 km. The results point to the absence of statistically significant differences in 10 out of 15 control variables. As shown later in the paper, the inclusion of control variables does not affect the results.

services provision—for Habsburg-ruled municipalities compared to those ruled by the Savoy House. Furthermore, the three figures highlight how the relationship between the administrative efficiency variables and the distance to the 1748 frontier is well approximated by a linear relationship within 30 km to the frontier, thus providing support to the baseline empirical strategy we have chosen—i.e., to consider a 30 km bandwidth sample and a linear one-dimensional RD polynomial.

We now present the results of the semi-parametric spatial RD analysis aimed at identifying whether a discontinuous jump at the frontier in the dependent variables exist. Table II reports the results obtained by estimating equation (1) on the 30 km bandwidth sample with the three sets of historical, geographical, and socio-economic control variables included according to a stepwise procedure. The results confirm the graphical evidence previously presented. On the one hand, we do not find evidence of a statistically significant difference in expenditure administrative efficiency between the municipalities ruled by the Habsburg Monarchy and those ruled by the Savoy House. On the other hand, we find evidence of discontinuity in overall administrative efficiency and, especially, in efficiency in public goods and services provision. Considering services provision administrative efficiency, we estimate a premium for Habsburg-ruled municipalities of approximately 0.73 points relative to a 30 km bandwidth sample mean of 5.44 points in a 1–10 efficiency scale (column (5) in Table II). Overall, these results suggest a long-lasting, time-persistent effect associated with the administrative setup that has characterized the Duchy of Milan under Habsburg domination. In other words, this administrative efficiency premium seems to be the result of the Habsburg “administrative tradition.”

#### *IV.B. Robustness Tests*

In this subsection, we present a series of exercises aimed at testing the robustness of the main results presented in column (5) of Table II. The results of these exercises are reported in the Online Appendix, and fully confirm our main findings.

First, we include in equation (1) only the control variables that are statistically significant as for Online Appendix Table A8 (see Online Appendix Table A9). Second, we exclude from the estimation sample nine municipalities in the Duchy of Milan—all belonging to the current Lombardy NUTS-3 region of Como—that, despite lying within 30 km to the 1748 frontier, are not contiguous due to the shape of the Italian external border (see Online Appendix Figure A10 and Table A10). Third, we exclude from the estimation sample the municipalities that belonged to the Principality of Masserano within the Savoy House’s territories (see Online Appendix Table A11).

Fourth, we rely on a purely border specification, that is, we omit the spatial RD polynomial from equation (1) and estimate it via OLS on the 30 km bandwidth sample. We estimate the border specification by: (i) introducing the three sets of historical, geographical, and socio-economic control variables according to a stepwise procedure (see Online Appendix Table A12); (ii) including in equation (1) only the control variables that are statistically significant as for Online Appendix Table A8 (see Online Appendix Table A13); (iii) excluding the nine non-contiguous treated municipalities belonging to the current NUTS-3 region of Como (see Online Appendix Table A14); and (iv) excluding the municipalities that belonged to the Principality of Masserano within the Savoy House’s territories (see Online Appendix Table A15).<sup>28</sup>

Fifth, we test for alternative operationalizations of the standard errors. The results of this exercise are reported in Online Appendix Table A18, where we present standard errors (i) clustered at the municipality level in parentheses, (ii) corrected for spatial dependence with distance cut-off set at 30 km in brackets, (iii) corrected for spatial dependence with distance cut-off set at 120 km in braces, (iv) corrected for spatial dependence with distance cut-off set at 180 km in angle brackets, and (v) corrected for spatial dependence with distance cut-off set at 240 km in guillemets.

Sixth, we test for alternative specifications of the RD polynomial by considering (i) non-interacted linear, quadratic, and cubic one-dimensional polynomials in distance to the frontier, (ii)

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28. We also replicate the border estimation strategy by considering both the whole sample (i.e., without imposing any bandwidth) and the whole sample but excluding those municipalities that belonged to the Principality of Masserano and/or the Duchy of Mantua (see Online Appendix Tables A16 and A17).

interacted quadratic and cubic one-dimensional polynomials in distance to the frontier, and (iii) linear, quadratic, and cubic two-dimensional polynomials in latitude and longitude.<sup>29</sup> The results of these exercises are presented in Online Appendix Table A19.

Seventh, we test for alternative bandwidths of 15, 60, and 90 km on either side of the frontier (see Online Appendix Figure A11 and Table A20).<sup>30</sup>

Eight, we replicate the spatial RD analysis by including in the control group only those municipalities that were part of the Duchy of Milan in 1700 (i.e., before the Succession Wars 1701–1748 period).<sup>31</sup> The rationale of this exercise is to compare treated and control municipalities ruled by the same dominant state in 1700 and, therefore, characterized by the same pre-war period institutional setup. The results of this exercise are reported in Online Appendix Table A22.

Ninth, we restrict the estimation sample to only those municipalities belonging to the current NUTS-2 region of Lombardy (see Online Appendix Figure A13). This exercise allows us to rule out any potential confounding effect related to the fact that a part of the 1748 frontier coincides with the current border between the NUTS-2 regions of Lombardy and Piedmont—despite we control for NUTS-2 region FEs in all our specifications. In this exercise, we still consider a 30 km bandwidth sample while controlling for NUTS-3 rather than NUTS-2 region FEs. The results of this exercise are reported in Online Appendix Table A23.

Tenth, we restrict the analysis to the subsample of municipalities bordering the 1748 frontier and thus estimate a simple border specification via OLS—that is, we omit the spatial RD polynomial from equation (1). First, we consider all border (i.e., 43 treated and 31 control) municipalities; second, we exclude five treated municipalities—all belonging to the current

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29. The non-interacted linear, quadratic, and cubic one-dimensional polynomials in distance to the frontier take the form  $g(\cdot) = \sum_{h=1}^H \pi_h D_{mf}^h$ . The interacted quadratic and cubic one-dimensional polynomials in distance to the frontier take the form  $g(\cdot) = \sum_{h=1}^H \pi_h D_{mf}^h + \rho_h (T_{mbrs} \times D_{mf}^h)$ . Let  $x_m$  and  $y_m$  denote the latitude and longitude, respectively, of municipality  $m$ . Then, we specify the two-dimensional RD polynomial as: (i) a linear function of the form  $g(\cdot) = x_m + y_m$ ; (ii) a quadratic function of the form  $g(\cdot) = x_m + y_m + x_m^2 + y_m^2 + x_m y_m$ ; and (iii) a cubic function of the form  $g(\cdot) = x_m + y_m + x_m^2 + y_m^2 + x_m y_m + x_m^3 + y_m^3 + x_m^2 y_m + x_m y_m^2$ .

30. The results presented in Online Appendix Table A20 obtained using 60 and 90 km bandwidth samples are also confirmed when excluding the municipalities that belonged to the Principality of Masserano and/or the Duchy of Mantua from the estimation sample (see Online Appendix Table A21).

31. Online Appendix Figure A12 maps this reduced estimation sample.

Lombardy NUTS-3 region of Varese—that do not have an adjacent municipality on the other side of the 1748 frontier.<sup>32</sup> The results, as shown in Online Appendix Table A24.

Eleventh, we test the robustness of the baseline RD specification by: (i) replacing NUTS-2 with NUTS-3 region FEs, as NUTS-3 regions have attributed some—despite very limited—degree of administrative autonomy in exerting institutional functions on their municipalities of competence; (ii) excluding NUTS-3 capital city municipalities from the sample, which are relatively large municipalities where NUTS-3 level institutional bodies usually have their seat; (iii) adding a log-transformed variable capturing the distance between a municipality’s centroid and the centroid of the own NUTS-3 region capital city; and (iv) adding a log-transformed variable capturing the distance between a municipality’s centroid and the centroid of the municipality of Milan, it being the most important municipality lying within 30 km on either side of the frontier. The results of these exercises are reported in Online Appendix Table A25.

Twelfth, we test the robustness of the baseline RD specification without applying any log-transformation to both the dependent and explanatory variables. The results of this exercise are presented in Online Appendix Table A26.<sup>33</sup>

Finally, we winsorize the three dependent variables at 1% and 99%, 5% and 95%, and 10% and 90%. The results of these exercises are presented in Online Appendix Table A27.

#### *IV.C. Placebo Analysis*

We present now a series of placebo exercises aimed at ensuring that our results are not driven by some unobserved spatial pattern. The results of these exercises are reported in the Online Appendix.

First, we consider the frontier of the Duchy of Milan in 1700 (i.e., before the Succession Wars period in 1701–1748). We identify those municipalities in the “true” control group but that

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32. Online Appendix Figure A14 maps these two estimation samples.

33. In this case, given that 30 km bandwidth sample municipalities have a mean efficiency in providing public goods and services of 5.44 points in a 1–10 efficiency scale, our estimates suggest that exposure to Habsburg administrative reformism leads to a 2.26 increase in relative position according to a 1–10 scale.

belonged to the Duchy of Milan in 1700, and lying within 30 km east to the 1700 frontier, as placebo treated; by contrast, the placebo-control group includes those municipalities that in 1700 belonged to the Duchy of Montferrat, the Duchy of Parma and Piacenza, the Principality of Masserano, and the Principality of Piedmont, and lying within 30 km west to the 1700 frontier of the Duchy of Milan. The results of this exercise are presented in Online Appendix Table A28 and highlight the absence of statistically significant differences between placebo-treated and placebo-control municipalities.

Second, we move the 1748 frontier by 5 km towards east and west to assess the sensitivity of the results to a slight shift of the frontier. Third, we move the 1748 frontier by 40 km towards the east. In this case, we identify those municipalities belonging to the “true” treatment group and lying within 30 km east to the placebo frontier as placebo treated. By contrast, the placebo-control group includes those municipalities belonging to the “true” treatment group and lying within 30 km west to the placebo frontier. Therefore, we compare municipalities all belonging to the Duchy of Milan under Habsburg domination. Fourth, we move the 1748 frontier 40 km towards the west. In this case, we identify those municipalities belonging to the “true” control group and lying within 30 km east to the placebo frontier as placebo treated. By contrast, the placebo-control group includes those municipalities belonging to the “true” control group and lying within 30 km west to the placebo frontier. Therefore, we compare municipalities all ruled by the Savoy House after the 1748 Treaty of Aix-la-Chapelle. The results of these placebo exercises are reported in Online Appendix Table A29 and clearly show that none of the placebo frontiers leads to statistically significant differences between municipalities located on either side of each frontier. This indicates that the effect of the treatment is observable only at the 1748 frontier between the Habsburg-ruled Duchy of Milan and the Savoy House’s territories. This corroborates our results and, specifically, the fact that current differences in administrative efficiency are ascribable to differences in the administrative setups that emerged in the 1748–1796 period.

As a final placebo exercise, we replicate our main analysis on 1,000 randomly drawn placebo frontiers to assess the magnitude of the estimated effect associated with the 1748 frontier. We define the study region for this exercise to draw the placebo frontiers in the geographical space  $43^\circ$  to  $47^\circ$  in latitude and  $7.5^\circ$  to  $10^\circ$  in longitude. The rationale for this choice relies on two considerations: first, the 1748 frontier follows a North–South orientation, such that we have to draw the sequence of placebo frontiers along the East–West dimension; second, the municipalities in our sample lie in the geographical space  $43.82^\circ$  to  $46.24^\circ$  in latitude and  $6.73^\circ$  to  $11.36^\circ$  in longitude, such that we have chosen to draw placebo frontiers in the range  $7.5^\circ$  to  $10^\circ$  in longitude to have a sufficiently large number of municipalities lying on both sides of each placebo frontier. Following Oto-Peralías and Romero-Ávila (2017) and Oto-Peralías (2020), we generate a longitude coordinate according to a random walk process for each centesimal fraction of a latitude degree and we then identify those municipalities whose centroids fall to the east (west) of each drawn placebo frontier as placebo-treated (placebo-control). We then estimate equation (1) by choosing a 30 km bandwidth around each placebo frontier, as in our baseline RD specification, and by relying on interacted linear, quadratic, and cubic one-dimensional RD polynomials. The results of this exercise are presented in Online Appendix Figure A15, which plots the cumulative distribution of the coefficients obtained from the estimation of equation (1) on the 1,000 randomly drawn placebo frontiers with respect to the three dependent variables for administrative efficiency and considering three alternative functional forms of the one-dimensional RD polynomial. We find that the “true” estimated effect associated with the 1748 frontier is larger (in absolute value) than the 90% of the placebo effects in eight out of nine simulations—the only exception refers to the variable for expenditure administrative efficiency in the case of the interacted linear RD polynomial, with respect to which the “true” estimated coefficient is systematically negligible from a statistical point of view. This exercise further corroborates our previous evidence of the long-lasting, time-persistent effect ascribable to the Enlightenment-inspired administrative reform implemented by



the Habsburg Monarchy in the Duchy of Milan, compared to the Savoy House's authoritarian and highly centralized administrative system.

## V. HETEROGENEITY ANALYSIS

We now investigate potential sources of heterogeneity. First, we study municipality-level heterogeneity within the Habsburg-ruled Duchy of Milan by focusing on the administrative autonomy granted by the Habsburg Monarchy through ad hoc edicts beyond the 1755 general administrative system. Second, we investigate heterogeneity related to the time of implementation of the Habsburg administrative reform: indeed, the reform was implemented in 1755 in the Milanese territories of the Duchy of Milan, whereas it was extended to the Mantuan territories in 1784. Third, we exploit historical (pre-1755) information on the presence or absence of first forms of local councils or assemblies in the Milanese municipalities of the Duchy of Milan to assess potential heterogeneous effects of the 1755 Habsburg reform driven by differences in pre-reform local administrative setups. Finally, we exploit historical (pre-1755) information on feudalism to investigate potential constraints on the long-term effects of the 1755 Habsburg reform.

### *V.A. Special Status Municipalities in the Habsburg-Ruled Duchy of Milan*

We start our heterogeneity analysis by disentangling the treatment group according to whether municipalities were granted a “special status” by law beyond the 1755 general administrative system. In fact, as discussed in Subsection II.B, the Habsburgs promulgated a series of specific edicts between January 1756 and February 1758, providing the targeted municipalities with additional autonomy in terms of local administrative regulation, while retaining the *Convocato Generale degli Estimati* as the baseline rule for local governance. It is worth noting that these edicts were not promulgated by the central government to accommodate a demand for autonomy by local elites—indeed, the Habsburg reform intended to eliminate the feudal and fiscal privileges of the aristocracy (Riley 2003). By contrast, they were promulgated to account for municipalities'

specificities and peculiarities related to their size or specific needs in providing public services to the local community. Considering our sample, we can identify 20 edicts granting municipalities a “special status” from an administrative point of view.<sup>34</sup>

We thus test whether treated municipalities that were granted a “special status” by law through ad hoc edicts experience a larger premium in terms of current administrative efficiency than those purely subject to the 1755 general administrative system compared to municipalities ruled by the Savoy House. To this aim, we modify equation (1) by replacing the treatment dummy variable with two dummy variables: the first takes a value of one for treated municipalities subject to the general administrative system and a value of zero otherwise; the second takes a value of one for “special status” treated municipalities and a value of zero otherwise. First, we rely on a simple OLS border specification estimated for the whole sample of municipalities. Second, we replicate the same exercise but exclude the Habsburg-ruled municipalities of the former Duchy of Mantua from the treatment group, as the 1755 general administrative system was extended to the Mantuan territories only in 1784. Third, we rely on a semi-parametric spatial RD approach using an interacted linear polynomial in distance to the frontier and focusing on those municipalities lying within 30 km on either side of the frontier.

The results of these exercises are reported in Table III and clearly suggest a premium in terms of both overall administrative efficiency and services provision administrative efficiency that is higher in magnitude for “special status”-treated municipalities than for treated municipalities purely subject to the general Habsburg administrative system compared to the Savoy House’s municipalities. This result is not surprising, considering that the granting of a “special status”

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34. We list the 20 edicts in Online Appendix Table A30. For example, due to the very large number of *Estimati*, the Edict of 23 June 1757 regulating Busto Arsizio provided that decisional and administrative functions as for the 1755 general reform had to be exerted by a council composed of 32 *Estimati* elected by the *Convocato*, plus two deputies representing citizens subject to the personal tax and the mercantile tax, respectively. Council members were in charge for four years, and every year the *Convocato* had to replace only eight of them. Another interesting example concerns the Edict of 16 September 1757 regulating the Valsassina Valley (including 14 municipalities), which provided for the establishment of a cross-municipality institute (a *società*) in charge of administering and providing services for the mutual and common needs of the whole Valsassina Valley. The edicts can be accessed at <https://www.lombardiabeniculturali.it/leggi/editti-1760/>.

implied that these municipalities experienced a more intense tradition of administrative “autonomy” that resulted in stronger attention to the needs of the local populations.

### *V.B. Heterogeneity between Milanese and Mantuan Habsburg-Ruled Municipalities*

The results presented in Table III may lead one to wonder whether higher current administrative efficiency in the Habsburg-ruled Duchy of Milan is the result of a limited number of “special status” municipalities, rather than of the general administrative setup based on the *Convocato* institute, as well as whether the time lag in the implementation of the general administrative system—established in the Milanese territories in December 1755, while in the Mantuan territories only in November 1784—could have developed a deeper Habsburg administrative tradition in the Milanese municipalities of the Duchy of Milan compared to the Mantuan ones.

To assess whether this is the case, we carry out three exercises by restricting our attention to the treatment group. First, we simply compare Milanese versus Mantuan municipalities within the Habsburg-ruled Duchy of Milan. We estimate a modified version of equation (1) via OLS on the subsample of municipalities belonging to the Duchy of Milan under Habsburg domination and replace the treatment variable with a dummy variable taking a value of zero for Mantuan municipalities and a value of one for Milanese municipalities. Second, we test for potential differences between Milanese municipalities purely subject to the 1755 general administrative system and “special status” Milanese municipalities compared to Mantuan municipalities. In this case, we consider two dummy variables: the first takes a value of one for Milanese municipalities purely subject to the 1755 administrative reform and a value of zero otherwise; the second takes a value of one for “special status” Milanese municipalities and a value of zero otherwise. Finally, we test for potential differences in current administrative efficiency between Milanese municipalities purely subject to the 1755 general administrative system and “special status” Milanese

municipalities through a dummy variable taking a value of zero for the former type of municipality and a value of one for the latter type.

As shown in Table IV, we systematically find an absence of statistically significant differences in current administrative efficiency among the three types of Habsburg-ruled municipalities. This result provides further support for our general hypothesis: the Habsburg administrative system based on the *Convocato* institute—as a form of local administration allowing for a generalized participation of the local community in the municipality’s decisional and administrative activities—has represented a structural innovation with long-lasting, time-persistent effects in terms of local administrative efficiency. In other words, municipalities that were ruled by the Habsburg Monarchy in the second half of the 18<sup>th</sup> century keep traces of the high-valued Habsburg administrative tradition.

#### *V.C. Pre-1755 Administrative Heterogeneity in the Habsburg-Ruled Duchy of Milan*

In this subsection, we focus on pre-1755 administrative heterogeneity by leveraging differences in local administration before the implementation of the Habsburg reform in the Milanese territories of the Duchy of Milan. As previously highlighted, the Duchy of Milan was characterized by high heterogeneity in terms of municipality-level administrative systems before the homogenization process was implemented by the Habsburgs with the 1755 reform. Indeed, according to the census carried out in 1751 by the Habsburg Monarchy in the Milanese territories of the Duchy of Milan, the local administrative system varied from municipality to municipality, especially with respect to the presence or absence of a council empowered to nominate civil servants.

In some municipalities, administrative functions were attributed to one or more mayors and/or one or more *Cancellieri* and/or one or more consuls and/or one or more tax collectors nominated by—and under the monitoring of—a proto-*Convocato* consisting in a council or an assembly involving either a restricted number of landowners, a restricted number of household

heads, or all household heads. By contrast, in other municipalities, civil servants (i.e., one or more mayors, *Cancellieri*, consuls, tax collectors) managing the local administration were not nominated by—and under the monitoring of—a council or an assembly. Rather, they were contracted by public auctions. Therefore, we can reasonably hypothesize that the introduction of the *Convocato Generale degli Estimati* in 1755 by the Habsburgs could have represented a relatively more “radical” administrative change in those municipalities characterized by the absence of first forms of councils or assemblies, compared to those where councils or assemblies empowered with (limited and highly heterogeneous) decisional and administrative functions were already provided for before the 1755 administrative reform (i.e., before the introduction of the *Convocato* institute).

We empirically assess potential heterogeneity in the long-term effects of the 1755 Habsburg administrative reform by comparing Habsburg-ruled municipalities that, according to the 1751 census, were characterized by the presence of a council or an assembly nominating civil servants with Habsburg-ruled municipalities where, by contrast, such forms of proto-*Convocato* were absent. We digitalize information drawn from the 1751 census carried out by the Habsburg Monarchy in the Milanese territories of the Duchy of Milan.<sup>35</sup> We can identify the presence or absence of a council or an assembly for 660 out of 723 Habsburg-ruled Milanese municipalities included in our sample. Empirically, this information allows us to compare the municipalities ruled by the Savoy House with those ruled by the Habsburg Monarchy by exploring heterogeneity in the presence or absence of a proto-*Convocato* among Milanese municipalities to assess whether the 1755 administrative reform has had a deeper effect on treated municipalities where a council-type decision-making institute was introduced for the very first time (i.e., on those municipalities where the 1755 reform entailed a relatively more “radical” change in terms of local administrative system).

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35. The Habsburgs summoned all *Cancellieri* to Milan at the end of 1750 to answer 45 questions ranging from the legal position of the lands (e.g., whether they were subject or not to a Feudal Lord) to the organizational, institutional, and financial structure of the municipality (Capra 1987).

We modify equation (1) by replacing the treatment dummy variable with two dummy variables: the first takes a value of one for treated Milanese municipalities characterized by the absence of a proto-*Convocato* and a value of zero otherwise; the second takes a value of one for treated Milanese municipalities characterized by the presence of a proto-*Convocato* and a value of zero otherwise. We rely on a semi-parametric spatial RD approach using an interacted linear polynomial in distance to the frontier and focusing on those municipalities lying within 30 km on either side of the frontier.

Table V reports the results of this exercise. First, we confirm a premium for treated municipalities in terms of both overall and services provision administrative efficiency, whereas there is no evidence of statistically significant differences between municipalities on the two sides of the frontier in terms of expenditure administrative efficiency. Second, we find a relatively larger premium for Milanese municipalities characterized by the absence of a proto-*Convocato* before the 1755 administrative reform with respect to those where, instead, such a council-type decision-making institute was already present compared to Savoy House-ruled municipalities. This result provides empirical support for our theoretical expectation: the introduction of the *Convocato Generale degli Estimati* in 1755 by the Habsburgs has had a relatively deeper long-term, persistent effect in those municipalities where first forms of councils or assemblies were absent. In other words, this result offers further support for the thesis that the 1755 reform—and, particularly, the establishment of the *Convocato* institute—brought about a long-term, persistent change in the value system of the local administrative apparatus.

#### *V.D. Feudalism as a Constraint on the Transmission of Administrative Values*

We now focus on pre-1755 institutional heterogeneity to assess the role that the feudal system could have played as a constraint on the full transmission to—and “assimilation” by—local institutions of the administrative values of community welfare and attention for the public good that characterized the administrative system envisaged by the 1755 Habsburg reform.

The feudal system was severely curtailed by the 1755 Habsburg reform and subsequently completely abolished by Napoleon with the arrival of the French armies in Italy. Indeed, one of the goals of the 1755 reform was to downsize the role, functions, and powers of the aristocracy and, thus, of the feudal system (Capra 1987). In other words, the processes of “administrative standardization” triggered by the 1755 reform also responded to the need to eliminate the feudal and fiscal privileges of the aristocracy (Riley 2003). Before the reform, the local government and administration of a feudal municipality (i.e., a municipality acquired by a Feudal Lord at the *Regia Camera* of Milan) was carried out by the *Cancelliere*, a man appointed by the Feudal Lord.<sup>36</sup> Under feudalism, the local government of a municipality was in the hands of the Feudal Lord and her delegates, thus resulting in a strong oligarchic structure focused on the interests of the Feudal Lord. In this sense, feudalism could have represented a “constraint” on the diffusion among local bureaucrats of the culture of the “*pubblico bene*”—so much emphasized by the Habsburgs—and, thus, on relatively greater attention to the provision of local public goods. It is thus likely that this pre-existing “administrative style” (Peters 2021) significantly weakened and attenuated the effectiveness of the long-term transmission of the Habsburg administrative tradition.

To empirically test whether the feudal system could have represented such a constraint on the long-term transmission of the Habsburg administrative tradition, we collect data on whether a municipality was subject to a Feudal Lord before the implementation of the 1755 reform from the 1751 census carried out by the Habsburg Monarchy in the Milanese territories of the Duchy of Milan. We are also able to complement 1751 census information of feudalism with further information on Lombardy municipalities belonging to the current NUTS-3 region of Pavia that were annexed by the Savoy House during the Succession Wars in the 1701–1748 period. This information is collected from the historical archives maintained by the Lombardy region, which preserves historical documents—including copies of the 1751 Habsburg census—useful to

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36. In a 1750 letter from Pompeo Neri, President of the *Giunta Censuaria*, to the Duke of Silya Tarouca, the *Cancellieri* were defined as follows: “some are incompetent; others are agents, or employed in the service of some powerful landowner of the municipality from which they were created *Cancellieri*” (Capra 1987, p. 179, our translation).

reconstruct the institutional development process of Lombardy municipalities.<sup>37</sup> We can precisely identify whether a municipality was subject to a Feudal Lord for 664 out of 723 Habsburg Milanese municipalities included in our sample, and for 123 out of 132 Savoy House-ruled municipalities belonging to the current Lombardy NUTS-3 region of Pavia. We thus construct a dummy variable taking a value of one for municipalities that were subject to a Feudal Lord and a value of zero otherwise.

As a preliminary exercise, we assess whether a correlation exists between the feudal status of a municipality and the salary paid to the *Cancelliere* as a proxy for the Feudal Lord's institutional power and the influence she could exert on the decision-making and administrative processes of the local community. To this aim, we digitalize 1751 census data on the yearly salary (expressed in *Lire*) paid to the *Cancelliere* by a municipality and the resident population of municipalities, even though such information is available only for 154 Milanese municipalities of the Duchy of Milan. We estimate via OLS whether the feudal status of a municipality is associated with a higher salary per capita, and find that this is indeed the case (see Online Appendix Table A31). This result suggests that the Feudal Lord could exert her personal influence on the decision-making and administrative processes of the local community through monetary incentives paid to the *Cancelliere*.

We now compare the municipalities ruled by the Savoy House with those ruled by the Habsburg Monarchy by exploring feudal status heterogeneity among Milanese municipalities to assess whether feudalism has represented a constraint on the long-term transmission of the Habsburg administrative tradition for treated municipalities. To this aim, we modify equation (1) by replacing the treatment dummy variable with two dummy variables: the first takes a value of one for treated Milanese municipalities that were not subject to a Feudal Lord in 1751 and a value of zero otherwise; the second takes a value of one for treated Milanese municipalities that were subject to a Feudal Lord in 1751 and a value of zero otherwise. We rely on a semi-parametric

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37. Summaries of municipality-level institutional information concerning the 18<sup>th</sup> century Lombardy region can be accessed at <https://www.lombardiabeniculturali.it/istituzioni/materiali/>.



spatial RD approach using an interacted linear polynomial in distance to the frontier and focusing on those municipalities lying within 30 km on either side of the frontier.

The results of this exercise are reported in Table VI. First, we confirm a premium for treated municipalities in terms of both overall and services provision administrative efficiency, whereas there is no evidence of statistically significant differences between municipalities on the two sides of the frontier in terms of current expenditure administrative efficiency. Second, we find a relatively larger premium for Milanese municipalities that were not subject to a Feudal Lord with respect to those that, instead, were subject to her compared to Savoy House-ruled municipalities. This last result confirms the previous narrative: feudalism has represented a constraint on the diffusion and “assimilation” of community welfare values envisaged by the 1755 reform, thus lowering the long-term transmission of the Habsburg administrative tradition.

We complement the previous analysis by focusing on the sample of current Lombardy municipalities to exploit information on feudalism on either side of the frontier. In other words, we compare treated Milanese municipalities with control municipalities belonging to the current Lombardy NUTS-3 region of Pavia that were ruled by the Savoy House. To this aim, we modify equation (1) by including the dummy variable capturing whether a municipality was subject to a Feudal Lord, plus an interaction term between the treatment and the feudalism dummy variables.

The results of this exercise—based on a semi-parametric spatial RD approach estimated using an interacted linear polynomial in distance to the frontier on a 30 km bandwidth sample—are reported in Table VII. First, the results confirm that only overall and services provision administrative efficiency keep traces of the Habsburg reform. By contrast, we do not find statistically significant differences in the case of expenditure administrative efficiency. Second, we confirm the results of the heterogeneity analysis presented in Table VI: we estimate negative coefficients of the interaction term between the treatment and the feudalism dummy variables in the case of both overall and services provision administrative efficiency. This suggests that any current administrative efficiency premium associated with the 1755 Habsburg reform is constrained

by the pre-1755 presence of the feudal system. On the one hand, we estimate a marginal effect of 0.76 for treated municipalities that were not subject to a Feudal Lord and a marginal effect of 0.47 for treated municipalities that were subject to a Feudal Lord, compared to the control municipalities, in the case of overall administrative efficiency. On the other hand, we estimate a marginal effect of 0.72 for treated municipalities that were not subject to a Feudal Lord and a marginal effect of 0.46 for treated municipalities that were subject to a Feudal Lord, compared to the control municipalities, in the case of services provision administrative efficiency.

## VI. EVIDENCE ON PUBLIC GOODS PROVISION

Our empirical analysis suggests that Habsburg-ruled municipalities have higher current administrative efficiency compared to Savoy House-ruled municipalities, and that such a premium is especially driven by a relatively higher efficiency in providing public goods and services. Moving from this general result, we now provide further evidence focusing on public goods provision and consider this dimension with respect to three different historical periods. First, we look at the second half of the 18<sup>th</sup> century (i.e., when the Habsburg administrative reform took place) and provide more suggestive evidence on the role of public culture in the Enlightenment age as a moderating force in the long-run relationship between the Habsburg administrative reform and current administrative efficiency. Second, we exploit information on municipalities' expenses for public goods provision in the mid-1880s (i.e., approximately two decades after the beginning of the Italian unification process, which led to the homogenization of the administrative and institutional setups in the Habsburg- and Savoy House-ruled territories). Finally, we consider the case of nurseries as an example of municipality-provided public good, and assess differences in authorized nursery places in 2013 between Habsburg- and Savoy House-ruled municipalities.

## VI.A. *The Role of Public Culture in the Enlightenment Age*

In this subsection, we focus on the Enlightenment cultural atmosphere that inspired Habsburg Monarchy reformism in the second half of the 18<sup>th</sup> century. The cultural atmosphere in this region of the Habsburg Empire changed rapidly starting in the 1750s. The *Accademia dei Trasformati* (founded in 1743) first, and then the *Accademia dei Pugni* (founded in 1761)—of which Cesare Beccaria, Pietro Verri, Alessandro Verri, Luigi Lambertenghi, Giambattista Biffi, Alfonso Longo, and Giuseppe Visconti were influential members—had a fundamental role not only in introducing the Enlightenment’s institutional ideas and values in the Duchy of Milan, but also in shaping some principles implemented in the institutional and administrative reforms. In particular, the ideology of the *Accademia dei Pugni*—expressed in the periodical *Il Caffè*, published in 1764–1765 (Venturi 1969)—made it possible to give a more cultural and philosophical basis to the Habsburg administrative reform process with respect to the “improvisation” practiced by previous reformers (Riley 2003). Consequently, the public culture of this historical period became less backward and provincial and more connected to the debate developed by the French encyclopedists and, more generally, to the European Enlightenment. In those years, there was a broadening of intellectual and cultural horizons (Capra 1987). In summary, the institutional and administrative reforms introduced in the second half of the 18<sup>th</sup> century in the Duchy of Milan would not be conceivable without accounting for the “hybridization” of its public culture with the most advanced currents of the European Enlightenment. In what follows, we provide a suggestive, correlation-based analysis by considering the potential moderating role of public culture in the long-run relationship between the 1755 Habsburg administrative reform and current administrative efficiency.

We consider access to public culture as a public good and proxy it through the opening of public-use libraries in 1748–1796. The rationale relies on the idea that culture represents a public good and that the opening of public-use libraries could have facilitated the spread of Enlightenment ideas and values among citizens and, consequently, could have promoted a shared vision of

community interests—the “*pubblico bene*” (Mozzarelli 1975)—by the bureaucratic apparatus and civil society.

We collect municipality-level information on existing libraries, their year of foundation, and whether they were of public use from the paper-based source *Statistica del Regno d’Italia. Biblioteche. Anno 1863* published in 1865 by the Italian Ministry of Public Education. From our sample, we identify public-use libraries that opened in 1748–1796 in three treated municipalities and in two control municipalities. We thus construct a dummy variable capturing public culture as a public good that takes a value of one for municipalities where a public-use library was opened in 1748–1796 and a value of zero otherwise.

We augment equation (1) by adding the dummy variable for public libraries opened in 1748–1796 as a proxy for public goods provision and interacting it with the treatment variable to assess whether public access to culture plays an amplifying effect on the long-run positive relationship between Habsburg reformism and current local administrative efficiency.

We also control for the stock of (public- and private-use) libraries already existing in 1748 through a dummy variable, and for private citizens’ cultural openness to the Enlightenment values and ideas in 1748–1796 through a synthetic proxy measure based on five dimensions: (i) international book purchases from the *Société Typographique de Neuchâtel* (STN); (ii) international postal correspondence with the STN; (iii) subscriptions to the *quarto* of the French *Encyclopédie*; (iv) subscriptions to the Venetian *Giornale Enciclopedico*; and (v) foundations of private libraries in 1748–1796.<sup>38</sup> We then construct a dummy variable taking a value of one for

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38. We collect information on international book purchases from the *French Book Trade in Enlightenment Europe* (FBTEE) database (Burrows 2018; Curran 2018). The FBTEE database provides data on international book trading by the Swiss publishing house STN during its period of activity from 1769 to 1794. The FBTEE database is built on STN’s archives and represents a unique and almost exhaustive source of information on European book trade in the Enlightenment period, given that the STN operated as an international supplier selling both own edited works and works edited by other publishers, including clandestine copies of illegal and pirate editions banned in several states. We collect data on international postal correspondence with the STN during its period of activity from Pasta (1997), who identifies the cities from which letters to the STN have been sent in 1769–1794. We collect data on subscriptions to the *quarto* of the French *Encyclopédie* in circa 1780 from Darnton (1979). We include data on subscriptions to the *Giornale Enciclopedico*, a monthly journal reporting on literary and scientific innovations in Enlightenment Europe that was published in the Republic of Venice between 1774 and 1782 (Di Maro 2021). All issues of the *Giornale Enciclopedico* report the list of municipalities where the journal was sold via subscription. We collect these data via inspection of microfilm digitalized copies of the *Giornale Enciclopedico*. Finally, we use information on private libraries from the *Statistica del Regno d’Italia. Biblioteche. Anno 1863*.

municipalities recording a strictly positive value on at least one of the five proxies for citizens' "private exposure" to the Enlightenment culture and a value of zero otherwise.

We thus estimate this augmented version of equation (1) via OLS on the whole sample of 2,093 municipalities. The results of this exercise are reported in Table VIII. The coefficient of the interaction term capturing the moderating role of public culture as a proxy for public good is positive with respect to all three dependent variables capturing current administrative efficiency. However, it is statistically significant only when considering the dependent variables for overall administrative efficiency and efficiency in public goods and services provision. On the one hand, we estimate a marginal effect of 0.28 for treated municipalities where no public library was opened in 1748–1796 and a marginal effect of 0.78 for treated municipalities where a public library was opened in the same period, compared to the control municipalities, in the case of current overall administrative efficiency. On the other hand, we estimate a marginal effect of 0.60 for treated municipalities where no public library was opened and a marginal effect of 1.39 for treated municipalities where a public library was opened, compared to the control municipalities, in the case of current services provision administrative efficiency.

### *VI.B. Local Public Good Provision in the Aftermath of Italian Unification*

We now provide evidence of the mid-term effects of the Habsburg administrative reform by considering municipalities' expenditure for public goods and services provision in the mid-1880s. We analyze municipality-level differences in discretionary expenditure in 1884 (i.e., 25 years after the beginning of the Italian unification process led by Victor Emmanuel II of Savoy) that homogenized the administrative and institutional setups of the territories previously ruled by the Habsburgs and the Savoy House. This homogenization process took place, first, through the extension of Savoy House's Rattazzi Law (Law No. 3702 of 23 October 1859) to the territories of the Habsburg-ruled Duchy of Milan that were annexed in 1859; second, through the enforcement of the 1865 *Legge per l'unificazione amministrativa del Regno d'Italia* (Law No. 2248 of 20 March

1865), which extended and homogenized the bulk of norms provided for by the 1859 Rattazzi Law throughout the entire new-born Kingdom of Italy.

In particular, Title II of the Rattazzi Law, entitled *Dell'amministrazione comunale*, defined for each municipality its administrative and governing bodies (i.e., the council and the mayor), their composition, the rules for their election, and the principles of municipal administration and accounting. It also split municipal expenses into two categories of compulsory and discretionary expenses. Compulsory expenses assigned to municipalities included: (i) the payment of salaries to municipal employees; (ii) primary education; (iii) the maintenance of municipal roads and public squares; (iv) the collection of municipal taxes; (v) the preservation of municipal properties; and (vi) the management of cemeteries. Discretionary expenses were grouped into eight categories concerning (i) public administration (e.g., the payment of an allowance to the mayor, the payment of subsidies to civil servants, their widows, and their orphans), (ii) local police and hygiene (e.g., public healthcare, public lighting, expenses for the slaughterhouse and dog catching), (iii) public security and justice (e.g., payment and accommodation for firefighters), (iv) public infrastructures (e.g., beautification of streets and squares, maintenance of gardens, construction of canals and aqueducts, construction of harbors on lakes and rivers, construction of slaughterhouses, construction and maintenance of markets), (v) public education (e.g., kindergartens, evening and festive schools for adults, schools for blind and deaf-mute people, industrial schools, commercial schools, vocational schools, elementary schools beyond the number prescribed by law, expenditure on museums and libraries, expenditure on classical and technical secondary education), (vi) worship, (vii) charity (e.g., orphanages, nursing homes, funeral transport and coffins for the poor), and (viii) other miscellaneous expenses (e.g., the purchase of instruments for the town band, theatre endowments).

We exploit the distinction between compulsory and discretionary expenses provided for by law and consider discretionary expenses as a proxy for a municipality's attention to local community needs. Indeed, we can reasonably hypothesize that municipalities that were spending

relatively more on discretionary expense categories were relatively more inclined to provide public goods and services to their citizens.

To test whether this is the case, we digitalize municipality-level balance sheet data from 1884 (i.e., the first available year for which municipality-level information on revenues and expenditure is available) drawn from the paper-based source *Bilanci comunali per l'anno 1884* published in 1887 by the Italian Ministry for Agriculture, Industry and Trade. This source provides aggregate information on total revenues and more disaggregated information on the expenditure side. Indeed, expenditure figures are split according to their compulsory or discretionary nature and with respect to three main aggregate categories: (i) public education; (ii) public infrastructures; and (iii) other expenditures (including the categories of public administration, local police and hygiene, public security and justice, worship, charity, and other miscellaneous expenses). Moreover, this source provides municipality-level population figures for 1881. Overall, we collect 1884 balance sheet data and 1881 population figures for 1,987 of the 2,093 municipalities that make up our estimation sample.

We construct three dependent variables to proxy for a municipality's inclination to provide public goods and services to the local community: (i) the share of discretionary expenses to total expenses to capture relatively higher attention to local community needs; (ii) the amount of discretionary expenses in public education per capita (log-transformed); and (iii) the amount of discretionary expenses in public infrastructures per capita (log-transformed).<sup>39</sup> We also construct four additional control variables: (i) effective revenues per capita (log-transformed) to capture the amount of resources available to a municipality; (ii) share of total (i.e., compulsory and discretionary) expenses in public education to total expenses; (iii) share of total (i.e., compulsory and discretionary) expenses in public infrastructures to total expenses; and (iv) population density in 1881 (population per square kilometers, log-transformed).

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39. Per capita variables are based on 1881 population figures. Indeed, population figures are not available for the year 1884 because the population census was carried out in 1881 and then in 1901.

We modify equation (1) by: (i) omitting the set of current (i.e., 2010–2011) demographic and economic control variables; (ii) replacing the set of current NUTS-2 region FEs with NUTS-3 region FEs as for the 1881 administrative geography of the Kingdom of Italy; (iii) replacing the geographical control variable capturing the distance between a municipality and the own current NUTS-2 region capital city with a variable capturing a municipality’s distance to the own 1881 NUTS-3 region capital city; and (iv) adding the control variables for revenues per capita in 1884, population density in 1881, share of public education expenditure in 1884, and share of public infrastructures expenditure in 1884. We thus estimate the modified version of equation (1) both via OLS on the whole sample of municipalities, and via a semi-parametric spatial RD approach using an interacted linear polynomial in distance to the frontier and focusing on those municipalities lying within 30 km on either side of the 1748 frontier.

The results of this exercise are reported in Table IX. We find that, in the aftermath of the Italian unification process, municipalities that were previously under Habsburg domination tended to spend 3.7 percentage points more on discretionary expenses relative to a 30 km bandwidth sample mean of 0.13 (column (2)). We also find evidence of higher discretionary expenses per capita in public education, whereas no difference emerges when considering discretionary expenses in public infrastructures.<sup>40</sup> This result is not surprising: whereas Title II of the Rattazzi Law assigned to each municipality a significant role in primary education through discretionary expenses, discretionary expenses in public infrastructures had less importance as the Rattazzi Law assigned a key role in this field to the province—corresponding to the NUTS-3 region—rather than to the municipality—indeed, provinces were in charge of building and maintaining main infrastructures such as roads and bridges.

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40. We replicate our baseline RD analysis (see column (5) in Table II) on the reduced estimation sample for which we have 1884 municipality-level balance sheet data available. The results of this exercise are reported in Online Appendix Table A32 and fully corroborate our main findings.



## *VI.C. Long-Run Effects: The Case of Nurseries*

We now move to more recent times and provide additional evidence to support our main result of Habsburg-ruled municipalities having a relatively higher efficiency in providing public goods and services compared to Savoy House-ruled municipalities by considering the case of nurseries, which suits our intent as they represent a public good provided locally by municipalities.

We collect data on the number of authorized nursery places per 100 children aged 0–2 years from 2013 and provided by the Italian National Institute of Statistics (ISTAT). We also consider two types of nursery services: (i) standard nursery and (ii) standard nursery plus “spring section” nursery (i.e., a nursery service addressing children aged 24 to 36 months facilitating the transition from nursery to pre-school).<sup>41</sup> Overall, we collect nursery data for 2,082 out of the 2,093 municipalities that make up our sample (with missing data for only one municipality in the control group when restricting the estimation sample to a 30 km bandwidth around the 1748 frontier).

We thus estimate equation (1) via OLS on the whole sample of municipalities, and via a semi-parametric spatial RD approach using an interacted linear polynomial in distance to the frontier and focusing on those municipalities lying within 30 km on either side of the frontier. The results of this exercise are reported in Table X and clearly highlight that Habsburg-ruled municipalities outperform Savoy House-ruled ones in providing access to nursery services. As shown in column (2), we estimate a premium for Habsburg-ruled municipalities of approximately 10.35 points relative to a 30 km bandwidth sample mean of 15.93 authorized nursery places per 100 children aged 0–2 years. Thus, we can confirm our general results that Habsburg-ruled municipalities have a relatively higher efficiency in providing public goods and services to the local community compared to Savoy House-ruled municipalities.<sup>42</sup>

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41. Municipality-level nursery data are aggregated over four types of nursery services: (i) nursery directly operated by the municipality; (ii) nursery in municipal management but entrusted to third parties; (iii) private nursery with reservation of posts by the municipality; and (iv) municipal contribution to families for public or private nursery service. Unfortunately, data are not available for each individual type of nursery service. However, the aggregate does not include private nursery services without reservation of posts by the municipality, implying that the nursery data we rely on refer to an education service provided by municipalities and, thus, represent a good proxy for municipality-level public goods and services provision.

42. We replicate our baseline RD analysis (see column (5) in Table II) on the reduced estimation sample for

## VII. UNDERLYING MECHANISM

According to our empirical results, municipalities exposed to the Habsburg administrative reform seem to provide more public goods and services to their citizens while spending as much as the neighboring municipalities that were ruled by the Savoy House in the second half of the 18<sup>th</sup> century. Furthermore, this difference in public goods and services provision can be traced back to 1884 municipal budget data. These results are consistent with our interpretation of the role played and the long-term effects produced by the Enlightenment-inspired administrative reform introduced by Maria Theresa of Austria in 1755. At that time, the main effect of this reform was to generate a new set of values, norms, and practices in the administrative system. In other words, the 1755 reform “activated” a new administrative tradition (Ongaro 2008; Meyer-Sahling and Yesilkagit 2011). However, an administrative tradition may persist over time only if it is driven by a within-institution channel. Only the presence of a within-institution transmission mechanism may explain the “reproductive capacity” over time and, therefore, the persistence of an administrative tradition.

We now propose a simple, minimal model that can explain the persistence of an administrative tradition over time. In this model, we identify a within-institution mechanism of transmission over time of values, norms, and practices of an administrative tradition based on a “bureaucracy enculturation” channel. The literature provides models of cultural transmission including retirement and knowledge transmission among individuals—see, for example, Harrison and Carroll (1991) for cultural transmission in the institutional setting, Suzuki (1997) for international organizations, and Bisin and Verdier (2000, 2011) for inter-generational cultural transmission within the society as a whole. By contrast, our model attempts to capture the basic stylized facts of persistence while minimizing the number of free parameters employed and ensuring that the model does not differentiate between desirable and undesirable characteristics.

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which we have 2013 municipality-level nursery data available. The results of this exercise are reported in Online Appendix Table A33 and fully corroborate our main findings.

## VII.A. Modeling Persistence of Administrative Traditions

Suppose that, at any time, there are  $N$  civil servants operating in a local institution—in our case, a municipality. They have a distribution of some trait  $T$ —in our case, administrative efficiency—which we take to be binary. Let  $gN$  be the number of civil servants who have the trait  $T = 1$ , such that  $bN = (N - gN)$  is the number of civil servants for whom  $T = 0$ . Then,  $g = (1 - b)$  is the fraction of civil servants with trait  $T = 1$ . For definiteness, we refer to civil servants with trait  $T = 1$  as “good” ones (i.e., with high administrative efficiency) and to those with trait  $T = 0$  as “bad” ones (i.e., with low administrative efficiency).

At the end of each period, a fraction  $\alpha > 0$  of civil servants retires and is replaced by newly hired ones selected from the general population—in our case, a municipality’s population. We assume that in the latter  $p(T = 1) = p(T = 0) = 1/2$ , that is, the fraction of the general population endowed with the “good” version of the trait  $T$  equals the fraction of the general population endowed with the “bad” version of  $T$ .<sup>43</sup>

It follows that, in each period,  $\alpha N$  civil servants retire, of which  $\alpha gN$  have  $T = 1$  and  $\alpha bN$  have  $T = 0$ . Then,  $\alpha N/2$  of the replaced civil servants will have  $T = 1$ , and  $\alpha N/2$  will have  $T = 0$ . Therefore, the fraction of “good” civil servants at time  $t + 1$  can be defined as follows:

$$(2) \quad g_{t+1} = \frac{1}{N} \left( g_t N - \alpha g_t N + \alpha \frac{N}{2} \right) = g_t - \alpha \left( g_t - \frac{1}{2} \right)$$

The time-continuum equivalent of equation (2) is:

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43. In principle, the trait  $T$  can be imagined as a continuous trait, whose specifics would depend on the chosen operational definition. At this stage, in our model, we are considering  $T$  to be a binary trait: for instance, being efficient or inefficient in case  $T$  represents administrative efficiency. This assumption corresponds implicitly to binning the underlying continuous trait at a given threshold. We can always choose such a threshold so that half of the population is efficient and half is inefficient. In other words, we aim at describing the evolution of a trait relative to the median of the population.

$$(3) \quad \dot{g} = -\alpha \left( g - \frac{1}{2} \right)$$

where  $\alpha$  is the fraction of civil servants replaced per unit of time. In a society where people work for approximately 50 years, then  $\alpha \approx 1/50 \text{ year}^{-1}$ . A caveat concerning this result is that, in our idealization, civil servants live forever (i.e., we would treat death as retirement) and are replaced at random.<sup>44</sup>

Equation (3) does not yet describe any persistence. It can be solved by introducing the new variable  $u = (g - 1/2)$ , for which  $\dot{u} = \dot{g}$ , and the following equation holds:

$$(4) \quad \dot{u} = -\alpha u$$

The solution to the above equation is in the form:

$$(5) \quad u(t) = u(0)e^{-\alpha t}$$

which can be rewritten in terms of  $g$  as follows:

$$(6) \quad g(t) = \frac{1}{2} + \left( g(0) - \frac{1}{2} \right) e^{-\alpha t}$$

Figure IV shows the evolution of  $g(t)$  for  $\alpha = 0.02$  and  $g(0) = 0.9$ . In general, for  $t \rightarrow \infty$ , the resulting evolution brings the composition of civil servants to the average value of the general population, as one would expect. This is a general result.

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44. On a more technical note, we point out that the equation for  $b = (1 - g)$  is symmetrical to the one for  $g$ , that is:  $\dot{b} = -\alpha \left( b - \frac{1}{2} \right) = -\alpha \left( 1 - g - \frac{1}{2} \right) = \alpha \left( g - \frac{1}{2} \right) = -\dot{g}$ . The symmetry must be the case, as we assumed that  $(g + b) = 1$ . As a result,  $(\dot{g} + \dot{b}) = 0$ , such that  $\dot{g} = -\dot{b}$ .

We now need to introduce an “enculturation” term to model the long-term persistence of an administrative tradition. A very general form can be  $\beta(g - 1/2)^k$ , where the power-law dependence with exponent  $k > 1$  is meant to model network effects among civil servants: in general, the value of having the trait  $T = 1$  depends on how many other persons in the local institution also have  $T = 1$ . For instance, the incentive for the individual civil servant to be efficient is much higher if most of her colleagues are efficient and hold her to the same standards as they hold themselves. A seemingly natural choice for  $k$  would be  $k = 2$ . However, if the “enculturation” term were quadratic, the property of symmetry for  $b$  and  $g$  would not hold; indeed, our model would introduce a preference in either direction, depending on the sign of  $\beta$ . The simplest polynomial term that does not have this shortcoming is in cubic form. Thus, we can rewrite equation (3) augmented with the “enculturation” term as follows:

$$(7) \quad \dot{g} = -\alpha \left( g - \frac{1}{2} \right) + \beta \left( g - \frac{1}{2} \right)^3$$

In equation (7), it is ensured that persistence of the “good” trait will be as likely as persistence of the “bad” trait depending only on initial conditions. By setting  $u = (g - 1/2)$ , then equation (7) can be rewritten as follows:

$$(8) \quad \dot{u} = -\alpha u + \beta u^3$$

where  $\beta$  has dimensions of one over time (i.e., it is measured in  $year^{-1}$ ), similar to  $\alpha$ . It is the reciprocal of the “enculturation” time scale (i.e.,  $1/\beta$ ) that captures how long it takes for the typical worker to absorb the values of the majority within the workplace.

Let us now consider the steady state of equation (8). By setting  $\dot{u} = 0$ , we obtain the following:

$$(9) \quad u(\alpha - \beta u^2) = 0$$

which has three possible solutions:  $u = 0$  and  $u_{1,2} = \pm\sqrt{\alpha/\beta}$ . If we require these solutions to be real, then we get the condition  $\alpha/\beta > 0$ , which, having taken  $\alpha > 0$ , corresponds to require  $\beta > 0$ . The latter result corresponds to “enculturation” being towards the majority group of civil servants, that is, “good” civil servants lead to “good” civil servants, and “bad” civil servants lead to “bad” civil servants. If this is not the case, then we get a sort of “anti-enculturation” mechanism. Whereas anti-conformist behavior may certainly exist, we assume that it is not prevalent among civil servants, such that we do not discuss this case.

An important condition we impose on the above possible solutions to equation (9) is that  $u \in [-1/2, 1/2]$ , which is equivalent to requiring  $g$  to be positive and less than one. This restriction leads to the following two cases depending on the values of the relevant coefficients of equation (8): either  $\sqrt{\alpha/\beta} \leq 1/2$  or  $\sqrt{\alpha/\beta} > 1/2$ . We name these two cases as “strong enculturation” and “weak enculturation,” respectively. We start by discussing them from the latter.

1. *Weak Enculturation Scenario.* The “weak enculturation” scenario emerges when  $\sqrt{\alpha/\beta} > 1/2$ . Given that  $\alpha > 0$  and  $\beta > 0$ , as discussed previously, it follows that  $\alpha/\beta > 1/4$ , such that  $1/\beta > 1/(4\alpha)$ . In other words, the typical time it takes to absorb administrative values (i.e.,  $1/\beta$ ) is longer than  $1/4$  of the typical time it takes to retire a civil servant: the older employees retire too fast before being able to “teach” the new ones how to be “good” (or “bad”) civil servants. As a result,  $(\beta/4 - \alpha) < 0$  and  $(\beta u^2 - \alpha) < 0$ , as  $u^2 \leq 1/4$  since  $u \in [-1/2, 1/2]$ . Therefore, by rewriting equation (8) as follows:

$$(10) \quad \dot{u} = u(\beta u^2 - \alpha)$$

we can notice that the right-hand side has the opposite sign of  $\dot{u}$ , such that  $\dot{u}$  is negative if  $u$  is positive, and vice versa. This leaves only  $u = 0$  (i.e.,  $g = 1/2$ ) as a stable equilibrium. It follows that “weak enculturation” does not bring about persistence: eventually, civil servants become distributed similarly to the parent population.

2. *Strong Enculturation Scenario.* The “strong enculturation” scenario emerges if  $\sqrt{\alpha/\beta} \leq 1/2$ . In this case, there are two symmetric points  $u_{1,2} = \pm\sqrt{\alpha/\beta}$  within the interval  $[-1/2, 1/2]$  which are steady-state solutions. In this scenario, “enculturation” is fast enough to induce persistence. The solution  $u = 0$  is still the only stable one since the term  $(\beta u^2 - \alpha)$  is negative around 0, and  $\dot{u}$  becomes proportional to  $-u$ . However, near those two points,  $\dot{u}$  has the same sign as  $u_{1,2}$ , making them unstable. This is more easily seen graphically in Figure V: the green curve corresponds to  $\dot{u}(u)$  in the “strong enculturation” case (with  $\alpha = \beta/8$ ), whereas the red curve corresponds to the “weak enculturation” case (with  $\alpha = \beta/3$ ). In the case of “strong enculturation,” and with initial conditions such that  $|u(0)| > \sqrt{\alpha/\beta}$ ,  $u$  would increase or decrease forever. In practice, it will have to stop either at  $u = 1/2$  or at  $u = -1/2$  due to the restriction imposed on  $u$  (i.e.,  $u \in [-1/2, 1/2]$ ). It follows that either all civil servants become “good” (efficient) or all become “bad” (inefficient).

This could seem counterintuitive if we think that a small number of counter-aligned civil servants should exist at any given time, because those who retired were substituted by newly hired ones picked from the general population. However, this is not an inconsistency of the model. Indeed, in continuous time, an infinitesimal number of civil servants retire at any given time, and individuals hired to replace them within the local institution are immediately enculturated.<sup>45</sup>

Our simple model suggests that under “weak enculturation” we would inevitably converge to  $u = 0$  (i.e., with civil servants’ values representing the general population). Under “strong

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45. It is true that firing several civil servants suddenly *en masse* would result in a fluctuation that would take time to evolve back to stability; however, this is not a scenario we model here.

enculturation,” instead, we may converge to either of three situations, namely: (i) all civil servants are “good;” (ii) all civil servants are “bad;” or (iii) civil servants represent the general population. Crucially, an infinitesimal difference in the initial condition  $u(0)$  can determine whether we fall into the all-“good” equilibrium, the all-“bad” equilibrium, or the representing-the-general population equilibrium.

If we interpret our empirical findings through the lens of this model, the municipalities along both sides of the Treaty of Aix-la-Chapelle frontier were clearly exposed to different administrative traditions, effectively changing the efficient/inefficient bureaucrat ratio within local institutions. If the “enculturation process” within local institutions had been weak (i.e., the employee turnover had been fast enough to prevent learning at the workplace), we would not possibly observe discontinuity in administrative efficiency today. However, it is more likely that the “enculturation process” within Italian bureaucracy has been following the “strong enculturation” scenario. There is ample evidence of life-long tenure and little geographical mobility of a typical Italian local bureaucrat, as well as her immunity to political turmoil (Cole 1953). It is less clear how learning at the workplace happens within Italian local institutions, but it is reasonable to assume that conformism to existing administrative practices prevails. Under such conditions, differences in the administrative traditions under the Habsburgs and Savoy House could well have perpetuated until current times.

### *VII.B. Ruling Out External-to-the-Institution Transmission Mechanisms*

Similar to local institutions, the populations of these municipalities may also have been affected by different institutional arrangements associated with the administrative reforms implemented by the Habsburgs and the Savoy House. In turn, differences in the populations’ attitudes towards local institutions—and their efficiency in, for example, providing public goods and services—may affect the present-day characteristics of the latter. Perhaps, the most obvious mechanisms for this are people’s civic capital and referendum voting preferences, and the political



orientation of the elected municipal government. Indeed, differences in civic capital—as the set of norms and values affecting individuals’ behavior in society (Guiso, Sapienza, and Zingales 2011)—, referendum voting preferences, and the political orientation of the elected municipal government may reflect differences in past administrative traditions if such administrative traditions have shaped the attitude of the local populations towards the management of the public good.

We empirically assess whether differences at the 1748 frontier exist with respect to these three dimensions to rule out such potential mechanisms, which are external to the local institution but internal to the local population (Alesina and Giuliano 2015). We can thus reasonably interpret the absence of statistically significant differences in civic capital, referendum voting preferences and the political orientation of the elected municipal government between Habsburg- and Savoy House-ruled municipalities as evidence supporting our within-institution “bureaucracy enculturation” mechanism.

To this aim, we collect municipality-level data on volunteering activity, referendum voter turnout, referendum voting preferences, and the political orientation of the elected municipal government. We consider two alternative measures to proxy for civic capital. First, the per-inhabitant number of unpaid voluntary workers in non-profit organizations in 2011 (log-transformed), with data drawn from the Census of Non-Profit Institutions (ISTAT). The rationale for this variable rests on the idea that the absence of economic payoffs in doing unpaid voluntary work “can be seen as a direct measure of how much people internalize the common good” (Guiso, Sapienza, and Zingales 2011, p. 453).<sup>46</sup> Second, we proxy civic capital with referendum voter turnout (Putnam 1993), as it captures “the extent to which people in a community are willing to pay a personal cost to enhance the common good” without receiving any “direct economic payoff to voting” (Guiso, Sapienza, and Zingales 2011, p. 453). We consider the Italian referendum held in June 2011 and collect data from the Italian Ministry of the Interior. This referendum included

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46. Similar proxy variables for civic capital that have been used in the literature are based on organ or blood donation (Guiso, Sapienza, and Zingales 2004, 2016).

four questions, three of which were strictly related to (local) public goods and services, namely the entrusting and management of local public services with economic relevance (question #1), the determination of the integrated water service tariff based on an adequate return on invested capital (question #2), and the production of nuclear electric power on the national territory (question #3).<sup>47</sup> We thus consider voter turnout both with respect to the three questions separately and by averaging them. We rely on the same three questions of the referendum held in June 2011 to capture referendum voting preferences: namely, the share of “yes” votes, the share of “no” votes, and the share of blank votes with respect to each question separately and then by averaging them. Finally, we consider the political orientation of the elected municipal governments. A peculiarity of Italy is that most municipalities are ruled by a mayor representing a *Lista Civica*, i.e., an electoral list which is not a direct expression of a political party, rather than by a mayor representing “traditional” (left- or right-wing) political parties.<sup>48</sup> We rely on the *Anagrafe degli Amministratori Locali e Regionali* database maintained by the Italian Ministry of the Interior, which provides information on the elected municipal governments. Given that our dependent variables for current administrative efficiency refer to the year 2013, we consider only municipal governments whose mayors were in office during the period between January 1, 2013 and December 31, 2013.<sup>49</sup> We classify a municipality as ruled by a mayor representing either a *Lista Civica*, a left-wing party (or coalition), or a right-wing party (or coalition).<sup>50</sup> From the same source, we also collect information on the age, sex, and education level of municipalities’ incumbent mayors.

We thus estimate equation (1) by considering this set of alternative dependent variables for civic capital, referendum voting preferences, and the political orientation of the elected municipal

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47. We do not consider question #4 on the legal impediment of the Prime Minister and the Ministers due to its political nature of national interest.

48. The Garzanti Italian Dictionary defines a *Lista Civica* as “an electoral list presented at local elections, independent of traditional parties, with a program that aims to address and solve local problems” (our translation), while the De Mauro Italian Dictionary defines it as an electoral list “in which candidates are not linked to political parties, but are united by particular category interests” (our translation).

49. This selection criterion restricts the whole estimation sample to 1,955 municipalities, and the 30 km bandwidth estimation sample to 609 municipalities.

50. A candidate mayor representing a *Lista Civica* could also be supported by left- or right-wing parties. In this case, we classify a municipal government as either left- or right-wing.

government. As shown in Tables XI, XII and XIII, we do not find evidence of a statistically significant discontinuity at the 1748 frontier with respect to the measures of civic capital, referendum voting preferences, and the political orientation of the elected municipal government considered here.<sup>51</sup>

Although this evidence does not rule out subtler differences that may have an important cumulative effect, we interpret this result through the lens of our theoretical model that allows for the establishment of a persistent difference in any relevant characteristic of local institutions—in our case, differences related to an administrative tradition—without the need for a similar persistent difference in the characteristics—such as cultural values—of the underlying local populations (Alesina and Giuliano 2015). This is due to the fact that in the proximity of the unstable stationary points that fall within the admissible parameter range, as in the case of “strong enculturation,” the evolution towards either of the equilibria can be affected by arbitrarily small differences in the initial conditions. Thus, even in the presence of local populations that are identical throughout, a relatively “small” exogenous shock to a local institution with a relatively high internal “enculturation level” and low employee turnover can nudge the institution’s evolution towards a diverging direction, and the resulting difference can later be maintained indefinitely.

## VIII. CONCLUSIONS

In this paper, we have exploited the Enlightenment-inspired administrative reform introduced by the Habsburg Monarchy in 1755 as a natural experiment to analyze current administrative efficiency differentials in Northern Italy between the municipalities that belonged to the Habsburg-ruled Duchy of Milan and the neighboring ones ruled by the Savoy House in the second half of the

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51. We replicate our baseline RD analysis (see column (5) in Table II) by: (i) controlling for civic capital and referendum voting preferences (see Online Appendix Table A34); (ii) considering the reduced estimation sample for which we have 2013 municipal government data (see Online Appendix Table A35); (iii) controlling for the political orientation of the elected municipal government and the mayor’s characteristics (see Online Appendix Table A36); and (iv) controlling for civic capital, referendum voting preferences, the political orientation of the elected municipal government, and the mayor’s characteristics (see Online Appendix Table A37). These analyses fully corroborate our main findings.

18<sup>th</sup> century. We have found clear evidence of a persistent positive effect of the Habsburg reform on current administrative efficiency, especially in terms of public goods and services provision.

We have supported these findings in different ways. First, we have examined the second half of the 18<sup>th</sup> century and provided more suggestive evidence on the role of public culture in the Enlightenment age as a moderating force in the long-run relationship between the Habsburg administrative reform and current administrative efficiency. Second, we have exploited information on municipalities' expenses for public goods provision in the mid-1880s, showing that differences in public goods and services provision can be traced back to 1884 municipal budget data. Finally, we have considered the case of nurseries as an example of municipality-provided public good and assessed differences in authorized nursery places in 2013 between Habsburg- and Savoy House-ruled municipalities. All this evidence confirms our main hypothesis drawn from the history of Enlightenment reformism in the 18<sup>th</sup> century: municipalities exposed to the Habsburg administrative reform tend to provide more public goods and services to their citizens while spending as much as the neighboring municipalities that were ruled by the Savoy House. Finally, we have attempted to identify the underlying mechanisms of these phenomena by developing a simple model of persistence of an administrative tradition driven by a within-institution "bureaucracy enculturation" mechanism.

This line of research does not seem to leave "room for policy" (Nunn 2020, p. 5). If current economic, political, and institutional outcomes are conditioned by historical events, then what role can be assigned to current economic policies? In other words, is it possible to use history to inform policy?

The findings of this paper seem to suggest that some useful policy indications can be drawn from this type of historical analysis. First, the current reforms should account for the administrative traditions of a country. In fact, these traditions can "block, delay or filter the reform proposals of political and administrative reformers" (Meyer-Sahling and Yesilkagit 2011, p. 311). Second, as learning occurs within institutions, temporary rotation of bureaucrats among nearby municipalities

with diverging administrative traditions could be a cost-effective way of disseminating administrative values, norms, and practices. Of course, the timescale of “bureaucracy enculturation” would matter for the rotation to have an effect. Finally, the empirical findings and mechanisms we have discussed in this paper could explain existing internal administrative efficiency heterogeneity. In this sense, “differentiated” public policies and reforms should account for this heterogeneity, which, in turn, depends on historical events and institutional choices made in the past. In other words, and more generally, our history, including its institutional and administrative aspects, conditions our current lives.

DEPARTMENT OF ECONOMICS AND MANAGENENT “MARCO FANNO,” UNIVERSITY  
OF PADOVA, ITALY

DEPARTMENT OF GEOGRAHY AND ENVIRONMENT, LONDON SCHOOL OF  
ECONOMICS AND POLITICAL SCIENCE, UNITED KINGDOM

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TABLE I

## MEAN DIFFERENCE IN HISTORICAL (PRE-1748) VARIABLES ACROSS THE FRONTIER

Dependent Variable	Bishop	Commune	Market	Large City	Distance to Closest Roman Road
Bandwidth			90 km		
	(1)	(2)	(3)	(4)	(5)
Habsburgs	-0.007 (0.004)	-0.003 (0.004)	-0.002 (0.005)	-0.000 (0.004)	-0.516*** (0.200)
R <sup>2</sup>	0.00	0.00	0.00	0.00	0.07
No. Municipalities	1,587	1,587	1,587	1,587	1,587
No. Treated Municipalities	748	748	748	748	748
No. Control Municipalities	839	839	839	839	839
Bandwidth			60 km		
	(6)	(7)	(8)	(9)	(10)
Habsburgs	-0.007 (0.006)	-0.005 (0.006)	-0.007 (0.006)	0.000 (0.005)	-0.740*** (0.263)
R <sup>2</sup>	0.00	0.00	0.00	0.00	0.13
No. Municipalities	1,239	1,239	1,239	1,239	1,239
No. Treated Municipalities	687	687	687	687	687
No. Control Municipalities	552	552	552	552	552
Bandwidth			30 km		
	(11)	(12)	(13)	(14)	(15)
Habsburgs	-0.002 (0.006)	-0.003 (0.008)	0.005 (0.007)	0.005 (0.005)	-0.558 (0.342)
R <sup>2</sup>	0.00	0.00	0.00	0.00	0.07
No. Municipalities	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. All dependent variables are binary, except for the variable capturing the log-distance to the closest ancient Roman road. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE II  
BASELINE RD SPECIFICATION

Dependent Variable	Administrative Efficiency				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.249*** (0.087)	0.248*** (0.085)	0.204**** (0.056)	0.261*** (0.085)	0.250**** (0.067)
R <sup>2</sup>	0.22	0.22	0.22	0.27	0.28
Dependent Variable	Administrative Efficiency – Expenditure				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	-0.109 (0.101)	-0.099 (0.094)	-0.087 (0.121)	-0.104 (0.091)	-0.022 (0.096)
R <sup>2</sup>	0.05	0.05	0.07	0.12	0.14
Dependent Variable	Administrative Efficiency – Services				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.616**** (0.164)	0.600**** (0.168)	0.525**** (0.114)	0.617**** (0.173)	0.546**** (0.135)
R <sup>2</sup>	0.30	0.30	0.32	0.32	0.35
Historical Controls	No	Yes	No	No	Yes
Geographical Controls	No	No	Yes	No	Yes
Demographic and Economic Controls	No	No	No	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE III

## LOCAL AUTONOMY BEYOND THE 1755 HABSBURG GENERAL ADMINISTRATIVE SYSTEM

Estimation Strategy	OLS						Spatial RD		
Sample	Whole Sample			Whole Sample Excluding Duchy of Mantua			30 km Bandwidth Sample		
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Savoy House Habsburgs	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
General Administrative System	0.276**** (0.045)	-0.047 (0.070)	0.596**** (0.069)	0.274**** (0.045)	-0.043 (0.070)	0.592**** (0.070)	0.244 (0.075)*** [0.067]****	-0.026 (0.113) [0.096]	0.538 (0.129)**** [0.138]****
Special Status	0.394**** (0.075)	0.114 (0.129)	0.694**** (0.117)	0.397**** (0.075)	0.132 (0.129)	0.692**** (0.118)	0.428 (0.105)**** [0.048]****	-0.081 (0.199) [0.135]	0.863 (0.147)**** [0.123]****
R <sup>2</sup>	0.17	0.15	0.21	0.17	0.15	0.20	0.28	0.14	0.35
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	2,093	2,093	2,093	2,013	2,013	2,013	657	657	657
No. Treated Municipalities	803	803	803	723	723	723	371	371	371
General Administrative System	770	770	770	690	690	690	361	361	361
Special Status	33	33	33	33	33	33	10	10	10
No. Control Municipalities	1,290	1,290	1,290	1,290	1,290	1,290	286	286	286

Notes. OLS estimation: standard errors clustered at the municipality level in parentheses. Spatial RD estimation: standard errors clustered at the municipality level in parentheses; standard errors corrected for spatial dependence in brackets with distance cut-off set at 60 km; one-dimensional RD polynomial specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE IV

## ADMINISTRATIVE HETEROGENEITY WITHIN THE HABSBURG-RULED DUCHY OF MILAN

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mantuan Municipalities (Habsburgs)	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	...	...	...
Milanese Municipalities (Habsburgs)									
All Municipalities	0.064 (0.062)	0.099 (0.128)	0.048 (0.088)	...	...	...	...	...	...
General Administrative System	...	...	...	0.059 (0.063)	0.097 (0.131)	0.040 (0.090)	Ref.	Ref.	Ref.
Special Status	...	...	...	0.107 (0.083)	0.115 (0.157)	0.106 (0.123)	0.060 (0.069)	0.049 (0.128)	0.076 (0.109)
R <sup>2</sup>	0.13	0.15	0.21	0.13	0.15	0.21	0.12	0.14	0.18
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Dominant State in 1700 FE	No	No	No	No	No	No	No	No	No
No. Municipalities	803	803	803	803	803	803	723	723	723
No. Mantuan Municipalities	80	80	80	80	80	80	...	...	...
No. Milanese Municipalities	723	723	723	723	723	723	723	723	723
General Administrative System	...	...	...	690	690	690	690	690	690
Special Status	...	...	...	33	33	33	33	33	33

*Notes.* Standard errors (in parentheses) are clustered at the municipality level. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE V

ADMINISTRATIVE HETEROGENEITY OF HABSBURG-RULED MUNICIPALITIES  
BEFORE THE 1755 REFORM

Dependent Variable	Administrative Efficiency (1)	Administrative Efficiency – Expenditure (2)	Administrative Efficiency – Services (3)
Savoy House Habsburgs	Ref.	Ref.	Ref.
Absence of Council or Assembly	0.289 (0.091)*** [0.066]****	0.001 (0.138) [0.106]	0.641 (0.147)**** [0.119]****
Presence of Council or Assembly	0.223 (0.079)*** [0.083]***	-0.025 (0.121) [0.108]	0.479 (0.135)**** [0.156]***
R <sup>2</sup>	0.29	0.13	0.36
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	624	624	624
No. Treated Municipalities	338	338	338
Absence of Council or Assembly	121	121	121
Presence of Council or Assembly	217	217	217
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE VI

## FEUDALISM AS A CONSTRAINT ON THE EFFECT OF THE HABSBURG REFORM

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Savoy House Habsburgs	Ref.	Ref.	Ref.
Free from a Feudal Lord	0.282 (0.125)** [0.107]***	-0.055 (0.151) [0.091]	0.659 (0.199)**** [0.178]****
Subject to a Feudal Lord	0.215 (0.078)*** [0.066]***	-0.026 (0.119) [0.103]	0.470 (0.134)**** [0.142]****
R <sup>2</sup>	0.29	0.13	0.36
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	625	625	625
No. Treated Municipalities	339	339	339
Free from a Feudal Lord	77	77	77
Subject to a Feudal Lord	262	262	262
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$ ; \*\*\*\*  $p < .001$ .

TABLE VII

FEUDALISM AS A CONSTRAINT ON THE EFFECT OF THE HABSBURG REFORM IN  
CURRENT LOMBARDY MUNICIPALITIES

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.612 (0.286)** [0.166]****	-0.143 (0.368) [0.141]	1.443 (0.423)**** [0.254]****
Subject to a Feudal Lord	0.475 (0.234)** [0.123]****	-0.153 (0.329) [0.118]	1.216 (0.343)**** [0.278]****
Habsburgs × Subject to a Feudal Lord	-0.576 (0.305)* [0.187]****	0.167 (0.404) [0.181]	-1.433 (0.454)*** [0.331]****
$R^2$	0.33	0.19	0.44
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	No	No	No
NUTS-3 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	258	258	258
No. Treated Municipalities	144	144	144
Free from a Feudal Lord	46	46	46
Subject to a Feudal Lord	98	98	98
No. Control Municipalities	114	114	114
Free from a Feudal Lord	12	12	12
Subject to a Feudal Lord	102	102	102

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. NUTS-2 region FEs are replaced by NUTS-3 region FEs. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE VIII

THE ROLE OF PUBLIC CULTURE IN THE 18<sup>TH</sup> CENTURY

Estimation Strategy	OLS		
Sample	Whole Sample		
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.280**** (0.045)	-0.041 (0.070)	0.599**** (0.069)
Public Libraries Opened in 1748-1796	-0.189 (0.140)	0.321 (0.217)	-0.473** (0.210)
Habsburgs × Public Libraries Opened in 1748-1796	0.496* (0.264)	0.357 (0.372)	0.791** (0.315)
Private Culture in 1748-1796	-0.144 (0.125)	-0.227 (0.309)	-0.145 (0.174)
Libraries Exiting in 1748	-0.095 (0.118)	-0.208 (0.209)	0.057 (0.138)
R <sup>2</sup>	0.17	0.15	0.21
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	2,093	2,093	2,093
No. Treated Municipalities	803	803	803
No. Control Municipalities	1,290	1,290	1,290

*Notes.* Standard errors clustered at the municipality level in parentheses. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE IX

## PUBLIC GOODS PROVISION IN THE ITALIAN POST-UNIFICATION PERIOD

Dependent Variable	Share Discretionary Expenses in 1884		log(Discretionary Expenses in Education Per Capita in 1884)		log(Discretionary Expenses in Infrastructures Per Capita in 1884)	
	OLS	Spatial RD	OLS	Spatial RD	OLS	Spatial RD
Estimation Strategy	OLS	Spatial RD	OLS	Spatial RD	OLS	Spatial RD
Sample	Whole Sample	30 km Bandwidth Sample	Whole Sample	30 km Bandwidth Sample	Whole Sample	30 km Bandwidth Sample
	(1)	(2)	(3)	(4)	(5)	(6)
Habsburgs	0.038** (0.018)	0.037** (0.016)	0.675* (0.390)	0.599** (0.268)	-0.572 (0.392)	-0.038 (0.485)
log(Revenues Per Capita in 1884)	0.017*** (0.006)	0.032*** (0.011)	1.396*** (0.191)	1.344*** (0.204)	1.136*** (0.220)	1.781*** (0.248)
log(Population Density in 1881)	0.016*** (0.005)	0.016 (0.012)	1.261*** (0.130)	0.729*** (0.207)	0.860*** (0.163)	0.828** (0.305)
Share Expenses in Education in 1884	...	...	2.869*** (1.059)	1.360 (1.603)	2.236** (0.960)	4.011*** (1.380)
Share Expenses in Infrastructures in 1884	...	...	-0.261 (0.590)	0.449 (0.661)	4.353*** (0.691)	5.938*** (1.353)
R <sup>2</sup>	0.26	0.26	0.28	0.27	0.16	0.23
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-3 Region in 1881 FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	1,987	606	1,987	606	1,987	606
No. Treated Municipalities	743	337	743	337	743	337
No. Control Municipalities	1,244	269	1,244	269	1,244	269

*Notes.* Standard errors (in parentheses) are clustered at the municipality level in OLS estimates. Standard errors (in parentheses) are corrected for spatial dependence in spatial RD estimates: the distance cut-off is set at 60 km. The set of geographical controls includes the distance to the own NUTS-3 region capital city in 1881. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE X

## PUBLIC GOODS PROVISION: THE CASE OF NURSERIES

Dependent Variable	log(Authorized Nursery Places per 100 Children Aged 0–2 Years in 2013)			
Nursery Type	Standard Nursery		Standard Nursery and Spring Section	
Estimation Strategy	OLS	Spatial RD	OLS	Spatial RD
Sample	Whole Sample	30 km Bandwidth Sample	Whole Sample	30 km Bandwidth Sample
	(1)	(2)	(3)	(4)
Habsburgs	2.268****	2.429****	2.238****	2.397****
	(0.550)	(0.563)	(0.562)	(0.612)
R <sup>2</sup>	0.47	0.50	0.47	0.50
Historical Controls	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes
No. Municipalities	2,082	656	2,082	656
No. Treated Municipalities	803	371	803	371
No. Control Municipalities	1,279	285	1,279	285

*Notes.* Standard errors (in parentheses) are clustered at the municipality level in OLS estimates. Standard errors (in parentheses) are corrected for spatial dependence in spatial RD estimates: the distance cut-off is set at 60 km. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE XI

## BASELINE RD SPECIFICATION ON CIVIC CAPITAL

Dependent Variable	log(Volunteering)	Voter Turnout			
		Question #1	Question #2	Question #3	Average
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.324 (0.348) [0.217]	-0.008 (0.010) [0.010]	-0.008 (0.010) [0.010]	-0.008 (0.010) [0.010]	-0.008 (0.010) [0.010]
R <sup>2</sup>	0.19	0.23	0.23	0.23	0.23
Historical Controls	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables for voter turnout refer to the referendum held in June 2011: question #1 concerns the entrusting and management of local public services with economic relevance; question #2 concerns the determination of the integrated water service tariff based on an adequate return on invested capital; question #3 concerns the production of nuclear electric power on the national territory. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE XII

## BASELINE RD SPECIFICATION ON REFERENDUM VOTING PREFERENCES

Dependent Variable	Share of “Yes” Votes			
	Question #1	Question #2	Question #3	Average
	(1)	(2)	(3)	(4)
Habsburgs	0.004 (0.004) [0.004]	0.003 (0.004) [0.003]	0.003 (0.004) [0.003]	0.003 (0.004) [0.003]
R <sup>2</sup>	0.28	0.28	0.14	0.26
Dependent Variable	Share of “No” Votes			
	Question #1	Question #2	Question #3	Average
	(1)	(2)	(3)	(4)
Habsburgs	-0.002 (0.004) [0.003]	-0.002 (0.003) [0.003]	-0.002 (0.004) [0.003]	-0.002 (0.003) [0.003]
R <sup>2</sup>	0.19	0.17	0.10	0.17
Dependent Variable	Share of Blank Votes			
	Question #1	Question #2	Question #3	Average
	(1)	(2)	(3)	(4)
Habsburgs	-0.002 (0.002) [0.001]	-0.001 (0.001) [0.001]	-0.000 (0.001) [0.001]	-0.001 (0.001) [0.001]
R <sup>2</sup>	0.33	0.33	0.27	0.35
Historical Controls	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	657
No. Treated Municipalities	371	371	371	371
No. Control Municipalities	286	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables capturing the share of “yes,” “no,” and blank votes refer to the referendum held in June 2011: question #1 concerns the entrusting and management of local public services with economic relevance; question #2 concerns the determination of the integrated water service tariff based on an adequate return on invested capital; question #3 concerns the production of nuclear electric power on the national territory. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE XIII

## BASELINE RD SPECIFICATION ON MUNICIPAL GOVERNMENT

Dependent Variable	Elected Municipal Government					
	<i>Lista Civica</i>		Left-Wing Party		Right-Wing Party	
	(1)	(2)	(3)	(4)	(5)	(6)
Habsburgs	-0.042 (0.065) [0.035]	-0.055 (0.065) [0.034]	0.009 (0.031) [0.021]	0.011 (0.032) [0.021]	0.034 (0.063) [0.029]	0.044 (0.063) [0.029]
R <sup>2</sup>	0.39	0.41	0.34	0.35	0.23	0.25
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
Mayor's Characteristics	No	Yes	No	Yes	No	Yes
No. Municipalities	609	609	609	609	609	609
No. Treated Municipalities	344	344	344	344	344	344
No. Control Municipalities	265	265	265	265	265	265

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence in brackets: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. All dependent variables are binary, and capture the political orientation of the municipal government ruling in the period from January 1, 2013 to December 31, 2013. The set of control variables for mayor's characteristics includes: age (log-transformed); sex (male or female); and education level (categorical variable for no education title, primary education, lower secondary education, upper secondary education, and tertiary education). All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

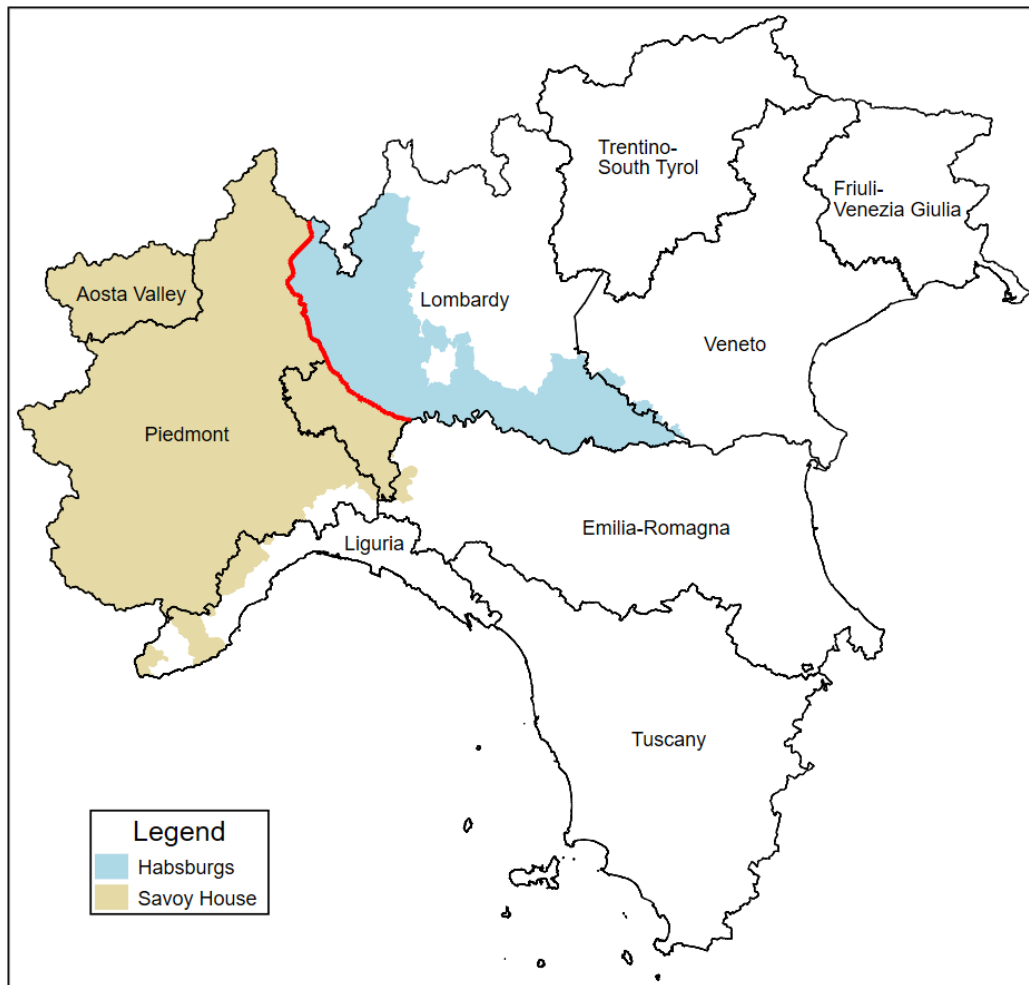


FIGURE I

Study Region

The light-blue area denotes the Duchy of Milan (Milanese and Mantuan territories) under Habsburg domination, while the light-khaki area denotes the territories ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

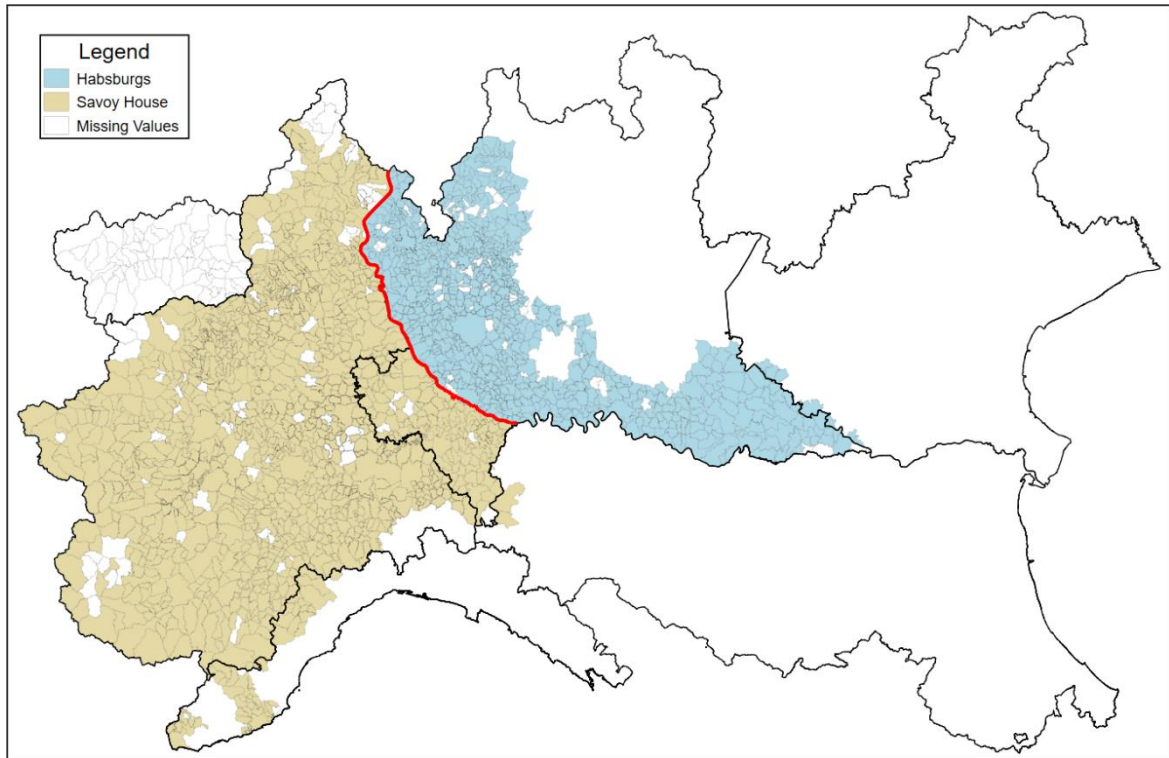


FIGURE II

### Municipalities in the Estimation Sample

The light-blue area denotes the Duchy of Milan (Milanese and Mantuan territories) under Habsburg domination, while the light-khaki area denotes the territories ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. White-colored municipalities are excluded from the estimation sample due to missing values in the dependent variables for current administrative efficiency. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

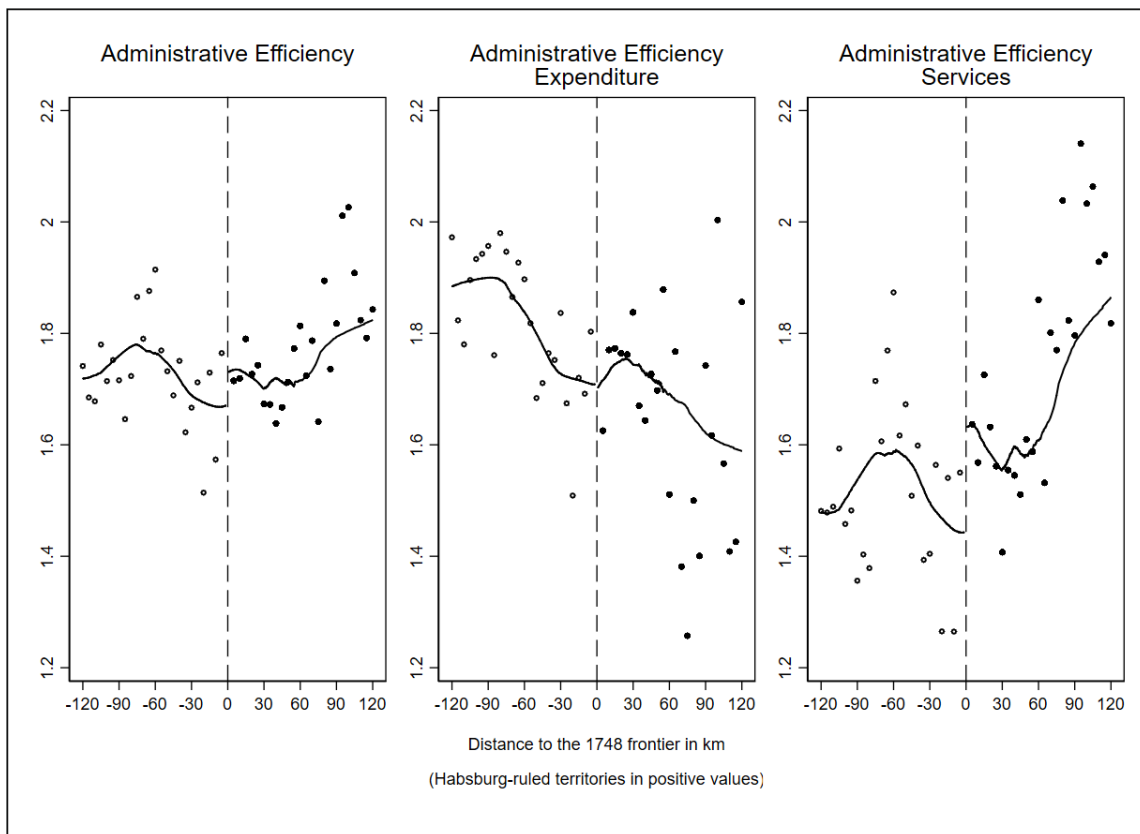


FIGURE III

### One-Dimensional RD Plots

Locally weighted regression. Dots show local averages of the dependent variables for municipalities in 5 km bins of their distance to the frontier. The dependent variables are log-transformed.

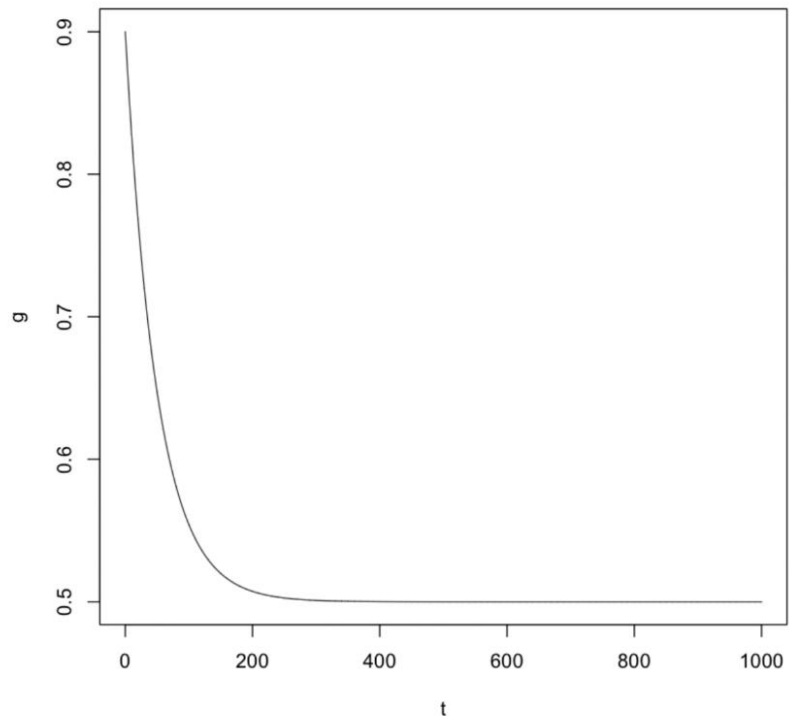


FIGURE IV

A Model Without Enculturation and Cultural Persistence

The plot displays the evolution of  $g(t)$  in equation (6) for  $\alpha = 0.02$  and  $g(0) = 0.9$ .

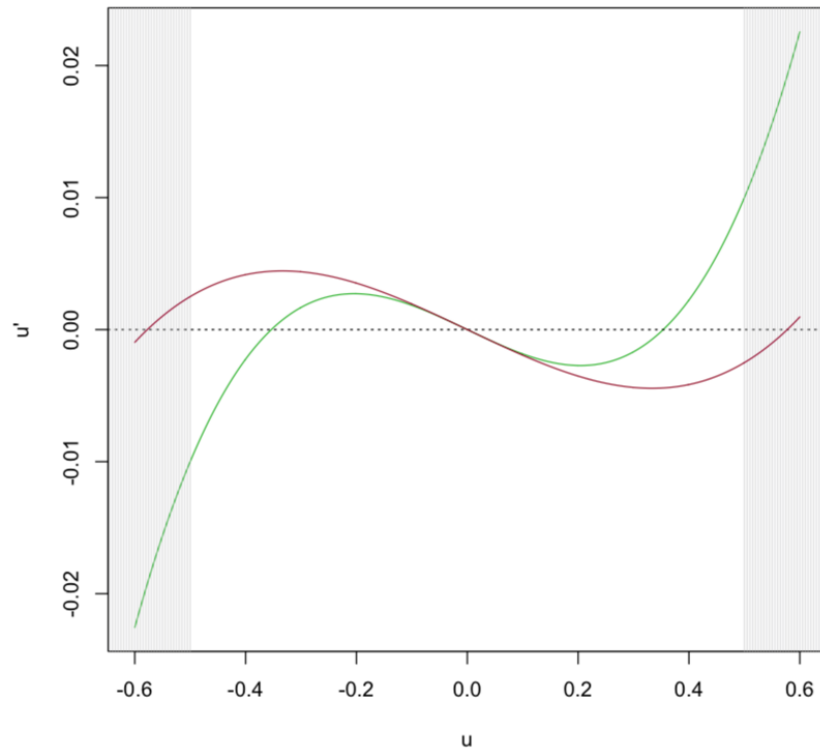


FIGURE V

### The Weak and Strong Enculturation Scenarios

The plot displays the weak (red curve) and strong (green curve) “enculturation” scenarios. The  $u$  parameter is plotted on the  $x$ -axis, while the time derivative of  $u$  (i.e.,  $u'$ ) is plotted on the  $y$ -axis.

**Online Appendix For**  
**ENLIGHTENMENT AND THE LONG-TERM PERSISTENCE OF**  
**THE HABSBURG ADMINISTRATIVE TRADITION**

GIULIO CAINELLI

*University of Padova*

ROBERTO GANAU

*University of Padova; LSE*

NADIJA MATSIUK

*University of Padova*

TABLE A1

MUNICIPALITIES IN THE STUDY REGION BY CURRENT NUTS-2 REGION AND  
DOMINANT STATE IN 1748

NUTS-2 Region	Dominant State in 1748		Total
	Habsburg Monarchy	Savoy House	
Aosta Valley	0	74	74
Emilia Romagna	0	3	3
Liguria	0	54	54
Lombardy	844	138	982
Piedmont	0	1,182	1,182
Veneto	7	0	7
<b>Total</b>	<b>851</b>	<b>1,451</b>	<b>2,302</b>



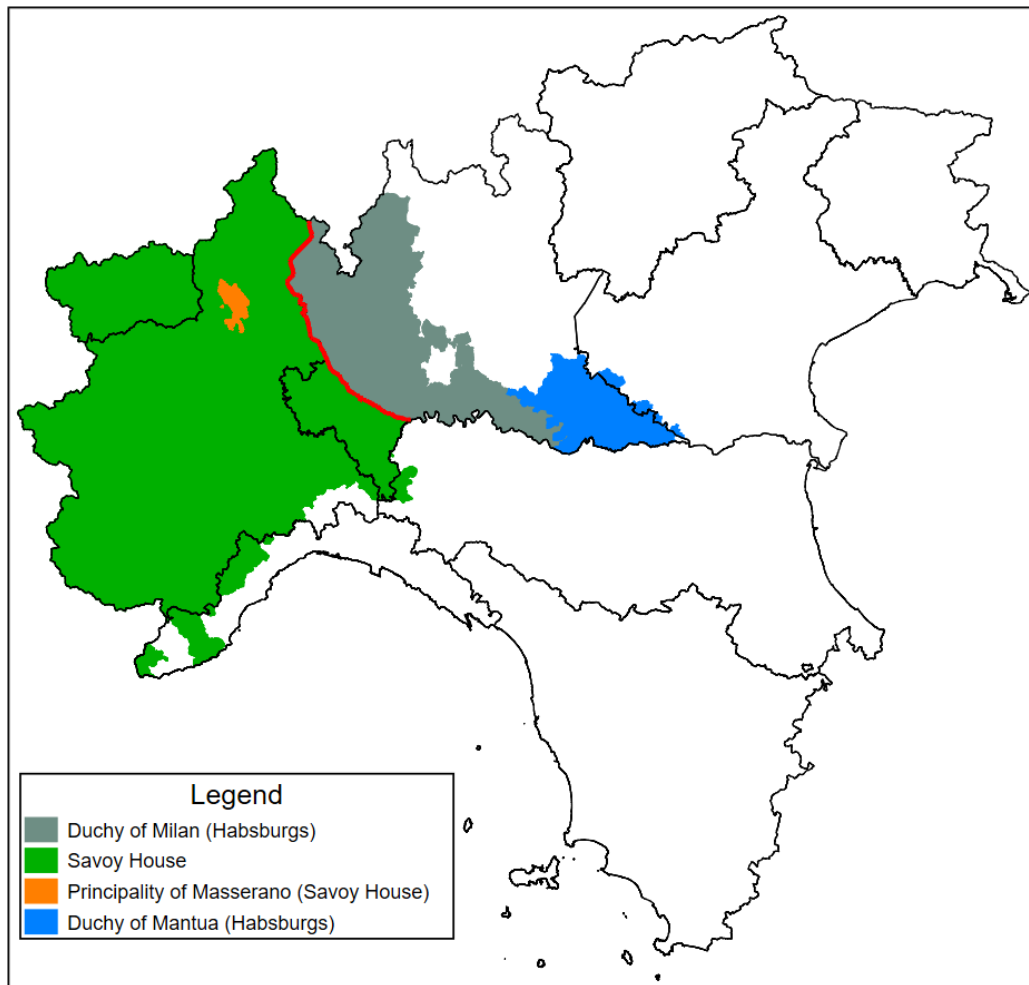


FIGURE A1

Study Region Highlighting the Principality of Masserano Under the Savoy House and the Milanese and Mantuan Territories Under Habsburg Domination

The teal area denotes the Milanese territories of the Duchy of Milan under Habsburg domination starting from the 1748 Treaty of Aix-la-Chapelle. The mid-blue area denotes the Mantuan territories of the Duchy of Milan under Habsburg domination starting from the 1748 Treaty of Aix-la-Chapelle. The green area denotes the territories ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The orange area denotes the Principality of Masserano ruled by the Savoy House. The territory of Masserano was elevated to the status of principality in 1598 by Pope Clemente VIII: indeed, it was a papal feud directly dependent on the Papal States. However, in 1741, Charles Emmanuel III of Savoy was nominated papal vicar of the Principality of Masserano by Pope Benedetto XIV, and the Principality felt under the control of the Savoy House. Later in 1753, the feud was formally ceded to Charles Emmanuel III. Finally, in 1767, the last Prince of Masserano, Vittorio Filippo, gave up all his remaining rights over the Principality. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

TABLE A2

MUNICIPALITIES IN THE ESTIMATION SAMPLE BY CURRENT NUTS-2 REGION AND  
DOMINANT STATE IN 1748

NUTS-2 Region	Dominant State in 1748		Total
	Habsburg Monarchy	Savoy House	
Emilia Romagna	0	3	3
Liguria	0	52	52
Lombardy	796	132	928
Piedmont	0	1,103	1,103
Veneto	7	0	7
Total	803	1,290	2,093

TABLE A3

MUNICIPALITIES IN THE ESTIMATION SAMPLE BY DOMINANT STATE IN 1700 AND  
DOMINANT STATE IN 1748

Dominant State in 1700	Dominant State in 1748		Total
	Habsburg Monarchy	Savoy House	
Duchy of Mantua	80	0	80
Duchy of Milan	723	390	1,113
Duchy of Montferrat	0	132	132
Duchy of Parma and Piacenza	0	6	6
<i>Gouvernement de Dauphiné</i>	0	16	16
Principality of Masserano	0	21	21
Principality of Piedmont	0	725	725
Total	803	1,290	2,093

TABLE A4

## DEFINITION OF VARIABLES AND DATA SOURCE

Variable	Definition	Source
<b>Dependent Variables</b>		
Administrative Efficiency – Expenditure (log)	Difference between actual expenditure and estimated standard expenditure needs, normalized in [1, 10]	SOSE
Administrative Efficiency – Services (log)	Difference between actual level of services provided and estimated standard level of services, normalized in [1, 10]	SOSE
Administrative Efficiency (log)	Weighted average of the expenditure (40%) and the services provision (60%) indexes of a municipality, normalized in [1, 10]	SOSE
<b>Historical Variables</b>		
Bishop (d)	Dummy variable equal to one if a municipality has been the seat of a bishop before year 1748	Elaboration on various sources <sup>(1)</sup>
Commune (d)	Dummy variable equal to one if a municipality has been a commune in the period 1000-1300	Elaboration on various sources <sup>(2)</sup>
Market (d)	Dummy variable equal to one if a municipality has been granted the right to hold a market before year 1748	Cantoni and Yuchtman (2014)
Large City (d)	Dummy variable equal to one if a municipality has recorded a population of at least 10,000 inhabitants in the period 1300-1700	Malanima (1998)
Distance to the Closest Roman Road (log)	Distance between the centroid of a municipality and the closest Roman road in kilometers	Elaboration on ISTAT <sup>(3)</sup> and McCormick et al. (2013)
Dominant State in 1700 (c)	Categorical variable for dominant State in year 1700	Elaboration on Euratlas and CHA <sup>(6)</sup>
<b>Geographical Variables</b>		
Altitude (log)	Elevation of a municipality from the sea level in meters	ISTAT <sup>(3)</sup>
Terrain Ruggedness (log)	Terrain ruggedness index	Elaboration on EEA <sup>(4)</sup>
Distance to Sea Coast (log)	Minimum distance to the nearest sea coast in kilometers	Elaboration on EEA <sup>(5)</sup>
Land Area (log)	Land area of a municipality in square kilometers	ISTAT <sup>(3)</sup>
Distance to Regional Capital City (log)	Distance between the centroids of a municipality and its own NUTS-2 region capital city in kilometers	Elaboration on ISTAT <sup>(3)</sup>
Provincial Capital City (d)	Dummy variable equal to one if a municipality is a NUTS-3 region capital city	Elaboration on ISTAT <sup>(3)</sup>
<b>Demographic and Economic Variables</b>		
Income Per Taxpayer (log)	Income per taxpayer in a municipality in year 2010	Elaboration on MEF
Population Density (log)	Population of a municipality per square kilometers in year 2011	Elaboration on ISTAT <sup>(3, 7)</sup>
Share Foreign Population (s)	Share of non-Italian population to total population in a municipality in year 2011	Elaboration on ISTAT <sup>(7)</sup>
Share Illiterate Population (s)	Share of illiterate population to total population in a municipality in year 2011	Elaboration on ISTAT <sup>(7)</sup>
Share Tertiary-Educated Population (s)	Share of population with tertiary education to total population in a municipality in year 2011	Elaboration on ISTAT <sup>(7)</sup>
Unemployment Rate (s)	Unemployment rate in a municipality in year 2011	ISTAT <sup>(7)</sup>
Share Manufacturing Employment (s)	Share of manufacturing sector employment to total employment in a municipality in year 2011	Elaboration on ISTAT <sup>(8)</sup>
Share Primary Employment (s)	Share of primary (agriculture, fishery, forestry, extraction) sector employment to total employment in a municipality in year 2011	Elaboration on ISTAT <sup>(8)</sup>
Share Services Employment (s)	Share of services sector employment to total employment in a municipality in year 2011	Elaboration on ISTAT <sup>(8)</sup>

*Notes.* (log) denotes a log-transformed variable. (d) denotes a binary variable. (c) denotes a categorical variable. (s) denotes a share defined in the interval [0, 1]. SOSE stands for Solutions for the Economic System. ISTAT stands for Italian National Institute of Statistics. EEA stands for European Environment Agency. MEF stands for Italian Ministry of Economy and Finance. (1) We collected data on bishops from various sources: (i) *Atlante delle diocesi d'Italia* (Italian Episcopal Conference, 2000); (ii) Bosker, Buringh, and van Zanden (2013); (iii) [https://it.cathopedia.org/wiki/Elenco\\_delle\\_diocesi\\_italiane\\_suddivise\\_per\\_regioni\\_ecclesiastiche](https://it.cathopedia.org/wiki/Elenco_delle_diocesi_italiane_suddivise_per_regioni_ecclesiastiche); and (iv) the websites of the various bishops, providing historical information on year of establishment and subsequent changes. (2) We collected data on the communal experience from various sources: (i) De Agostini (2007); (ii) Bosker, Buringh, and van Zanden (2013); and (iii) Belloc, Drago, and Galbiati (2016). (3) Digital cartography. (4) Global Digital Elevation Model (DEM) derived from GTOPO30, with 1 km-by-1 km resolution. (5) European coastline shapefile. (6) Euratlas Georeferenced Historical Vector Data and Centennia Historical Atlas (CHA) research edition (year 1700). (7) Italian Population Census, year 2011. (8) Italian Industry and Services Census, year 2011.

TABLE A5

## DESCRIPTIVE STATISTICS OF THE DEPENDENT AND THE CONTROL VARIABLES

Sample Statistics	Whole Sample				30 km Bandwidth			
	Mean	Std. Dev.	Min.	Max.	Mean	Std. Dev.	Min.	Max.
<b>Dependent Variables</b>								
Administrative Efficiency (log)	1.714	0.364	0.000	2.303	1.701	0.375	0.000	2.303
Administrative Efficiency – Expenditure (log)	1.752	0.589	0.000	2.303	1.721	0.602	0.000	2.303
Administrative Efficiency – Services (log)	1.548	0.590	0.000	2.303	1.533	0.628	0.000	2.303
<b>Historical Variables</b>								
Bishop (d)	0.010	0.097	0.000	1.000	0.006	0.078	0.000	1.000
Commune (d)	0.015	0.121	0.000	1.000	0.012	0.110	0.000	1.000
Market (d)	0.011	0.102	0.000	1.000	0.017	0.128	0.000	1.000
Large City (d)	0.008	0.090	0.000	1.000	0.006	0.078	0.000	1.000
Distance to Closest Roman Road (log)	1.818	0.964	-3.066	3.893	1.991	1.043	-3.066	3.893
<b>Geographical Variables</b>								
Altitude (log)	5.450	0.882	1.386	7.618	5.216	0.716	3.784	7.070
Terrain Ruggedness (log)	4.002	1.749	0.089	6.902	3.374	1.715	0.566	6.727
Distance to Sea Coast (log)	4.560	0.598	-0.864	5.329	4.768	0.294	3.996	5.269
Land Area (log)	2.466	0.852	-0.404	5.316	2.289	0.772	0.365	5.202
Distance to Regional Capital City (log)	3.888	0.705	-9.210	5.154	3.804	0.785	-9.210	5.123
Provincial Capital City (d)	0.008	0.090	0.000	1.000	0.009	0.095	0.000	1.000
<b>Demographic and Economic Variables</b>								
Income Per Taxpayer (log)	9.784	0.171	8.756	11.038	9.826	0.190	8.756	11.038
Population Density (log)	4.942	1.427	-0.084	8.936	5.438	1.303	1.629	8.830
Share Foreign Population (s)	0.070	0.039	0.000	0.367	0.069	0.034	0.000	0.367
Share Illiterate Population (s)	0.005	0.004	0.000	0.085	0.005	0.003	0.000	0.019
Share Tertiary-Educated Population (s)	0.093	0.035	0.000	0.369	0.098	0.038	0.007	0.369
Unemployment Rate (s)	0.050	0.019	0.000	0.200	0.053	0.016	0.000	0.174
Share Manufacturing Employment (s)	0.305	0.203	0.000	0.915	0.322	0.195	0.000	0.915
Share Primary Employment (s)	0.011	0.037	0.000	0.549	0.009	0.033	0.000	0.549
Share Services Employment (s)	0.518	0.177	0.059	1.000	0.518	0.175	0.059	1.000

*Notes.* The whole sample includes 2,093 municipalities. The subsample identified within 30 km around the frontier includes 657 municipalities. (log) denotes a log-transformed variable. (d) denotes a binary variable. (s) denotes a share defined in the interval [0, 1].

TABLE A6

## CORRELATION MATRIX OF THE CONTROL VARIABLES FOR THE WHOLE SAMPLE

Variable	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	
Bishop (d)	[1]	1																			
Commune (d)	[2]	0.76	1																		
Market (d)	[3]	0.47	0.41	1																	
Large City (d)	[4]	0.65	0.69	0.41	1																
Distance to Closest Roman Road (log)	[5]	-0.10	-0.10	-0.03	-0.08	1															
Altitude (log)	[6]	-0.07	-0.06	-0.04	-0.05	0.26	1														
Terrain Ruggedness (log)	[7]	-0.03	-0.03	-0.01	-0.05	0.26	0.81	1													
Distance to Sea Coast (log)	[8]	-0.06	-0.03	0.01	-0.02	0.08	0.08	-0.03	1												
Land Area (log)	[9]	0.21	0.23	0.16	0.22	0.07	-0.05	-0.01	-0.13	1											
Distance to Regional Capital City (log)	[10]	0.03	-0.13	-0.07	-0.19	0.27	0.00	0.23	-0.21	0.13	1										
Provincial Capital City (d)	[11]	0.48	0.65	0.36	0.64	-0.07	-0.05	-0.03	0.02	0.19	-0.18	1									
Income Per Taxpayer (log)	[12]	0.08	0.11	0.08	0.10	-0.24	-0.22	-0.31	0.25	-0.18	-0.42	0.12	1								
Population Density (log)	[13]	0.09	0.13	0.09	0.11	-0.28	-0.29	-0.35	0.28	-0.35	-0.50	0.14	0.64	1							
Share Foreign Population (s)	[14]	0.08	0.09	0.06	0.08	-0.09	-0.37	-0.24	-0.21	0.10	0.05	0.07	-0.04	0.11	1						
Share Illiterate Population (s)	[15]	0.04	0.04	0.03	0.03	-0.08	-0.24	-0.22	-0.05	0.06	0.03	0.03	-0.04	0.11	0.24	1					
Share Tertiary-Educated Population (s)	[16]	0.18	0.23	0.15	0.21	-0.17	-0.09	-0.09	0.09	-0.10	-0.30	0.25	0.69	0.46	0.04	-0.09	1				
Unemployment Rate (s)	[17]	0.05	0.06	0.05	0.05	0.02	-0.05	-0.04	0.07	0.03	-0.08	0.04	0.03	0.07	0.01	0.02	-0.02	1			
Share Manufacturing Employment (s)	[18]	-0.06	-0.07	-0.04	-0.04	-0.07	-0.21	-0.27	0.15	-0.09	-0.10	-0.06	0.24	0.32	0.09	0.12	-0.04	0.00	1		
Share Primary Employment (s)	[19]	-0.02	-0.03	-0.02	-0.02	0.03	0.01	0.03	-0.11	0.03	0.08	-0.02	-0.18	-0.18	-0.01	0.02	-0.12	-0.03	-0.13	1	
Share Services Employment (s)	[20]	0.11	0.15	0.09	0.10	-0.02	0.07	0.10	-0.08	0.13	-0.03	0.13	-0.01	-0.09	0.01	-0.08	0.23	0.03	-0.79	-0.06	1

Notes. Correlation coefficients calculated on 2,093 municipalities. (log) denotes a log-transformed variable. (d) denotes a binary variable. (s) denotes a share defined in the interval [0, 1].

TABLE A7

CORRELATION MATRIX OF THE CONTROL VARIABLES FOR THE SUBSAMPLE OF MUNICIPALITIES WITHIN 30 KM BANDWIDTH  
AROUND THE FRONTIER

Variable	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	
Bishop (d)	[1]	1																			
Commune (d)	[2]	0.70	1																		
Market (d)	[3]	0.29	0.31	1																	
Large City (d)	[4]	0.75	0.70	0.45	1																
Distance to Closest Roman Road (log)	[5]	-0.12	-0.08	0.01	-0.13	1															
Altitude (log)	[6]	-0.06	-0.05	0.02	-0.07	0.55	1														
Terrain Ruggedness (log)	[7]	-0.05	-0.05	0.03	-0.06	0.60	0.84	1													
Distance to Sea Coast (log)	[8]	-0.04	-0.01	0.05	-0.03	0.47	0.67	0.59	1												
Land Area (log)	[9]	0.20	0.23	0.21	0.21	-0.03	-0.16	-0.07	-0.14	1											
Distance to Regional Capital City (log)	[10]	-0.01	-0.22	-0.18	-0.35	0.45	0.36	0.47	0.19	0.04	1										
Provincial Capital City (d)	[11]	0.61	0.72	0.36	0.61	-0.09	-0.03	-0.02	0.01	0.24	-0.25	1									
Income Per Taxpayer (log)	[12]	0.08	0.11	0.09	0.11	-0.22	-0.29	-0.37	-0.04	-0.09	-0.41	0.12	1								
Population Density (log)	[13]	0.09	0.13	0.11	0.11	-0.26	-0.08	-0.21	0.22	-0.29	-0.52	0.14	0.58	1							
Share Foreign Population (s)	[14]	0.08	0.12	0.08	0.10	-0.19	-0.29	-0.16	-0.29	0.11	-0.15	0.10	0.05	0.08	1						
Share Illiterate Population (s)	[15]	0.02	0.03	0.03	0.01	-0.09	-0.12	-0.14	-0.01	0.06	-0.02	0.02	-0.02	0.19	0.13	1					
Share Tertiary-Educated Population (s)	[16]	0.20	0.25	0.22	0.26	-0.09	-0.03	-0.04	0.04	-0.03	-0.33	0.30	0.65	0.43	0.15	-0.14	1				
Unemployment Rate (s)	[17]	0.03	0.03	0.03	0.01	0.06	-0.06	-0.07	0.01	0.08	0.06	0.02	-0.04	-0.04	0.21	0.15	-0.13	1			
Share Manufacturing Employment (s)	[18]	-0.06	-0.09	-0.07	-0.07	-0.02	0.00	-0.09	0.10	-0.08	-0.02	-0.09	0.27	0.22	-0.07	0.13	-0.09	-0.07	1		
Share Primary Employment (s)	[19]	-0.02	-0.02	-0.03	-0.02	-0.03	-0.10	-0.04	-0.11	0.00	0.02	-0.02	-0.08	-0.16	-0.01	0.01	-0.07	0.09	-0.13	1	
Share Services Employment (s)	[20]	0.11	0.15	0.13	0.12	-0.08	-0.08	0.00	-0.10	0.13	-0.10	0.15	-0.06	-0.01	0.20	-0.09	0.27	0.02	-0.83	-0.09	1

*Notes.* Correlation coefficients calculated on 657 municipalities. (log) denotes a log-transformed variable. (d) denotes a binary variable. (s) denotes a share defined in the interval [0, 1].

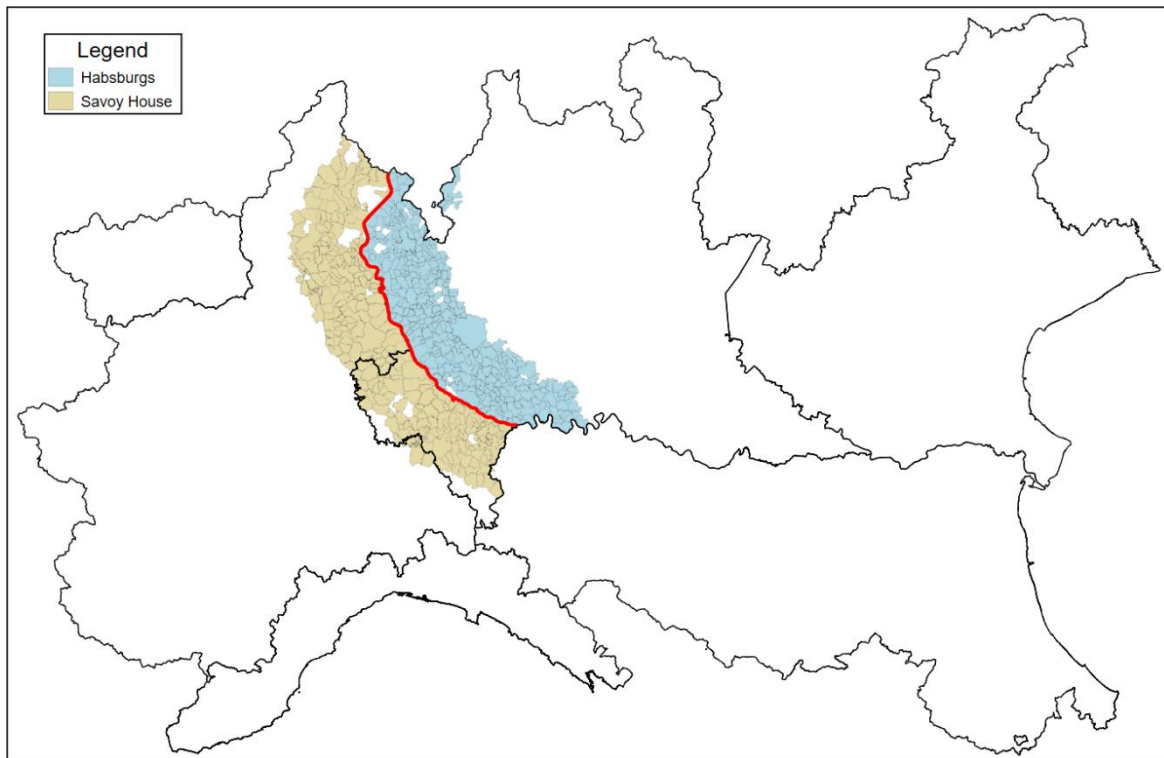


FIGURE A2

Estimation Sample Within 30 km on Either Side of the Frontier

The map displays estimation sample municipalities lying within 30 km on either side of the frontier. The light-blue area denotes municipalities of the Duchy of Milan under Habsburg domination, while the light-khaki area denotes municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.



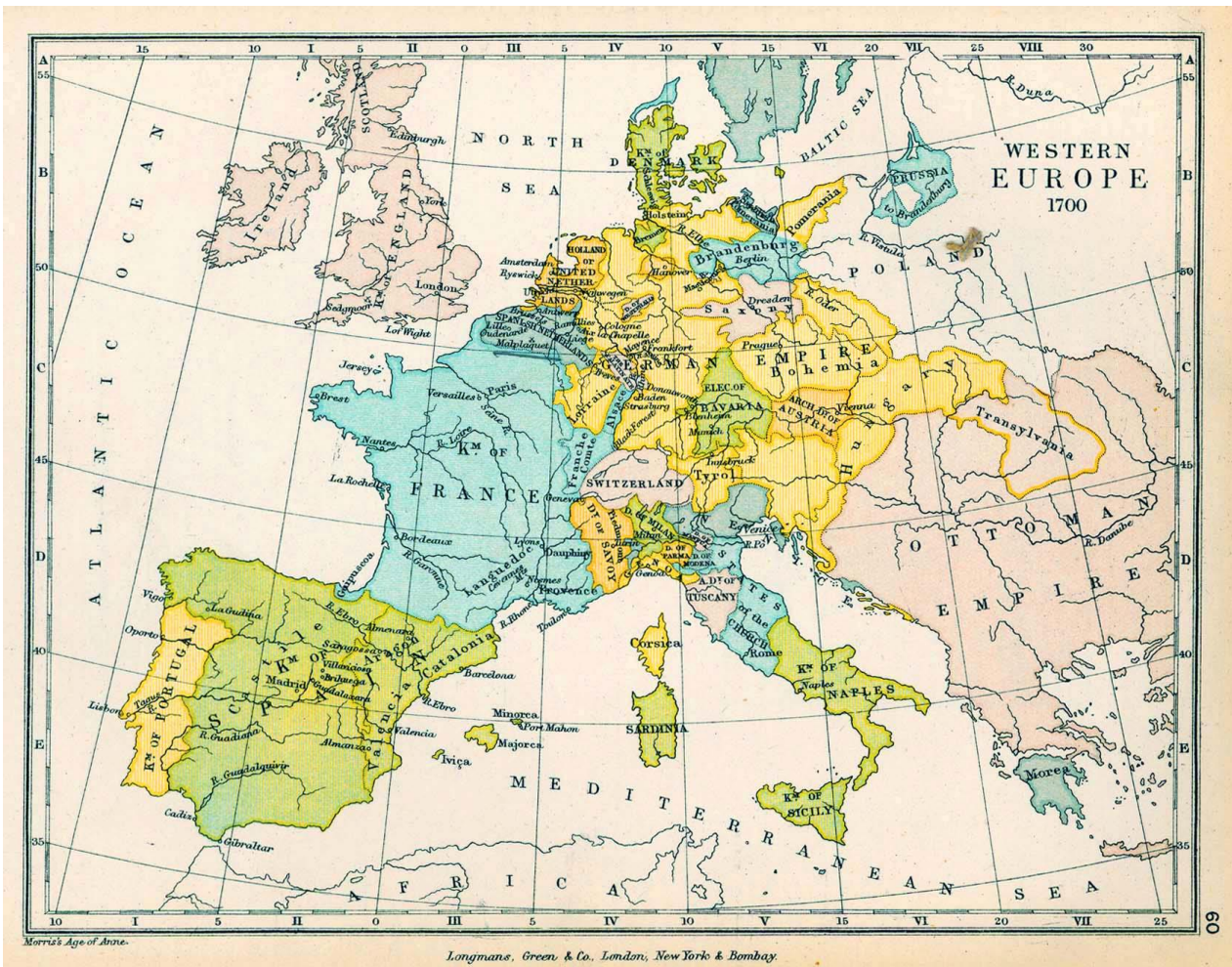


FIGURE A3

Europe in 1700

Map taken from Colbeck (1905).

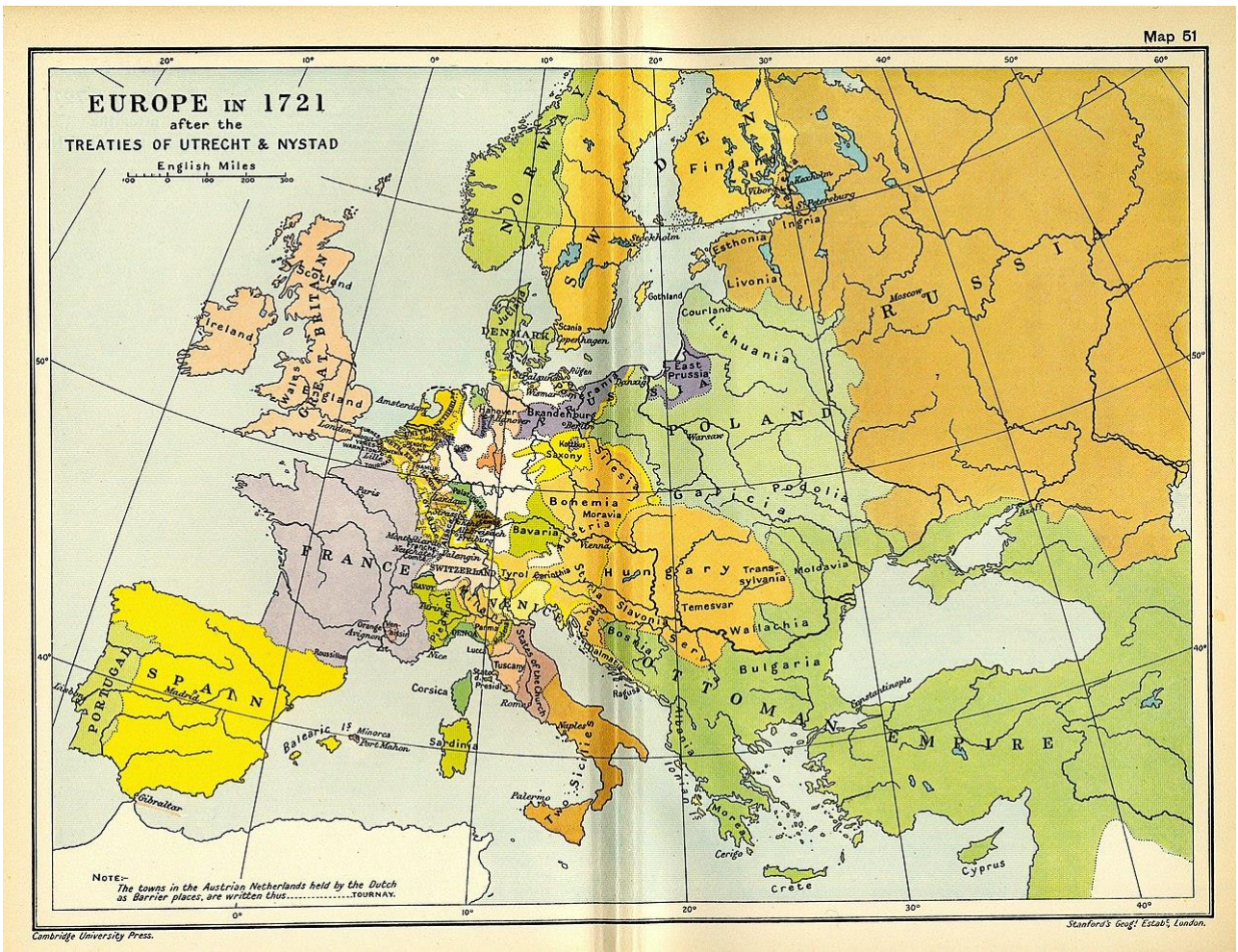


FIGURE A4

Europe in 1721

Map taken from Ward et al. (1912).



FIGURE A5

Europe in 1748

Map taken from De Agostini (2011, p. 117).



FIGURE A6

Italy in 1748

Map taken from the *Mapping History* project developed by the University of Oregon and the Universität Münster, and accessible at [https://pages.uoregon.edu/mapplace/EU/EU19%20-%20Italy/Maps/EU19\\_42.jpg](https://pages.uoregon.edu/mapplace/EU/EU19%20-%20Italy/Maps/EU19_42.jpg). The map depicts dominant states in 1748, and highlights the changes in territorial domination between the Treaty of Utrecht (1713) and the Treaty of Aix-la-Chapelle (1748).

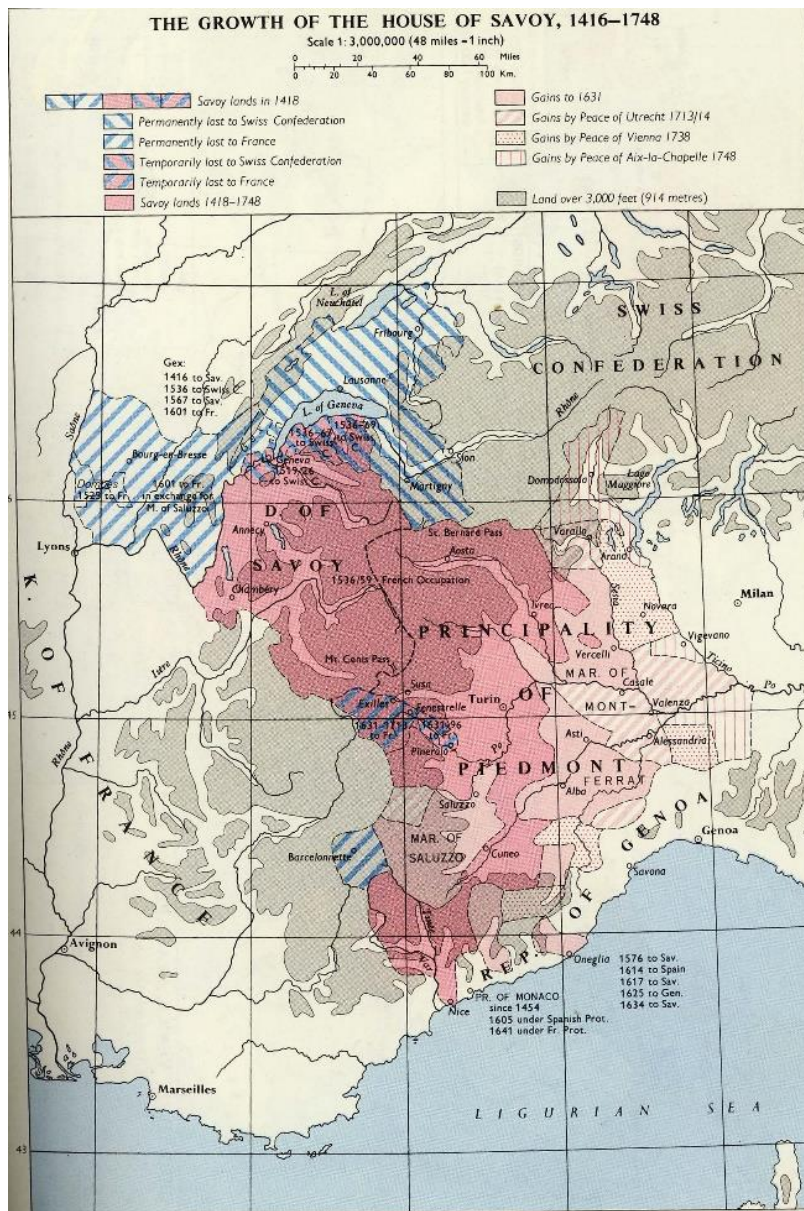


FIGURE A7

Territorial Expansion of the Savoy House in the Period 1416–1748

Map taken from the *Mapping History* project developed by the University of Oregon and the Universität Münster, and accessible at [https://pages.uoregon.edu/mapplace/EU/EU19%20-%20Italy/Maps/EU19\\_74.jpg](https://pages.uoregon.edu/mapplace/EU/EU19%20-%20Italy/Maps/EU19_74.jpg). The map highlights the changes in Savoy House’s domination, especially on the border with the Duchy of Milan.

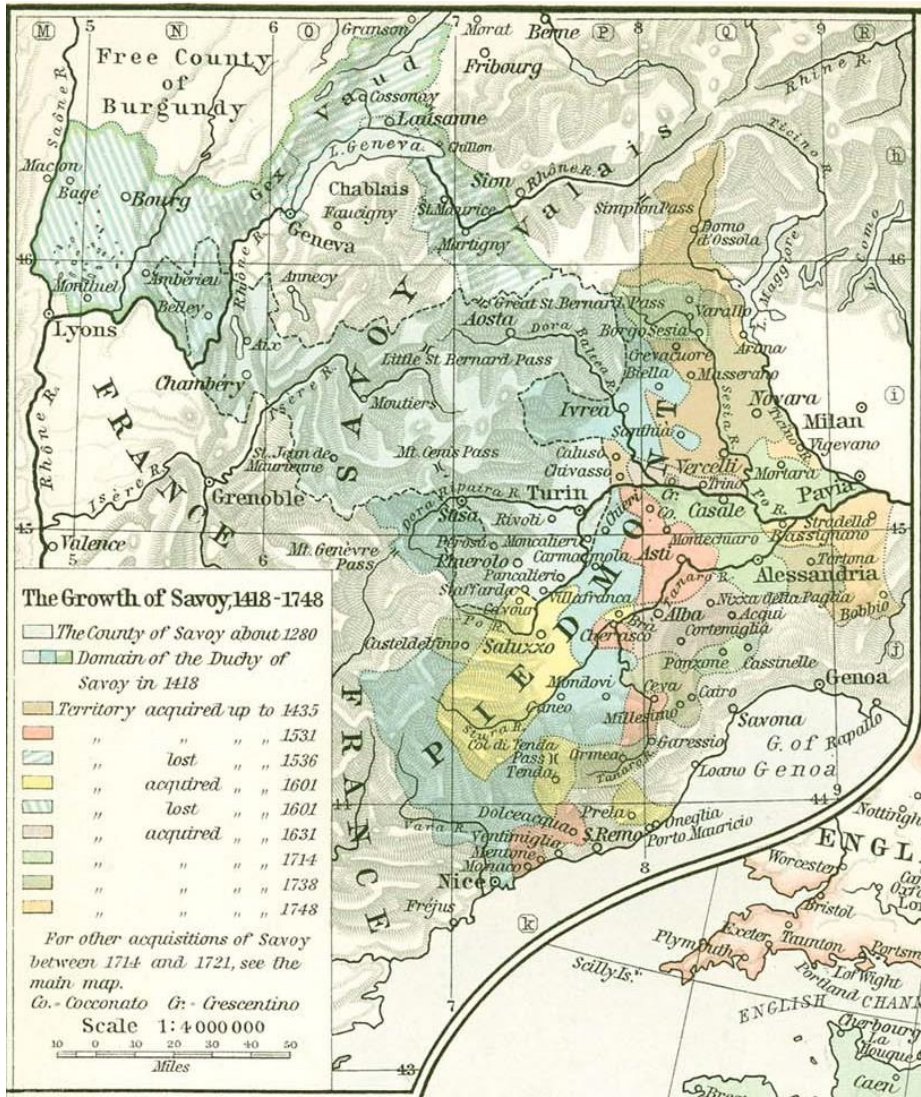


FIGURE A8

Territorial Expansion of the Savoy House in the Period 1418–1748

Map taken from Shepherd (1926, p. 130). The map highlights the changes in Savoy House's domination, especially on the border with the Duchy of Milan.

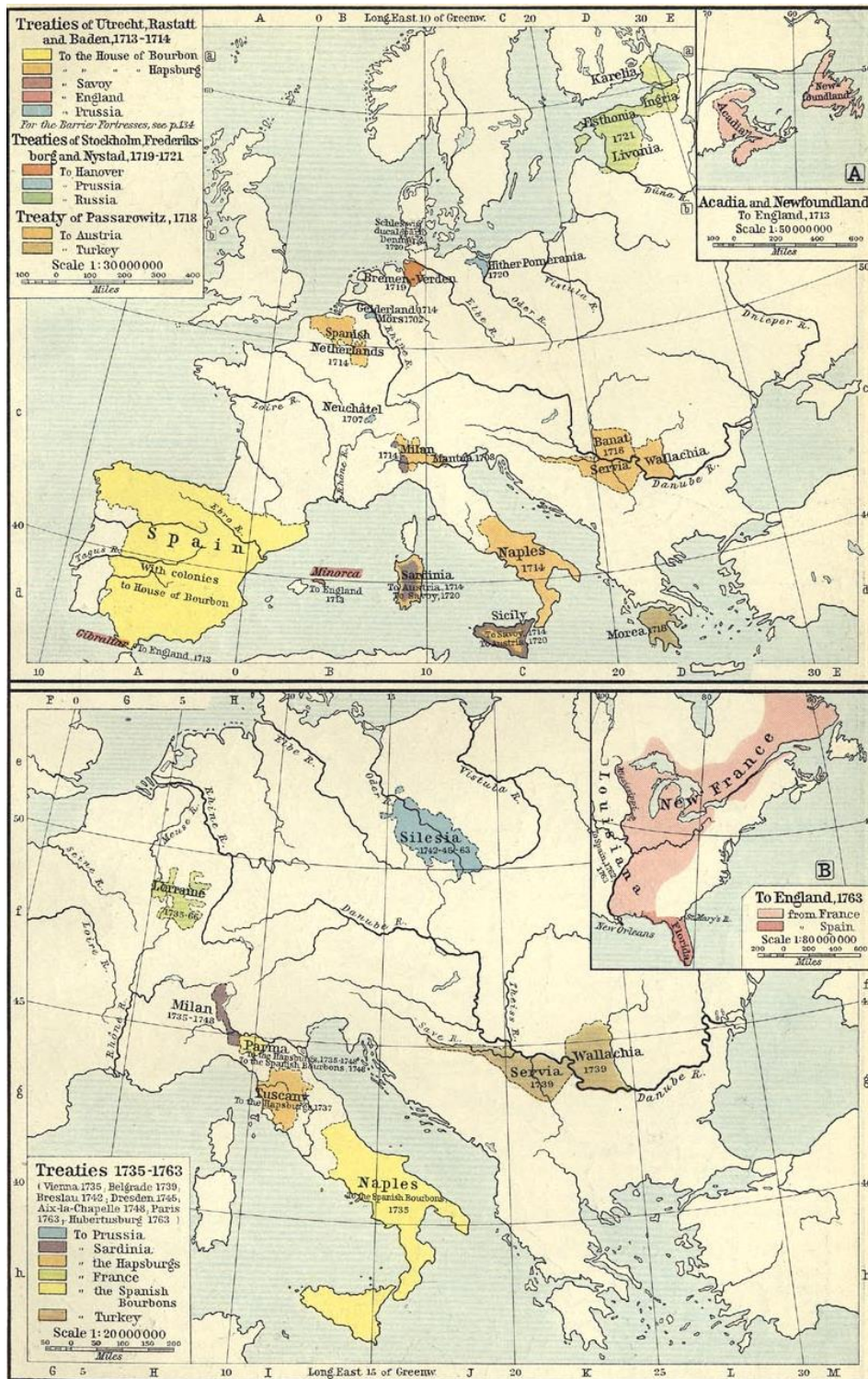


FIGURE A9

Territorial Variations Agreed through Treaties in Western Europe (1713–1763)

Map taken from Shepherd (1911, p. 133).

TABLE A8

## MEAN DIFFERENCE IN GEOGRAPHICAL, DEMOGRAPHIC, AND ECONOMIC VARIABLES ACROSS THE FRONTIER

Dependent Variable	Altitude	Terrain Ruggedness	Distance to Sea Coast	Land Area	Distance to Regional Capital City	Provincial Capital City
Habsburgs	-0.139 (0.301)	-0.543 (0.676)	0.161 (0.136)	-0.489*** (0.163)	-0.802**** (0.184)	0.004 (0.006)
R <sup>2</sup>	0.01	0.03	0.07	0.10	0.26	0.00
No. Municipalities	657	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286	286
Dependent Variable	Income Per Taxpayer	Population Density	Share Foreigner Population	Share Illiterate Population	Share Tertiary-Educated Population	
Habsburgs	0.121**** (0.031)	1.547**** (0.253)	0.007 (0.007)	0.000 (0.000)	0.019**** (0.006)	
R <sup>2</sup>	0.10	0.35	0.01	0.00	0.06	
No. Municipalities	657	657	657	657	657	
No. Treated Municipalities	371	371	371	371	371	
No. Control Municipalities	286	286	286	286	286	
Dependent Variable	Unemployment Rate	Share Manufacturing Employment	Share Primary Employment	Share Services Employment		
Habsburgs	-0.005 (0.003)	0.029 (0.025)	-0.000 (0.003)	0.010 (0.023)		
R <sup>2</sup>	0.02	0.01	0.00	0.00		
No. Municipalities	657	657	657	657		
No. Treated Municipalities	371	371	371	371		
No. Control Municipalities	286	286	286	286		

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE A9

RD SPECIFICATION INCLUDING ONLY STATISTICALLY SIGNIFICANT CONTROLS AS  
FOR TABLE A8

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.251*** (0.091)	-0.131 (0.098)	0.616**** (0.171)
R <sup>2</sup>	0.22	0.08	0.31
Selected Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. Selected controls are: land area; distance to regional capital city; income per taxpayer; population density; share of tertiary-educated population. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

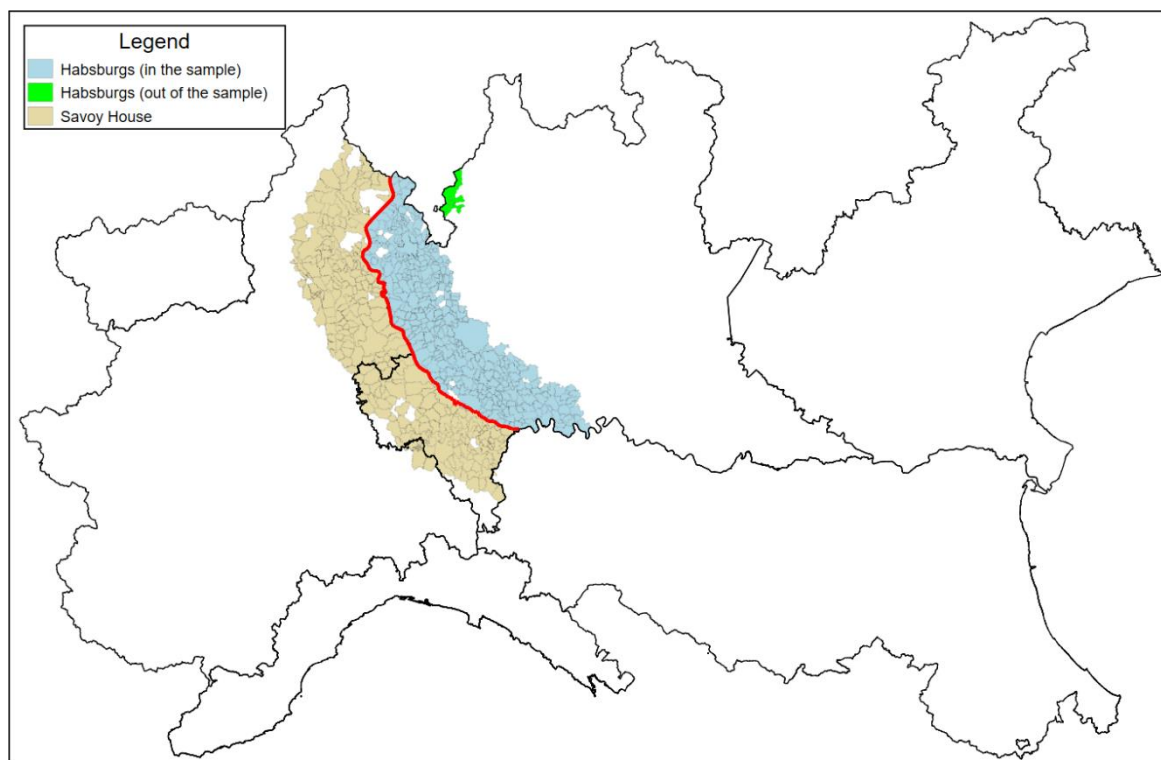


FIGURE A10

Estimation Sample Within 30 km on Either Side of the Frontier Excluding Non-Contiguous Treated  
Municipalities in the Current NUTS-3 Region of Como

The map displays estimation sample municipalities lying within 30 km on either side of the frontier. The light-blue area denotes municipalities of the Duchy of Milan under Habsburg domination, while the light-khaki area denotes municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The bright green area denotes the nine non-contiguous municipalities in the current NUTS-3 region of Como (Duchy of Milan under Habsburg domination) lying within 30 km of the 1748 frontier. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

TABLE A10

RD SPECIFICATION EXCLUDING NON-CONTIGUOUS TREATED MUNICIPALITIES IN  
THE CURRENT NUTS-3 REGION OF COMO

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.228**** (0.062)	-0.035 (0.094)	0.517**** (0.134)
R <sup>2</sup>	0.28	0.13	0.36
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	648	648	648
No. Treated Municipalities	362	362	362
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term.  
\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A11

RD SPECIFICATION EXCLUDING MUNICIPALITIES THAT WERE PART OF THE  
PRINCIPALITY OF MASSERANO

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.250**** (0.067)	-0.023 (0.095)	0.544**** (0.136)
R <sup>2</sup>	0.28	0.13	0.35
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	652	652	652
No. Treated Municipalities	371	371	371
No. Control Municipalities	281	281	281

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A12

## BORDER SPECIFICATION WITH 30 KM BANDWIDTH AROUND THE FRONTIER

Dependent Variable	Administrative Efficiency				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.348**** (0.048)	0.347**** (0.050)	0.226**** (0.053)	0.307**** (0.053)	0.267**** (0.054)
R <sup>2</sup>	0.21	0.21	0.22	0.26	0.27
Dependent Variable	Administrative Efficiency – Expenditure				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.125 (0.080)	0.118 (0.080)	0.016 (0.119)	-0.058 (0.052)	0.020 (0.079)
R <sup>2</sup>	0.04	0.04	0.07	0.12	0.14
Dependent Variable	Administrative Efficiency – Services				
	(1)	(2)	(3)	(4)	(5)
Habsburgs	0.650**** (0.075)	0.654**** (0.079)	0.506**** (0.079)	0.630**** (0.114)	0.542**** (0.098)
R <sup>2</sup>	0.29	0.30	0.32	0.32	0.35
Historical Controls	No	Yes	No	No	Yes
Geographical Controls	No	No	Yes	No	Yes
Demographic and Economic Controls	No	No	No	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A13

BORDER SPECIFICATION WITH 30 KM BANDWIDTH AROUND THE FRONTIER  
INCLUDING ONLY STATISTICALLY SIGNIFICANT CONTROLS AS FOR TABLE A8

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.308**** (0.060)	-0.072 (0.052)	0.648**** (0.114)
R <sup>2</sup>	0.21	0.08	0.30
Selected Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. Selected controls are: land area; distance to regional capital city; income per taxpayer; population density; share of tertiary-educated population. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A14

BORDER SPECIFICATION WITH 30 KM BANDWIDTH AROUND THE FRONTIER  
EXCLUDING NON-CONTIGUOUS TREATED MUNICIPALITIES IN THE CURRENT NUTS-  
3 REGION OF COMO

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.271****	0.019	0.551****
	(0.055)	(0.078)	(0.099)
R <sup>2</sup>	0.28	0.13	0.35
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	648	648	648
No. Treated Municipalities	362	362	362
No. Control Municipalities	286	286	286

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A15

BORDER SPECIFICATION WITH 30 KM BANDWIDTH AROUND THE FRONTIER  
EXCLUDING MUNICIPALITIES THAT WERE PART OF THE PRINCIPALITY OF  
MASSERANO

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.267****	0.019	0.541****
R <sup>2</sup>	(0.054)	(0.079)	(0.099)
Habsburgs	0.28	0.13	0.35
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	652	652	652
No. Treated Municipalities	371	371	371
No. Control Municipalities	281	281	281

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE A16

## BORDER SPECIFICATION ON THE WHOLE SAMPLE

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.281 (0.041)**** [0.031]**** {0.026}**** (0.023)****	-0.039 (0.068) [0.067] {0.058} (0.050)	0.600 (0.064)**** [0.054]**** {0.042}**** (0.034)****
R <sup>2</sup>	0.16	0.15	0.21
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	2,093	2,093	2,093
No. Treated Municipalities	803	803	803
No. Control Municipalities	1,290	1,290	1,290

*Notes.* Standard errors corrected for spatial dependence: in parentheses with distance cut-off set at 60 km; in brackets with distance cut-off set at 120 km; in braces with distance cut-off set at 180 km; and in angle brackets with distance cut-off set at 240 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A17

BORDER SPECIFICATION ON THE WHOLE SAMPLE EXCLUDING MUNICIPALITIES  
THAT WERE PART OF THE PRINCIPALITY OF MASSERANO AND/OR THE DUCHY OF  
MANTUA

Excluded Dominant State in 1700	Principality of Masserano	Duchy of Mantua	Principality of Masserano and Duchy of Mantua
Dependent Variable	Administrative Efficiency		
	(1)	(2)	(3)
Habsburgs	0.281**** (0.041)	0.279**** (0.041)	0.279**** (0.041)
R <sup>2</sup>	0.16	0.16	0.16
Dependent Variable	Administrative Efficiency – Expenditure		
	(1)	(2)	(3)
Habsburgs	-0.039 (0.069)	-0.035 (0.068)	-0.035 (0.068)
R <sup>2</sup>	0.14	0.15	0.15
Dependent Variable	Administrative Efficiency – Services		
	(1)	(2)	(3)
Habsburgs	0.600**** (0.064)	0.596**** (0.064)	0.596**** (0.064)
R <sup>2</sup>	0.21	0.20	0.20
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	2,072	2,013	1,992
No. Treated Municipalities	803	723	723
No. Control Municipalities	1,269	1,290	1,269

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A18

BASELINE RD SPECIFICATION USING ALTERNATIVE OPERATIONALIZATIONS OF  
THE STANDARD ERRORS

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.250 (0.075)**** [0.073]**** {0.053}**** <0.043>**** «0.038»****	-0.022 (0.112) [0.122] {0.068} <0.058> «0.050»	0.546 (0.128)**** [0.139]**** {0.090}**** <0.073>**** «0.064»****
R <sup>2</sup>	0.28	0.14	0.35
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors clustered at the municipality level in parentheses. Standard errors corrected for spatial dependence: in brackets with distance cut-off set at 30 km; in braces with distance cut-off set at 120 km; in angle brackets with distance cut-off set at 180 km; and in guillemets with distance cut-off set at 240 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A19

## ALTERNATIVE SPECIFICATIONS OF THE RD POLYNOMIAL

Dependent Variable	Administrative	Administrative	Administrative
	Efficiency	Efficiency – Expenditure	Efficiency – Services
	(1)	(2)	(3)
RD Polynomial	Non-Interacted Linear Polynomial in Distance to the Frontier		
Habsburgs	0.270**** (0.053)	0.022 (0.081)	0.545**** (0.100)
R <sup>2</sup>	0.28	0.14	0.35
RD Polynomial	Interacted Quadratic Polynomial in Distance to the Frontier		
Habsburgs	0.177*** (0.064)	-0.138 (0.114)	0.455**** (0.120)
R <sup>2</sup>	0.28	0.14	0.35
RD Polynomial	Non-Interacted Quadratic Polynomial in Distance to the Frontier		
Habsburgs	0.272**** (0.052)	0.011 (0.076)	0.558**** (0.101)
R <sup>2</sup>	0.28	0.14	0.35
RD Polynomial	Interacted Cubic Polynomial in Distance to the Frontier		
Habsburgs	0.154* (0.089)	-0.245 (0.181)	0.452**** (0.128)
R <sup>2</sup>	0.28	0.14	0.36
RD Polynomial	Non-Interacted Cubic Polynomial in Distance to the Frontier		
Habsburgs	0.273**** (0.053)	0.009 (0.074)	0.560**** (0.101)
R <sup>2</sup>	0.28	0.14	0.36
RD Polynomial	Linear Polynomial in Latitude and Longitude		
Habsburgs	0.244**** (0.070)	-0.008 (0.079)	0.511**** (0.150)
R <sup>2</sup>	0.28	0.14	0.35
RD Polynomial	Quadratic Polynomial in Latitude and Longitude		
Habsburgs	0.230*** (0.074)	-0.004 (0.094)	0.489**** (0.143)
R <sup>2</sup>	0.29	0.14	0.36
RD Polynomial	Cubic Polynomial in Latitude and Longitude		
Habsburgs	0.231*** (0.072)	-0.005 (0.087)	0.491**** (0.126)
R <sup>2</sup>	0.30	0.14	0.39
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

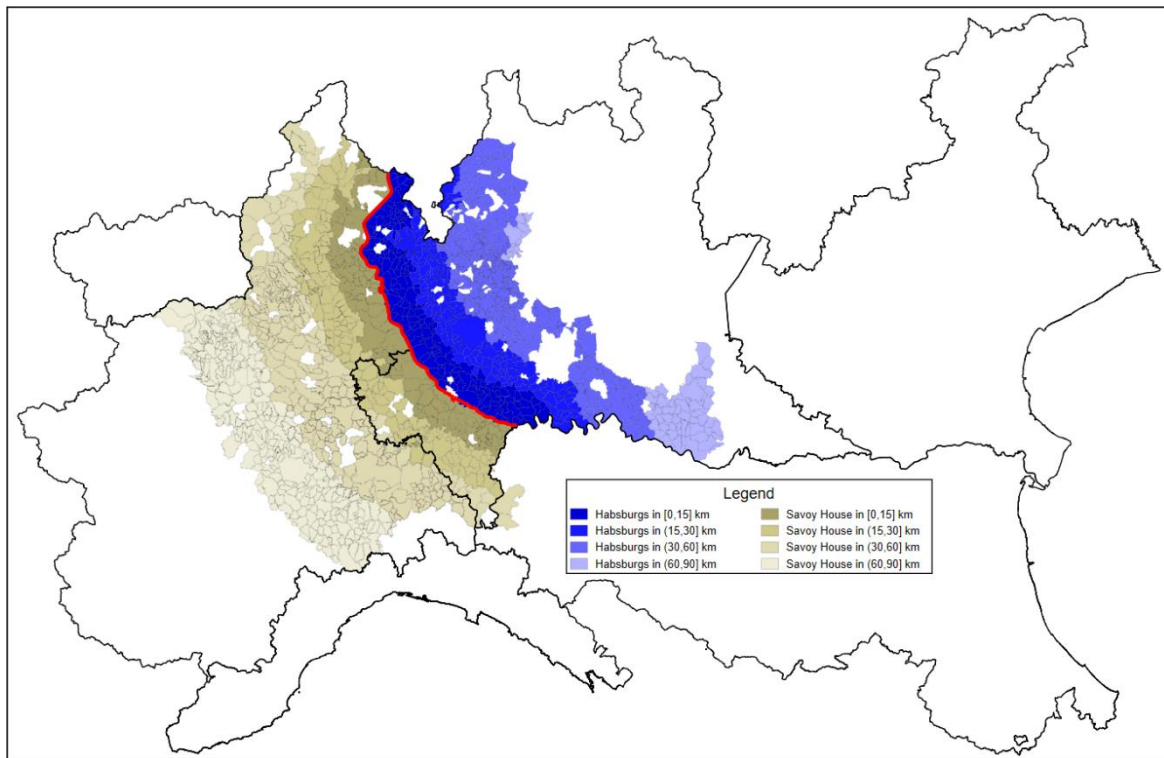


FIGURE A11

### Estimation Sample by Distance Band on Either Side of the Frontier

The map displays estimation sample municipalities grouped by distance band (0 km to 15 km, 15 km to 30 km, 30 km to 60 km, and 60 km to 90 km) within 90 km on either side of the frontier. The blue-shaded areas denote municipalities of the Duchy of Milan under Habsburg domination, while the khaki-shaded areas denote municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

TABLE A20

## ALTERNATIVE BANDWIDTHS AROUND THE FRONTIER

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
Bandwidth	15 km		
	(1)	(2)	(3)
Habsburgs	0.117** (0.052)	0.010 (0.154)	0.252*** (0.079)
R <sup>2</sup>	0.32	0.18	0.45
No. Municipalities	336	336	336
No. Treated Municipalities	196	196	196
No. Control Municipalities	140	140	140
Bandwidth	60 km		
	(1)	(2)	(3)
Habsburgs	0.262**** (0.049)	0.023 (0.061)	0.533**** (0.085)
R <sup>2</sup>	0.19	0.10	0.25
No. Municipalities	1,239	1,239	1,239
No. Treated Municipalities	687	687	687
No. Control Municipalities	552	552	552
Bandwidth	90 km		
	(1)	(2)	(3)
Habsburgs	0.295**** (0.053)	0.030 (0.062)	0.567**** (0.092)
R <sup>2</sup>	0.17	0.10	0.22
No. Municipalities	1,587	1,587	1,587
No. Treated Municipalities	748	748	748
No. Control Municipalities	839	839	839
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A21

## RD SPECIFICATION WITH 60 KM AND 90 KM BANDWIDTHS AROUND THE FRONTIER

## EXCLUDING MUNICIPALITIES THAT WERE PART OF THE PRINCIPALITY OF

## MASSERANO AND/OR THE DUCHY OF MANTUA

Excluded Dominant State in 1700	Principality of Masserano	Duchy of Mantua	Principality of Masserano and Duchy of Mantua
	(1)	(2)	(3)
Bandwidth	60 km		
Dependent Variable	Administrative Efficiency		
Habsburgs	0.262**** (0.049)	0.262**** (0.049)	0.262**** (0.049)
R <sup>2</sup>	0.19	0.19	0.19
Dependent Variable	Administrative Efficiency – Expenditure		
Habsburgs	0.025 (0.062)	0.023 (0.061)	0.025 (0.062)
R <sup>2</sup>	0.09	0.10	0.09
Dependent Variable	Administrative Efficiency – Services		
Habsburgs	0.531**** (0.086)	0.533**** (0.085)	0.531**** (0.086)
R <sup>2</sup>	0.26	0.25	0.26
No. Municipalities	1,218	1,238	1,217
No. Treated Municipalities	687	686	686
No. Control Municipalities	531	552	531
Bandwidth	90 km		
Dependent Variable	Administrative Efficiency		
Habsburgs	0.295**** (0.053)	0.294**** (0.053)	0.294**** (0.053)
R <sup>2</sup>	0.17	0.17	0.17
Dependent Variable	Administrative Efficiency – Expenditure		
Habsburgs	0.032 (0.062)	0.033 (0.062)	0.035 (0.063)
R <sup>2</sup>	0.10	0.10	0.10
Dependent Variable	Administrative Efficiency – Services		
Habsburgs	0.566**** (0.093)	0.565**** (0.093)	0.564**** (0.093)
R <sup>2</sup>	0.22	0.22	0.22
No. Municipalities	1,566	1,562	1,541
No. Treated Municipalities	748	723	723
No. Control Municipalities	818	839	818
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

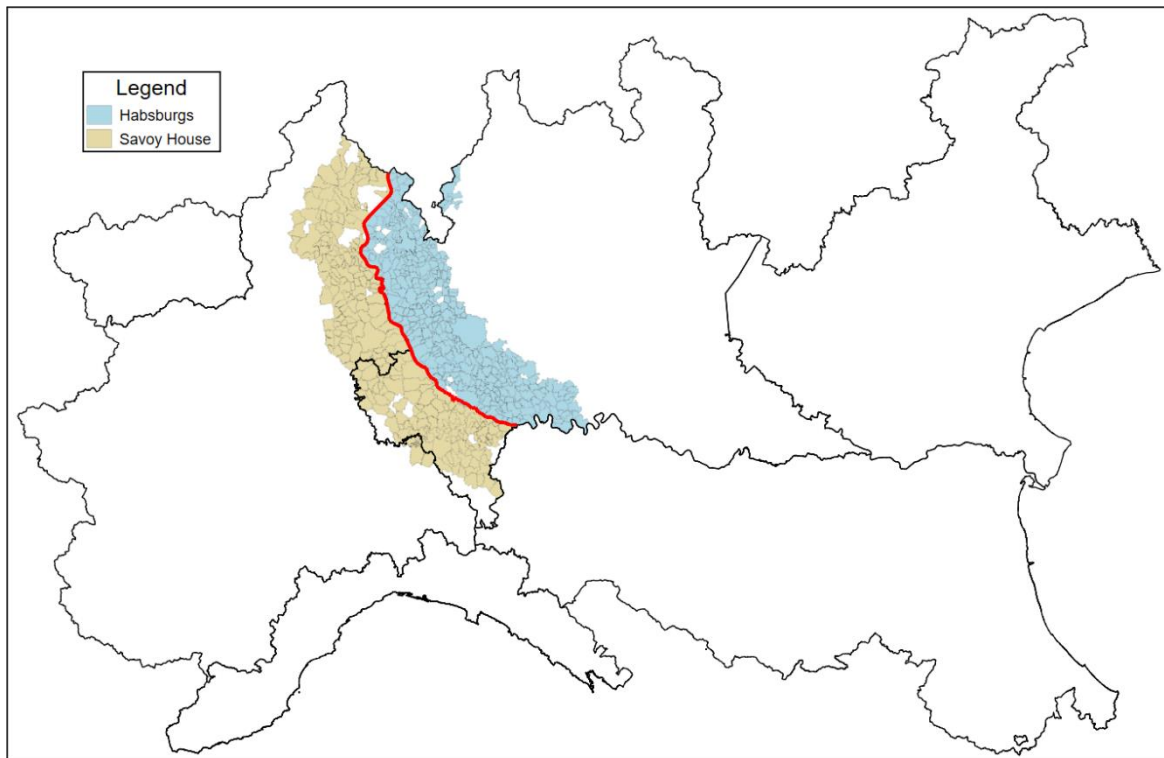


FIGURE A12

Estimation Sample Within 30 km on Either Side of the Frontier Including Only Municipalities that were Part of the Duchy of Milan in 1700

The map displays estimation sample municipalities that were part of the Duchy of Milan in 1700, and lying within 30 km on either side of the frontier. The light-blue area denotes municipalities of the Duchy of Milan under Habsburg domination, while the light-khaki area denotes municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.



TABLE A22

RD SPECIFICATION WITH ONLY CONTROL MUNICIPALITIES PART OF THE DUCHY OF  
MILAN IN 1700

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.248**** (0.068)	-0.023 (0.097)	0.544**** (0.137)
R <sup>2</sup>	0.27	0.13	0.33
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	No	No	No
No. Municipalities	637	637	637
No. Treated Municipalities	371	371	371
No. Control Municipalities	266	266	266

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The categorical variable for Dominant State in 1700 is omitted due to collinearity. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

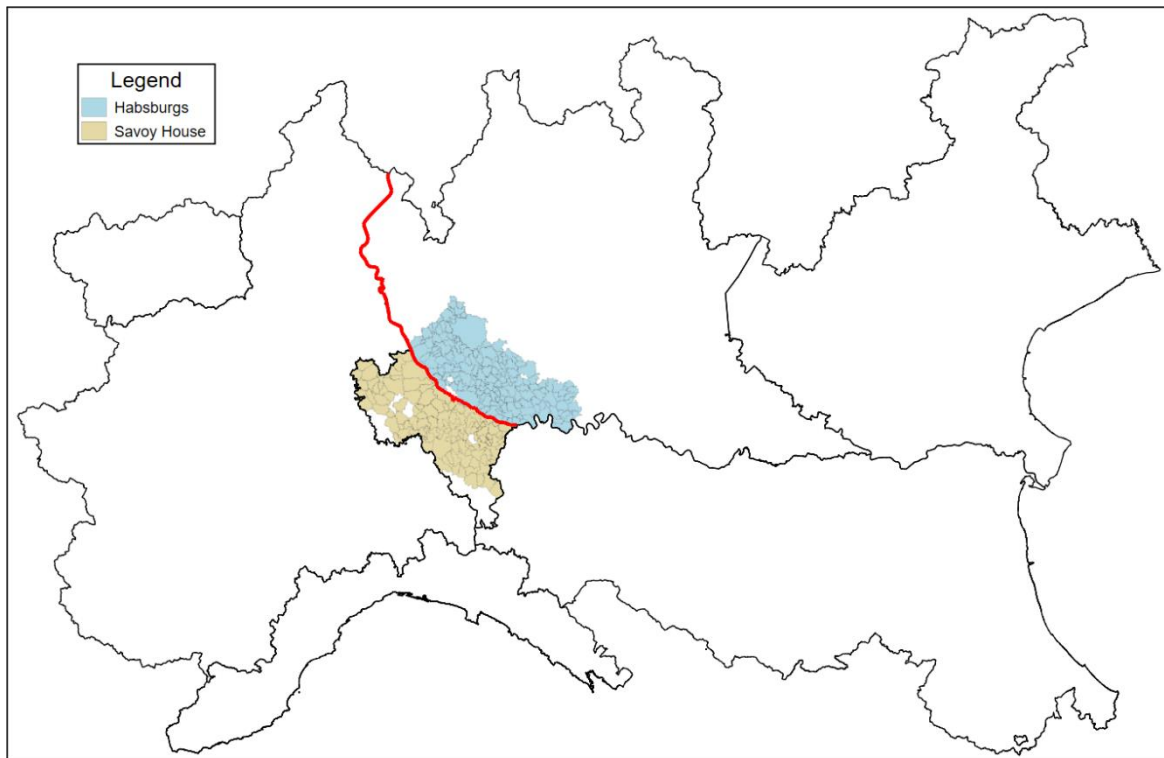


FIGURE A13

#### Estimation Sample of Lombardy Municipalities Within 30 km on Either Side of the Frontier

The map displays estimation sample municipalities belonging to the current NUTS-2 Lombardy region and lying within 30 km on either side of the frontier. The light-blue area denotes municipalities of the Duchy of Milan under Habsburg domination, while the light-khaki area denotes municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

TABLE A23

## RD SPECIFICATION ON CURRENT LOMBARDY MUNICIPALITIES

Dependent Variable	Administrative	Administrative	Administrative
	Efficiency	Efficiency – Expenditure	Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.124*** (0.043)	0.025 (0.065)	0.202** (0.098)
R <sup>2</sup>	0.29	0.18	0.40
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	No	No	No
NUTS-3 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	281	281	281
No. Treated Municipalities	160	160	160
No. Control Municipalities	121	121	121

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dummy variable for large city (historical controls) is omitted due to collinearity. NUTS-2 region FEs are replaced by NUTS-3 region FEs. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

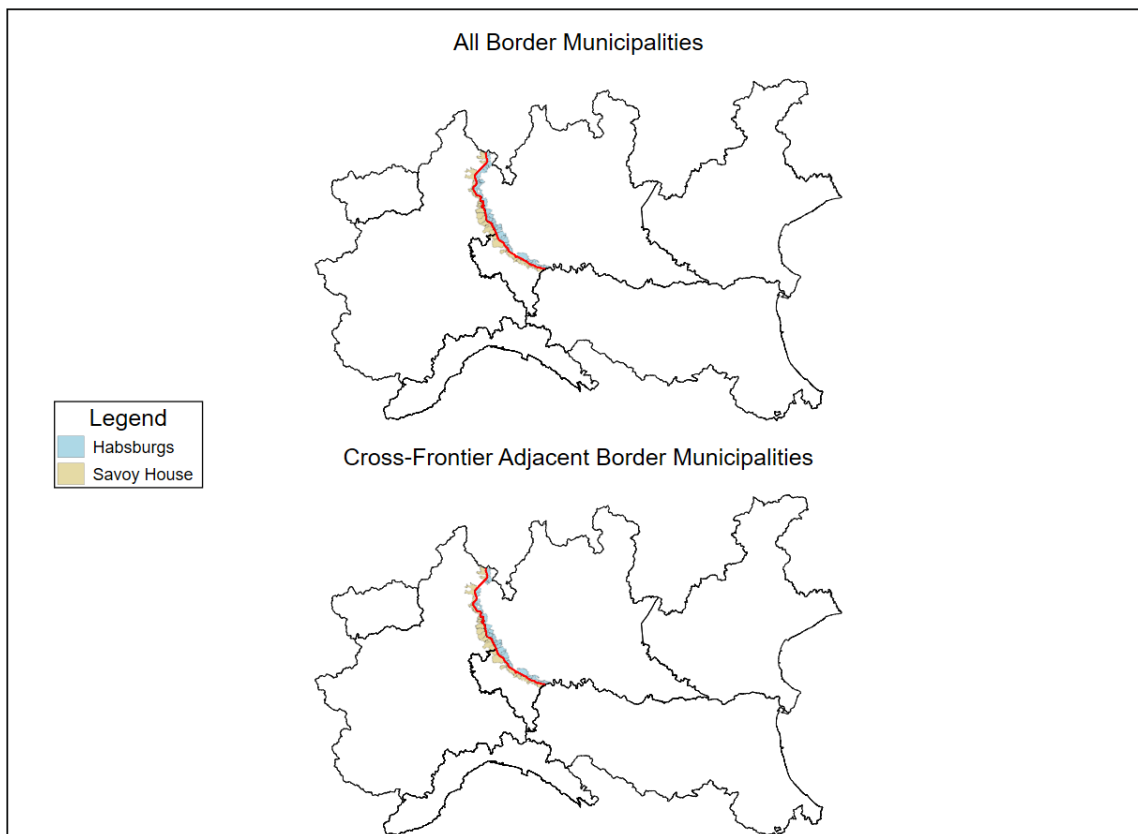


FIGURE A14

### Estimation Sample of Border Municipalities

The map displays estimation sample municipalities located along the 1748 frontier. The first map displays all border municipalities, while the second map excludes five border municipalities of the Habsburg-ruled Duchy of Milan without an adjacent municipality on the other side of the frontier. The light-blue area denotes municipalities of the Duchy of Milan under Habsburg domination, while the light-khaki area denotes municipalities ruled by the Savoy House starting from the 1748 Treaty of Aix-la-Chapelle. The red line identifies the frontier established in 1748 between the Habsburg-ruled Duchy of Milan and the Savoy House's territories. The black lines identify the borders of the current Italian NUTS-2 regions.

TABLE A24

## BORDER SPECIFICATION ON BORDER MUNICIPALITIES

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
Border Municipalities	All		
	(1)	(2)	(3)
Habsburgs	0.100* (0.052)	-0.262 (0.220)	0.408*** (0.154)
R <sup>2</sup>	0.65	0.52	0.80
No. Municipalities	74	74	74
No. Treated Municipalities	43	43	43
No. Control Municipalities	31	31	31
Border Municipalities	With an Adjacent Municipality on the Other Side of the Frontier		
	(1)	(2)	(3)
Habsburgs	0.092* (0.053)	-0.258 (0.222)	0.391** (0.159)
R <sup>2</sup>	0.67	0.53	0.81
No. Municipalities	69	69	69
No. Treated Municipalities	38	38	38
No. Control Municipalities	31	31	31
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	No	No	No

*Notes.* Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dummy variable for bishop (historical controls) and the categorical variable for Dominant State in 1700 are omitted due to collinearity. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A25

## VARIOUS ROBUSTNESS TESTS ON THE BASELINE RD SPECIFICATION

Robustness Test	NUTS-3 Instead of NUTS-2 FEs			Excluding NUTS-3 Capital Cities		
	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)
Habsburgs	0.151**** (0.038)	-0.012 (0.080)	0.304**** (0.077)	0.278**** (0.073)	0.025 (0.102)	0.559**** (0.139)
R <sup>2</sup>	0.32	0.18	0.42	0.28	0.15	0.35
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	No	No	No	Yes	Yes	Yes
NUTS-3 Region FE	Yes	Yes	Yes	No	No	No
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	651	651	651
No. Treated Municipalities	371	371	371	367	367	367
No. Control Municipalities	286	286	286	284	284	284
Robustness Test	Controlling for Distance to the Own NUTS-3 Capital City			Controlling for Distance to Milan		
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(7)	(8)	(9)	(10)	(11)	(12)
Habsburgs	0.250**** (0.065)	-0.022 (0.093)	0.546**** (0.136)	0.234**** (0.062)	-0.061 (0.098)	0.543**** (0.133)
R <sup>2</sup>	0.28	0.14	0.35	0.28	0.14	0.35
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	657	657	657	657	657	657
No. Treated Municipalities	371	371	371	371	371	371
No. Control Municipalities	286	286	286	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The dummy variables for bishop and NUTS-3 region capital city are omitted when considering the subsample of non-provincial capital cities due to collinearity. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A26

RD SPECIFICATION WITHOUT LOG-TRANSFORMING THE DEPENDENT AND  
CONTROL VARIABLES

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	1.203**** (0.321)	-0.379 (0.464)	2.259**** (0.629)
R <sup>2</sup>	0.26	0.12	0.31
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A27

## RD SPECIFICATION WINSORIZING DEPENDENT VARIABLES

Winsorizing at			
1% and 99%			
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.244**** (0.064)	-0.022 (0.096)	0.546**** (0.135)
R <sup>2</sup>	0.28	0.14	0.35
Winsorizing at			
5% and 95%			
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.206**** (0.048)	-0.022 (0.096)	0.546**** (0.135)
R <sup>2</sup>	0.27	0.14	0.35
Winsorizing at			
10% and 90%			
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.178**** (0.040)	-0.035 (0.077)	0.439**** (0.121)
R <sup>2</sup>	0.26	0.13	0.33
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE A28

FALSIFICATION TEST USING THE WESTERN FRONTIER OF THE DUCHY OF MILAN  
IN THE YEAR 1700

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Placebo-Habsburgs	0.037 (0.045)	-0.038 (0.074)	0.109 (0.073)
R <sup>2</sup>	0.32	0.17	0.34
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	713	713	713
No. Treated Municipalities	373	373	373
No. Control Municipalities	340	340	340

*Notes.* The bandwidth is set at 30 km around the placebo frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the placebo frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A29

## FALSIFICATION TEST SHIFTING THE 1748 FRONTIER TOWARDS EAST AND WEST

Falsification Test	Frontier Eastward Shifted by 5 km			Frontier Westward Shifted by 5 km		
	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)
Placebo-Habsburgs	-0.002 (0.098)	-0.091 (0.094)	0.126 (0.159)	0.122 (0.082)	0.091 (0.111)	0.237 (0.145)
R <sup>2</sup>	0.22	0.15	0.32	0.26	0.12	0.34
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	661	661	661	647	647	647
No. Treated Municipalities	371	371	371	344	344	344
No. Control Municipalities	290	290	290	303	303	303
Falsification Test	Frontier Eastward Shifted by 40 km			Frontier Westward Shifted by 40 km		
Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(7)	(8)	(9)	(10)	(11)	(12)
Placebo-Habsburgs	0.025 (0.063)	-0.004 (0.076)	0.068 (0.136)	-0.003 (0.082)	0.213 (0.158)	-0.136 (0.095)
R <sup>2</sup>	0.17	0.15	0.20	0.31	0.14	0.31
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	No	No	No	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
No. Municipalities	589	589	589	567	567	567
No. Treated Municipalities	246	246	246	315	315	315
No. Control Municipalities	343	343	343	252	252	252

*Notes.* The bandwidth is set at 30 km around the placebo frontiers. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The categorical variable for NUTS-2 region is omitted when shifting the border towards East by 40 km due to collinearity. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the placebo frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

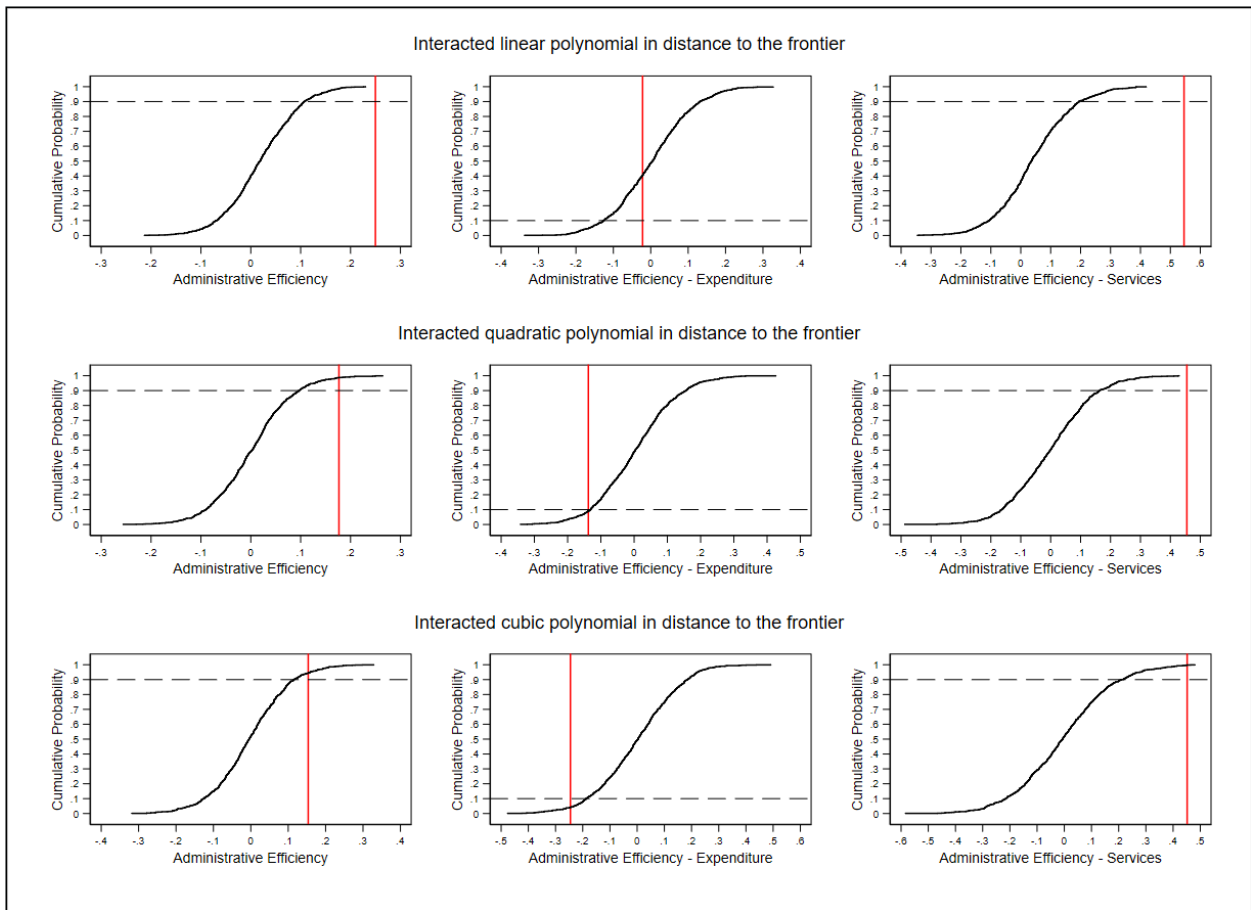


FIGURE A15

### Cumulative Distribution of Coefficients from 1,000 Randomly Drawn Placebo Frontiers

The plots report the cumulative distribution of coefficients obtained from a simulation of 1,000 random placebo frontiers. The y-axis indicates the point in the distribution, with the black dashed line referring to the 10% or the 90% of the cumulative distribution. The x-axis indicates the value of the placebo coefficients, while the red vertical line indicates the value of the “true” coefficient obtained from the corresponding RD specification.

TABLE A30

THE EDICTS PROMULGATED BY THE HABSBURG RULER BETWEEN JANUARY 1756  
AND FEBRUARY 1758

No.	Edict	Target Municipalities
1	Edict of 9 January 1756	Soncino
2	Edict of 2 June 1756	Casalmaggiore
3	Edict of 23 June 1757	Busto Arsizio
4	Edict of 30 July 1757	Monza
5	Edict of 19 August 1757	Varese
6	Edict of 19 August 1757	Codogno
7	Edict of 16 September 1757	Valsassina Valley (including 14 municipalities)
8	Edict of 11 November 1757	Gravedona
9	Edict of 14 December 1757	Gallarate
10	Edict of 16 December 1757	Abbiategrosso
11	Edict of 19 December 1757	Borghetto Lodigiano
12	Edict of 20 December 1757	Pizzighettone
13	Edict of 30 December 1757	Castiglione d'Adda
14	Edict of 30 December 1757	Canzo
15	Edict of 21 January 1758	Casalpusterlengo
16	Edict of 21 January 1758	Maleo
17	Edict of 21 January 1758	Treviglio
18	Edict of 4 February 1758	San Colombano al Lambro
19	Edict of 15 February 1758	Castelleone
20	Edict of 22 February 1758	Soresina

*Notes.* The Valsassina Valley includes the municipalities of Casargo, Cassina Valsassina, Cortenova, Crandola Valsassina, Cremeno, Margno, Moggio, Pagnona, Parlasco, Pasturo, Premana, Primaluna, Taceno and Vendrognò.

TABLE A31

CORRELATION BETWEEN FEUDAL STATUS AND SALARY PAID TO THE  
*CANCELLIERE* IN 1751

Dependent Variable	Salary Per Capita in 1751
	(1)
Subject to a Feudal Lord	0.027** (0.013)
R <sup>2</sup>	0.01
No. Milanese Municipalities	154
Free from a Feudal Lord	24
Subject to a Feudal Lord	130

*Notes.* Standard errors (in parentheses) are clustered at the municipality level. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A32

## BASELINE RD SPECIFICATION ON 1884 ESTIMATION SAMPLE

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.239**** (0.070)	-0.032 (0.098)	0.529**** (0.143)
R <sup>2</sup>	0.29	0.14	0.35
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	606	606	606
No. Treated Municipalities	337	337	337
No. Control Municipalities	269	269	269

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A33

## BASELINE RD SPECIFICATION ON 2013 NURSERY ESTIMATION SAMPLE

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.249**** (0.066)	-0.021 (0.096)	0.543**** (0.134)
R <sup>2</sup>	0.28	0.14	0.36
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	656	656	656
No. Treated Municipalities	371	371	371
No. Control Municipalities	285	285	285

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A34

BASELINE RD SPECIFICATION CONTROLLING FOR CIVIC CAPITAL AND  
REFERENDUM VOTING PREFERENCES

Dependent Variable	Administrative Efficiency	Administrative Efficiency – Expenditure	Administrative Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.250**** (0.065)	0.001 (0.100)	0.525**** (0.137)
R <sup>2</sup>	0.29	0.15	0.37
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
Civic Capital	Yes	Yes	Yes
Referendum Voting Preferences	Yes	Yes	Yes
No. Municipalities	657	657	657
No. Treated Municipalities	371	371	371
No. Control Municipalities	286	286	286

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. The set of control variables for civic capital includes log-volunteering and the average voter turnout at the referendum held in June 2011 (questions #1, #2, and #3). The set of control variables for referendum voting preferences includes the average percentage of “yes” votes at the referendum held in June 2011 (questions #1, #2, and #3), and the average percentage of blank votes at the same referendum (questions #1, #2, and #3). The three questions of the referendum held in June 2011 are as follows: question #1 concerns the entrusting and management of local public services with economic relevance; question #2 concerns the determination of the integrated water service tariff based on an adequate return on invested capital; question #3 concerns the production of nuclear electric power on the national territory. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .



TABLE A35

## BASELINE RD SPECIFICATION ON MUNICIPAL GOVERNMENT ESTIMATION

## SAMPLE

Dependent Variable	Administrative	Administrative	Administrative
	Efficiency	Efficiency – Expenditure	Efficiency – Services
	(1)	(2)	(3)
Habsburgs	0.221*** (0.082)	-0.030 (0.106)	0.489*** (0.151)
R <sup>2</sup>	0.29	0.15	0.38
Historical Controls	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes
No. Municipalities	609	609	609
No. Treated Municipalities	344	344	344
No. Control Municipalities	265	265	265

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A36

## BASELINE RD SPECIFICATION CONTROLLING FOR MUNICIPAL GOVERNMENT

Dependent Variable	Administrative Efficiency		Administrative Efficiency – Expenditure		Administrative Efficiency – Services	
	(1)	(2)	(3)	(4)	(5)	(6)
Habsburgs	0.224*** (0.081)	0.221*** (0.080)	-0.025 (0.104)	-0.018 (0.104)	0.491*** (0.150)	0.481*** (0.146)
R <sup>2</sup>	0.29	0.30	0.15	0.17	0.35	0.35
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
Municipal Government	Yes	Yes	Yes	Yes	Yes	Yes
Mayor's Characteristics	No	Yes	No	Yes	No	Yes
No. Municipalities	609	609	609	609	609	609
No. Treated Municipalities	344	344	344	344	344	344
No. Control Municipalities	265	265	265	265	265	265

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. The set of control variables for municipal government includes the dummy variables for left-wing and right-wing party governing the municipality in the period from January 1, 2013 to December 31, 2013. The set of control variables for mayor's characteristics includes: age (log-transformed); sex (male or female); and education level (categorical variable for no education title, primary education, lower secondary education, upper secondary education, and tertiary education). All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

TABLE A37

BASELINE RD SPECIFICATION CONTROLLING FOR CIVIC CAPITAL, REFERENDUM  
VOTING PREFERENCES AND MUNICIPAL GOVERNMENT

Dependent Variable	Administrative Efficiency		Administrative Efficiency – Expenditure		Administrative Efficiency – Services	
	(1)	(2)	(3)	(4)	(5)	(6)
Habsburgs	0.225*** (0.081)	0.221*** (0.079)	0.004 (0.107)	0.010 (0.106)	0.468*** (0.153)	0.458*** (0.150)
R <sup>2</sup>	0.30	0.31	0.17	0.18	0.37	0.37
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic and Economic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Border Segment FE	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Dominant State in 1700 FE	Yes	Yes	Yes	Yes	Yes	Yes
Civic Capital	Yes	Yes	Yes	Yes	Yes	Yes
Referendum Voting Preferences	Yes	Yes	Yes	Yes	Yes	Yes
Municipal Government	Yes	Yes	Yes	Yes	Yes	Yes
Mayor's Characteristics	No	Yes	No	Yes	No	Yes
No. Municipalities	609	609	609	609	609	609
No. Treated Municipalities	344	344	344	344	344	344
No. Control Municipalities	265	265	265	265	265	265

*Notes.* The bandwidth is set at 30 km around the frontier. Standard errors (in parentheses) are corrected for spatial dependence: the distance cut-off is set at 60 km. The one-dimensional RD polynomial is specified as an interacted linear polynomial in distance to the frontier. The dependent variables are log-transformed. The set of control variables for civic capital includes log-volunteering and the average voter turnout at the referendum held in June 2011 (questions #1, #2, and #3). The set of control variables for referendum voting preferences includes the average percentage of “yes” votes at the referendum held in June 2011 (questions #1, #2, and #3), and the average percentage of blank votes at the same referendum (questions #1, #2, and #3). The three questions of the referendum held in June 2011 are as follows: question #1 concerns the entrusting and management of local public services with economic relevance; question #2 concerns the determination of the integrated water service tariff based on an adequate return on invested capital; question #3 concerns the production of nuclear electric power on the national territory. The set of control variables for municipal government includes the dummy variables for left-wing and right-wing party governing the municipality in the period from January 1, 2013 to December 31, 2013. The set of control variables for mayor's characteristics includes: age (log-transformed); sex (male or female); and education level (categorical variable for no education title, primary education, lower secondary education, upper secondary education, and tertiary education). All specifications include a constant term. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ , \*\*\*\*  $p < .001$ .

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