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The Complex Imprint of Foreign Rule: Tracking Differential Legacies along the Administrative Hierarchy

Jan P. Vogler¹

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Abstract

Could imperial rule affect state institutions at the national, regional, and local level differently? No systematic theory to answer this question exists, which is surprising given the importance that is attributed to foreign rule for political-administrative organization around the world. The effectiveness of imperial rule may differ along the administrative hierarchy because empires are often subject to financial constraints, limits on organizational capabilities, and informational asymmetries. Therefore, a commonly used approach—aggregation at the national level—may yield erroneous findings about colonial legacies by ignoring vital nuances. To address this gap, I develop a novel theory of *imperial pervasiveness* and test it through a number of statistical analyses. Leveraging an original dataset of citizen perceptions of state institutions in Romania, this study reveals vastly different long-term effects of historical Habsburg rule at the regional and local levels. The results indicate that we need to rethink the study of colonial origins.

Keywords Imperialism · Legacies · State building · Bureaucracy · Foreign rule

Introduction

Could foreign rule affect the state's institutional development at the national, regional, and local level differently? Despite numerous studies on the long-term impact of colonialism and imperialism (e.g., Heller et al. 2009; Waldner et al. 2017;

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Yom 2011; Wibbels 2009),¹ neither systematic theory nor empirical test to explain possible *divergence* in the effects of foreign rule along the administrative hierarchy exist. This is surprising because previous studies have examined the legacies of empires in a vast array of dimensions, including political-economic structures (Acemoglu et al. 2001, 2002; Lankina and Getachew 2012; Lankina and Libman 2019; Nathan 2019; Paine 2019), legal systems (Acemoglu et al. 2011; La Porta et al. 1997; Mendelski and Libman 2014), the provision of public goods (Di Liberto and Sideri 2015; Guardado 2018; Lee and Schultz 2012), and public administration/state authority (Becker et al. 2016; Lange 2004; Pierskalla et al. 2017).²

The analysis of how administrative institutions in particular are affected by external factors is of special relevance to scholars of comparative and international political economy (CPE and IPE) for two reasons: First, these institutions determine the government's capacity to both coerce citizens and promote economic growth (Grundholm and Thorsen 2019; Hanson 2014; Mann 2008; Mattingly 2020; Slater 2008; Soifer 2013; Vogler 2023, forthcoming; Vu 2007). Second, while there are many contributions on (1) how bureaucratic design at the national level affects foreign policy (e.g., Arel-Bundock et al. 2015) and (2) how international agencies exercise administrative oversight (e.g., Grigorescu 2010), there is a noticeable scarcity of studies examining the impact of global phenomena, such as imperialism, on domestic bureaucratic development through “second image reversed” (Gourevitch 1978) perspectives.³

We can distinguish between different forms of imperialism, such as direct and indirect rule (Gerring et al. 2011).⁴ Regardless of which kind of imperial rule is analyzed, much of the existing research has an essential shortcoming: the aggregation of data across the national, regional, and/or local levels of the administrative hierarchy—a practice that may obfuscate vital nuances observable in more fine-grained analyses (cf. Gingerich 2013). Consider, for instance, La Porta et al. (1997), who code the United States as a “common law” country, without taking into account the French, Spanish, or Mexican civil law origins of some American state legal systems (Berkowitz and Clay 2012). Overlooking these and comparable differences along the administrative hierarchy can yield inconsistent results. This study elucidates those differences.

Importantly, this article does *not* claim that *all* existing analyses are limited to the national level (or to the aggregation of data at the national level). There are

¹ Additionally, scholars have also comprehensively investigated the effect of foreign aid on state development (Blair and Winters 2020; Barma et al. 2020).

² Moreover, for a study that evaluates the possibility of a reverse effect (of colonial administrations on bureaucratic organization in imperial centers), see Cornell and Svensson (2022).

³ Exceptions include Matsuzaki (2019), Mattingly (2017), and Vogler (2019b). Also, for an analysis of the indirect effect of colonialism on a country that remained independent (Siam), see Paik and Vechban-yongratana (2019).

⁴ For a more detailed discussion of this issue, see the historical background section.

many contributions that have moved from investigating national-level institutions to explaining *subnational* geographic variation. For instance, Lankina and Getachew (2012) examine if subnational variation in democratic outcomes across India is linked to missionary work and British colonialism. Similarly, Peisakhin (2014) examines variation in political attitudes and behavior, differentiating between a variety of local transmission mechanisms. These studies represent crucial advancements in moving away from simply aggregating data at the national level. However, what is missing from even these more fine-grained analyses is a *joint* examination of outcomes at *multiple* levels of the administrative hierarchy that is supported by a clear theoretical perspective. Thus, there still is a need to further differentiate between the administrative levels of government and examine how the quality of legacies could diverge along this administrative hierarchy, justifying a more in-depth study on possible variation along this specific dimension.

Several examples exist of how puzzling results can arise from disregarding the administrative hierarchy. For instance, Grosfeld and Zhuravskaya (2015) find no imperial legacies in Poland with respect to “trust in government.” Yet it is unclear whether the underlying question refers to the local, regional, or national government. If there is differential trust in governments along the administrative hierarchy, an aggregate measurement might obfuscate existing legacies. This could explain the discrepancy between their results and Vogler (2019b), who provides evidence for imperial legacies in local-government efficiency and meritocracy. Similarly, Kantorowicz (2022) finds differences in taxation practices across the historical borders of empires at the municipality level in Poland. Such clear variation in administrative performance likely affects citizens’ trust in local-level government.⁵

Another example is the study by Levkin (2015) that finds no differences in “trust in bureaucracy” between the formerly Habsburg and Ottoman parts of Romania. However, attitudes towards state institutions could differ between the national, regional, and local levels, and Becker et al. (2016) show that trust in specific *regional* (not local) state institutions (especially courts) varies significantly across the historical Habsburg borders.

Therefore, I seek to answer the following question: Do the legacies of foreign rule systematically vary along the administrative hierarchy? My analysis covers both bureaucratic and judicial state institutions as prominent studies in political economy have found that both types of institutions have been affected by foreign rule.

⁵ The case of Poland fundamentally differs from the case discussed here because the entire Polish territory was split between empires, meaning that no independent territories remained. As I discuss below, a central aspect of the historical divergence in the Romanian case is that only part of the territory was occupied by a foreign power (which was associated with sustained resistance against its institutions by the local population), while the other part was independent. Moreover, the administrative institutions in the Russian partition of Poland were the opposite of modern institutions, which is partly constitutive regional distinctions in legacies across the country. Thus, there are multiple crucial differences between this study and the analysis by Vogler (2019b).

To answer the question raised above, I develop a theoretical framework of *imperial pervasiveness*. I assume that when empires integrate territories into their core boundaries, (1) the imperial rulers typically seek to establish effective control⁶ over them, while (2) the people in those territories prefer to gain autonomy⁷ and thus attempt to resist colonial control. These are relevant underlying assumptions of my framework. With respect to the first of these assumptions, empires often tried to impose new institutions in occupied territories to ensure some degree of control (e.g., Centeno and Enriquez 2010; Matsuzaki 2019; Mattingly 2017; Vogler 2019b). The combination of such attempts to impose external institutions—even in cases in which those institutions were significantly more capable/modern than existing arrangements—frequently led to resistance by ruled populations (cf. Ferwerda and Miller 2014; Hechter 2013; Vogler 2019b), which is indicative of *tensions* that are inherent to numerous episodes of imperialism. Specifically, because even modern (externally imposed) institutions were used to suppress local populations and deny them self-governance, their imposition was often associated with processes of alienation and rejection.⁸

Given these assumptions, two dynamics predict a more effective imposition of institutions at higher levels of the administrative hierarchy. First, empires are typically subject to resource limitations (Kennedy 1988; Münkler 2007, 47; Vogler 2022). Financial pressures likely force imperial rulers to optimize cost-effectiveness by prioritizing the funding of institutions that are essential to imperial governance as they cover a wider area and a larger number of people, that is, those at higher administrative levels (which we might think of as “institutional economies of scale”). Second, building on insights from the literatures on political-economic organization (Hayek 1945; Rodrik 2007, chap. 5), empires (Centeno and Enriquez 2010; Münkler 2007, 125–126), and principal-agent theory (McCubbins et al. 1987; McCubbins 2014), I make the following argument: Organizational constraints and informational asymmetries in complex social systems limit the effectiveness of centralized imperial rule with respect to lower administrative levels and give ruled populations an informational advantage when resisting external rule at the *local* level. Accordingly, the effectiveness of imperial institutions varies along the administrative hierarchy.

I test this framework with an original dataset from present-day Romania that includes comprehensive information on citizen perceptions of state institutions at different administrative levels. Romania is an ideal testing ground for my theory, which aims to explain variations in the legacies of foreign rule. First, I am primarily interested in the institutions of the modern state and public administration, which developed in the nineteenth and early twentieth centuries (Carpenter 2001; Raadschelders and Rutgers 1996; Silberman 1993; Vogler 2023, forthcoming). Throughout this time period, the territories of present-day Romania were partly ruled by the Habsburg Empire and partly autonomous. Specifically, the region of Transylvania was ruled by the Austrian state between 1687 and 1866 and (subsequently)

⁶ “Effective control” is defined as the ability of the imperial center to implement and enforce laws.

⁷ “Autonomy” is defined as the ability of the local population to implement and enforce its own laws.

⁸ For example, in India, the British Empire imposed modern administrative and legal institutions, but faced significant resistance by local populations that rejected foreign rule.

by the Hungarian state—as a part of the Austro-Hungarian Empire—between 1867 and 1918. The other main parts of the Romanian nation (Wallachia and Moldavia) formed the Kingdom of Romania in 1866 and afterwards developed an early modern state. Figure 1 portrays the historical division.

The Romanian Communist regime aimed for the complete homogenization and unification of the country (Bădescu and Sum 2005, 118; Hitchins 2014, chap. 6), which makes finding Habsburg legacies more challenging and implies that Romania is a hard test case.⁹ Finally, the primarily military rationale of the border placement constitutes a natural experiment based on geography (Keele and Titiunik 2016). A quasi-random placement of borders¹⁰ makes it possible to use a range of empirical techniques, including a geographic regression discontinuity design (GRDD) (Becker et al. 2016; Levkin 2015).¹¹

In these empirical analyses, I rely on citizen evaluations and use a combination of more objective measures (wait times for standard administrative tasks) and more subjective measures (perceptions of corruption/trust). Both kinds of measures have their advantages and disadvantages: Objective measures of wait times for standard tasks are more comparable and arguably more reliable. To the contrary, subjective measures of corruption and trust in institutions may be more prone to individual cognitive biases. Yet, at the same time, they may also be substantively more relevant as they represent key components of the state's overall legitimacy. If citizens perceive public institutions as corrupt or not trustworthy, this can have negative effects on state–citizen interactions, including lower tax morale (Bräutigam et al. 2008; Levi 1989), higher willingness to engage in clientelistic exchange (Bustikova and Corduneanu-Huci 2017), and more frequent anti-government protests (Gingerich 2009).¹²

In analyzing both types of measures, I find that the legacies of foreign rule differ significantly both across the imperial borders *and* between levels of the administrative hierarchy. While the effect of Habsburg rule is positive at the regional level, it is either negative or displays no significant differences at the local level. These findings highlight the diverging impact and effectiveness of imperialism along the administrative hierarchy. More generally, my results underscore that we should not simply assume homogeneity of imperial rule. While I emphasize one specific dimension—of distinctions along the administrative hierarchy that are associated with the imposition of bureaucratic and legal institutions—this study also connects to the broader literature on within-colonizer heterogeneity in a variety of areas (e.g., Bruhn and Gallego 2012; Iyer 2010). Cumulatively, my findings and these studies suggest that imperial rule is much more complex and multifaceted than is frequently assumed. For this reason, we need to rethink the study of colonial origins.

⁹ On the impact of communism, see also Pop-Eleches and Tucker (2017).

¹⁰ For a more extensive discussion of this issue, see the detailed discussion in the Appendix.

¹¹ Yet this type of empirical test is ideally based on a high density of observations at the historical borders and the absence of potential spillover effects. Since my empirical test does not perfectly meet these conditions, in the Appendix, I also conduct an alternative analysis based on genetic matching.

¹² Due to the existence of self-reinforcing equilibria in state–citizen interactions (Corbacho et al. 2016; Bustikova and Corduneanu-Huci 2017; Vogler 2019b), it is very difficult to disrupt/change such dynamics. On self-reinforcing mechanisms of intertemporal persistence more broadly, see also Gingerich and Vogler (2021) and Kuipers (2022).



Fig. 1 The Austro-Hungarian Empire and Romania (1900). (This map is partly based on the following source: ©EuroGeographics for the administrative boundaries.)

Theory, History, and Hypotheses

Framework of the Differential Effects of Imperial Rule and an Application to the Habsburg Empire

It is important to distinguish between at least three forms of imperial rule. Empires can either (1) integrate territories into their core state boundaries, (2) establish a formal colony to rule directly, or (3) indirectly rule a territory by rendering it dependent while not implementing institutions (see Gerring et al. 2011). My theory is focused on the first type of imperial domination, which was common in Europe: Russia, Germany, and the Habsburg Empire typically integrated occupied lands into their core territory and imposed their own administrative institutions to consolidate their rule.¹³ In general, the inhabitants of foreign-controlled territories desired autonomy and sought opportunities for resistance (cf. Aaskoven 2022; Ferwerda and Miller 2014; Hechter 2013; Vogler 2019b).

For the Habsburg rulers, effectively controlling occupied territories was a major goal. The ability to enforce laws was particularly relevant for core functions of the state, such as tax collection and military conscription. Concerns about effective control of occupied territories and related issues caused two major efforts toward a

¹³ Additionally, some of the insights gained here may also be applicable to other contexts. I again highlight the possibility of expanding the theory to account for these other contexts in the conclusion.

more uniform administrative system. First, after military conflicts in the eighteenth century, the Habsburgs recognized that fragmentation in administrative organization was disadvantageous for military mobilization (Deak 2015, 9–12, 16; Hochedlinger 2003, 7–9; Judson 2016, 4–5, 16, 26–29; Kann 1974, 174–178). Moreover, after the 1848/49 revolutions, the centralization and unification of administrative organization was seen as a necessary response to resistance against Habsburg rule. Accordingly, consolidation of political control through a uniform and centralized public administration was an enduring goal of the Habsburgs (Deak 2015, 70, 95–96; Judson 2016, 54, 71, 103–107, 218–219). Thus, while we historically observe that some empires aimed at only controlling strategically or economically important locations in territories that were separated from their core state (cf. Acemoglu et al. 2002; Benton 2009; Sharman 2019; Vogler 2022, appendix), the Habsburgs generally incorporated occupied territories into their core boundaries and aimed at *uniform* geographic control (Deak 2015; Judson 2016). This also means that—in contrast to some other empires (Pierskalla et al. 2019)¹⁴—the goal of this imperial state was the effective control of its *entire* territory, not merely a number of select valuable regions.¹⁵

Although empires have incentives to control acquired territories—especially when they are part of their core state—the resources at their disposal are limited, creating pressures to allocate funding in a cost-effective manner (Münkler 2007, 47).¹⁶ The full control of all localities within an occupied territory is costly, and excessive expenditures frequently contribute to imperial decline (Kennedy 1988). While the longevity of the British empire can be linked to its cost-effectiveness, comparing the burden of maintenance to the economic benefits (Edelstein 1982; Offer 1993), the downfall of the Spanish empire is often attributed to poor fiscal management (Münkler 2007, 66). If empires seek to establish uniform control over their territory but face financial constraints, they have incentives to prioritize the funding of institutions that cover the widest territory and the largest number of people as these institutions are essential to maintaining the coherence of imperial governance.¹⁷

Similarly, the Habsburg state was always subject to financial pressures as reflected by an enduring budget deficit (Deak 2015, 30–33, 133; Hochedlinger 2003, 30–34; Judson 2016, 26–28, 45, 72, 108, 220; Münkler 2007, 63), which directly affected the financing of its administrative apparatus (Hochedlinger 2003, 34; Judson 2016, 43). Thus, achieving cost-effectiveness in administrative organization was the driving goal behind many reforms of the state (Kann 1974, 177). Bureaucratic structures had to be constructed in a way that allowed for the maintenance of Habsburg rule while minimizing financial burdens (Deak 2015, 9–12, 15–16, 21–22, 26, 107, 133, 138–141; Judson 2016, 72, 108, 219). These circumstances explain why Habsburg rulers had incentives to prioritize the funding and control of institutions that covered a more extensive geographic area and a larger number of people, while they often

¹⁴ For alternative cases of governance that do exhibit significant variation in ruling strategies and/or local state capacity, see Liu (2022) and Pardelli and Kustov (2022).

¹⁵ On the challenges associated with imperial rule through bureaucracies, see also Centeno and Enriquez (2010).

¹⁶ On the financial circumstances of and incentives for imperialism, see also Vogler (2022).

¹⁷ We may think of higher-level administrations as enjoying greater “institutional economies of scale.”

delegated local responsibilities to the landed nobility and other actors (Judson 2016, 43).

Furthermore, bureaucracies sometimes experience limits with respect to the flow and management of knowledge (Coyne 2008; Tullock 2005). Complex social systems can be difficult to control for imperial rulers, as the aggregation of information has the potential to push highly centralized political structures to their organizational limits (Hayek 1945; Münkler 2007, 125–126; Rodrik 2007, chap. 5). The imperfect aggregation of knowledge—along with informational asymmetries between the imperial center and the local population,¹⁸ comparable to asymmetries in a principal-agent relationship (McCubbins et al. 1987; McCubbins 2014)—likely gives the ruled people an informational advantage when resisting foreign institutions.¹⁹ In turn, the level of effective control that empires enjoy decreases, while the space for resistance and the likelihood of tensions with the population increase as we move down along the administrative hierarchy.

The Habsburg Empire experienced such constraints as well. Even though it had a relatively modern bureaucracy and legal system as of the late eighteenth and early nineteenth centuries (Deak 2015; Foster 2003, 13–14; Judson 2016, 107; Raphael 2000, 58–59), its public administration faced challenges of information flow and effective local control. The large number of languages spoken within the Empire's boundaries and its cultural, religious, and ethnic fragmentation were partially constitutive of these limits. Moreover, representatives of the state regularly found themselves in struggles with members of the local nobility or other forces for local autonomy, indicating tensions at the local level. All of this meant that the power of the imperial center did not reach all localities (Deak 2015, 13–16, 30, 38–41, 44–49, 88–90; Judson 2016, 18–19, 38–39, 43–49, 79–81). It is worth pointing out that, during the period of neoabsolutism in 1849–1859, the state expanded its reach, but heterogeneity in local conditions and financial pressures remained severe constraints on effective control (Deak 2015, chaps. 3–4; Judson 2016, 218–220).

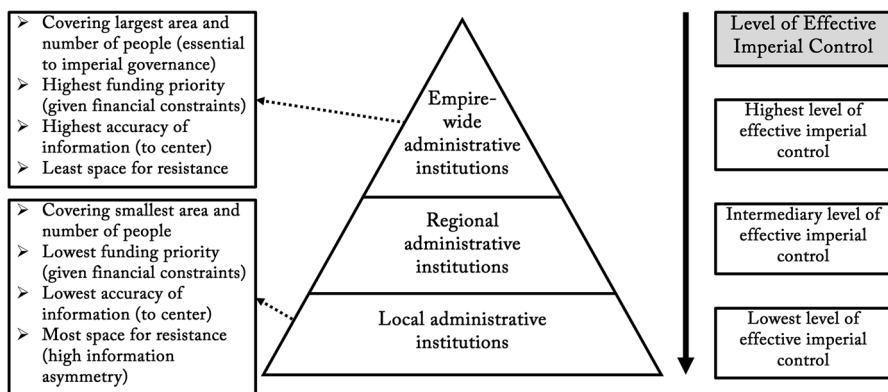
In short, when empires try to impose institutions on occupied territories, this process is often associated with significant tensions. Even the imposition of modern bureaucratic and legal institutions can be associated with sustained resistance by local populations, especially if those institutions are used to suppress these populations politically. Given these circumstances, two factors predict a differential effect along the administrative hierarchy. As summarized in Table 1 and Fig. 2, the combination of (1) resource constraints and (2) limits to the aggregation of knowledge along with informational asymmetries means that foreign rule can be expected to be less effective and experience more tensions with the local population as one moves down along the administrative hierarchy. All of these predictions can be observed in the case of the Habsburg Empire.

¹⁸ For an exploration of these dynamics with respect to overseas empires, see Banks (2002) and Gailmard (2022).

¹⁹ On the historical relevance of information asymmetries for government structures, see also Ahmed and Stasavage (2020).

Table 1 Constraints on Imperial Rule and Consequences for the Implementation of Institutions

	Constraints	Consequences
Finances	Limited financial resources of the imperial center	Prioritization of funding for institutions covering a more extensive area/population (essential to maintaining the coherence of imperial governance)
Information	Imperfect aggregation of information by center and informational asymmetries	Resistance more successful against lower-level institutions

**Fig. 2** Framework of Imperial Pervasiveness

The Imperial Administration in Transylvania (1849–1918)

Throughout the nineteenth and early twentieth centuries, when modern bureaucracies emerged (Silberman 1993; Carpenter 2001; Raadschelders and Rutgers 1996; Vogler 2023, forthcoming), Transylvania—a region of present-day Romania—was part of the Habsburg Empire. Since the early nineteenth century, the Habsburg public administration, too, had many characteristics similar to the concept of “modern bureaucracy” (Becker et al. 2016; Deak 2015, 21, 29; Taylor 1948, 38; Vogler 2023, forthcoming). However, the imposition of Habsburg institutions in Transylvania was multifaceted.

Before 1848, the local landed elites of Transylvania administered their lands themselves (Deak 2015, 44–45; Judson 2016, 42–43, 80–85). After 1848, however, the external imposition of modern administrative institutions began. At first, between 1849 and 1867, the Austrian state pursued a policy of “[e]xcessive centralization and ... Germanization” (Treptow 1996, 330).²⁰ On one hand, this entailed the introduction

²⁰ See also Bodea and Căndea (1982, 52) and Hitchins (1994, 202–203).

of modern and rational bureaucratic and legal institutions, which had been developed by Austria (Deak 2015; Foster 2003, 13–14; Raphael 2000, 58). On the other hand, it conflicted with the Romanian goal of gaining greater political and cultural autonomy (Hitchins 1994, 4–5, 202; Kann 1974, 304).²¹

In 1867, following the defeat of Austria in the war against Prussia, the *Dual Monarchy* of Austria-Hungary was established (Deak 2015, 167–171; Hoensch 1996, 16–19; Judson 2016, 259–264; Kann 1974, 332–342). As a consequence, Transylvania fell under Hungarian administration (Bodea and Căndeia 1982, 53). Even though the Hungarian state institutions—like Austria’s—were closer to the modern bureaucracy than administration by the landed elites (Küpper 2017), significant tensions arose between the bureaucracy and the Romanians. The Hungarian government wanted to achieve a *Magyar* (Hungarian) empire and aimed to integrate Transylvania politically, administratively, and culturally. Hungarian bureaucratic institutions were imposed at both the regional and local levels. With the goal of removing Romanian national identity, Hungarian became the official national language and was required in schools. Furthermore, the political structure of Transylvania was designed to maximize the electoral influence of Hungarians over Romanians. Therefore, achieving political autonomy became a key goal of the Romanians in Transylvania (Bodea and Căndeia 1982, chaps. 12–13; Hitchins 1994, 202–230; Hitchins 2014, 144–145; Hoensch 1996, 28–31; Szász 2002, 669–677; Treptow 1996, 336–339).

After the compromise of 1867, the Hungarian government increasingly “sought to exercise greater control over county and local government” (Judson 2016, 344),²² which led to strong Romanian resistance. “Of the three communities [of Transylvania, Bucovina, and Bessarabia], the Rumanians of Transylvania put up the strongest defence of their national existence” (Hitchins 1994, 202).²³ Measures of both active and passive resistance were taken against Transylvania’s integration into the administrative structures of Hungary (Bodea and Căndeia 1982, 59; Hitchins 1994, 204–205, 216–217; Szász 2002, 669–670). Moreover, in a memorandum to the Emperor, Romanian politicians and intellectuals demanded Transylvania’s autonomy (Hitchins 1994, 208–209; Treptow 1996, 336). While, under Hungarian rule, all traditional *formal* administrative institutions (that had previously existed) were abandoned, it is likely that local elites and populations were able to preserve some of their own *informal* institutions that contradicted the newly imposed formal administrative institutions. When there are such contradictions between formal and informal institutions, the effectiveness of governing is often reduced (see Böröcz 2000; Lauth 2004).

The opposition to administrative integration was so strong because the Hungarian bureaucracy was accused by the Romanians of participating in the destruction of Romanian culture and political development (Hitchins 1994, 212). In the late

²¹ Between 1863 and 1865, there was a brief period of liberalization with more extensive Romanian self-administration, but this remained temporary (Bodea and Căndeia 1982, 53; Treptow 1996, 330–334). In contrast to some non-European cases (Arias and Girod 2014; Hariri 2012), the Romanians of Transylvania were neither able to prevent the imposition of foreign institutions nor did their traditional administrative organization persist beyond 1848. Furthermore, on the general relevance and long-term impact of precolonial developments, see also Wilfahrt (2018) and Dincecco et al. (2022).

²² See also Janos (1982, 95–96).

²³ See also Bodea and Căndeia (1982, 54).

nineteenth century, under prime minister Dezső Bánffy, the attempts of Magyarization supported by the public administration became even more intense—all the way to the local level (Szász 2002, 695–696). Because the Romanian majority only represented six percent of bureaucrats (Treptow 1996, 338–339) and the Hungarian language dominated in administrative affairs (Hoensch 1996, 31; Judson 2016, 267), the alienation between the administration and the Romanian inhabitants of Transylvania grew stronger, and the latter called for more representation (Szász 2002, 674–675).

Similar dynamics can also be observed in the broader “professional class,” including the legal profession, which was heavily dominated by Hungarians. If any members of ethnic minorities found access to this professional class in the Habsburg Empire’s Hungarian part, they were primarily Germans and Jews—not Romanians (Kovács 1994, 16–20). A factor that further added to the inaccessibility of the public administration was the perceived “overproduction” of graduates—a phenomenon that was closely related to the relative scarcity of prestigious jobs for citizens with higher education. These circumstances led to personal and political relationships playing a greater role in administrative recruitment, furthering the notion of significant bureaucratic corruption (Janos 1982, 170–171). All of this contributed to the alienation between the Hungarian administration and the Romanian population.

Hechter (2013) argues that foreign rule is more likely to be seen as legitimate if it is considered effective and fair. With respect to fairness, the Hungarian public administration did not work indiscriminately—instead, it often put Romanians at a disadvantage, especially with respect to recruitment and the enforcement of regulations (Bodea and Cădea 1982, 55–56). This can partly explain why the Hungarian administration was perceived as corrupt and why there was such strong opposition to it.²⁴ However, building upon Hechter (2013) and my previous discussion, differential effectiveness of institutions at the regional and local levels means that institutions at the upper levels of the administrative hierarchy are likely to have been perceived as more legitimate.

In the legal realm, too, the Hungarian state was moving closer to the modern *Rechtsstaat*, amongst others, by establishing independent courts as of 1869. The goal of modernization motivated judicial reforms that lasted throughout the late nineteenth century (Küpper 2017, 294–295, 299–300). Romanians enjoyed essential rights, including the rights to property and individual freedom (Bíró 1992, chap. 5). Yet, at the same time, Hungarian laws and their enforcement through the legal system were seen as essential to the denial of Romanian autonomy (Hitchins 1994, 204–207; Molnár 2001, 223). The courts also rejected petitions in Romanian (Judson 2016, 267). Thus, while the system was close to the principles of a modern *Rechtsstaat* in that it successfully protected essential individual rights, regardless of ethnic background, it denied the Romanians political autonomy and prohibited the use of their own language in legal affairs.

²⁴ On corrupt behavior by Hungary’s bureaucracy, see also Janos (1982, 97).

In sum, before 1848, Transylvania was administered by its nobility. The introduction of modern bureaucratic and legal institutions began after 1848. For approximately two decades, this process was associated with comprehensive attempts of “germanization.” Additionally, following the Austro-Hungarian compromise of 1867, Hungarian administrative and legal institutions were imposed, leading to strong resistance by the Romanian population. Figure 3 illustrates these historical developments.

Based on my theory, I expect that foreign rule had some positive long-term effects. The externally imposed public administration and legal system were closer to the principles of a modern state than traditional control through the nobility. Nonetheless, strong historical resistance against external rule by the local population means that effects may differ along the administrative hierarchy. Following my framework that emphasizes informational and financial constraints, I expect this resistance against institutions to be most successful at the local level.

The Romanian State and Its Institutional Development (1866–1918)

In the years 1866–67, amid the integration of Transylvania into Hungary’s administrative structures, a Romanian state was founded in the regions of Wallachia and Moldavia. Its 1866 constitution was a liberal document with middle-class principles at its core (Hitchins 1994, 17–22; Hitchins 2014, 113–115). Prior to the nineteenth century, Wallachia and Moldavia had been part of the Ottoman Empire.

The Ottomans had attempted to impose their own administrative institutions in 1595, but had failed due to military backlashes (Treptow 1996, 158). Even though Wallachia and Moldavia subsequently had to pay tributes, the two provinces retained a high level of autonomy, did not adopt Islamic institutions, and never introduced millet courts or the *timar* system (Levkin 2015; Mendelski and Libman 2014; Pamuk 2004, 230; Sugar 1996, 113, 121; Treptow 1996, 158–159). Instead, many

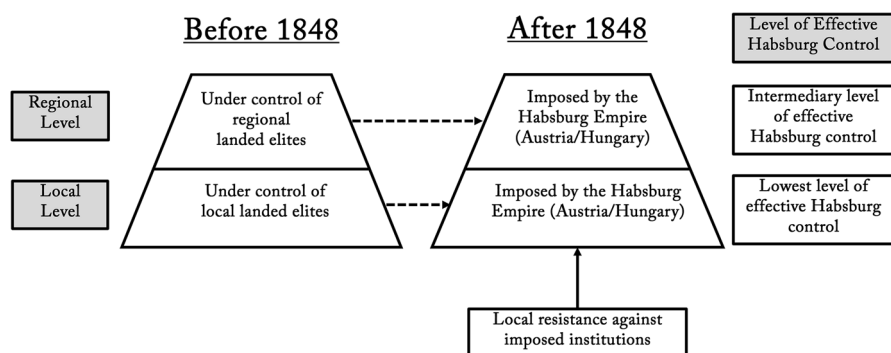


Fig. 3 The Imposition of Administrative Institutions in Transylvania

local customs and institutions remained in use (Levkin 2015; Pamuk 2004, 230; Sugar 1996, 121). As the Ottomans did not impose an administrative apparatus on Wallachia and Moldavia, left local institutions in place, and never had a modern bureaucracy of their own—which only developed in Romania after 1866 (Hitchins 1994, 1)—the Ottoman impact on administrative institutions was relatively minor.²⁵

The most decisive events shaping the public administration of Romania happened long after Ottoman influence had waned. In 1864, the *Communal Act* and the *Act for the Establishment of County Councils* created a common framework for the organization of local administration, and the 1866 constitution established the central administration (Dinca 2012, 9–11). Furthermore, the Brătianu government (1876–1888) initiated major reforms aimed at further centralization of the state, including the 1884 constitutional revision (Hitchins 1994, 96; Hitchins 2014, 130).

But the modernization and unification of the bureaucratic system in the form of a unitary state was only completed later, namely in the interwar period (1918–1939) (Dinca 2012, 13–20). This means that in the late nineteenth and early twentieth centuries, the Romanian bureaucracy still lagged behind its Austrian and Hungarian counterparts, which had mostly completed this process (Deak 2015; Küpper 2017; Molnár 2001, 223; Wiederin 2017). Nonetheless, in 1901, the number of civil servants expanded to two percent of the population (Hitchins 1994, 162), and Romania had developed a strong executive with a centralized bureaucracy (Hitchins 2014, 112). Thus, while the Habsburg bureaucracy was seen as more capable than the public administration of its neighbors to the east and south, as it had been in the past (Becker et al. 2016, 47–48), legislation was gradually moving Romania toward a modern bureaucracy (Dinca 2012, 7–13).

In terms of the legal-judicial system, the Romanian state was moving closer to the modern *Rechtsstaat*. The principle of equality before the law had already been formally established in Wallachia and Moldavia in 1856 (Dinca 2012, 8) and was confirmed by the 1866 constitution (Hitchins 2014, 113). But, in practice, the legal system did not offer equality to women and the Roma (Hitchins 2014, 115–116), the working class had no protection against exploitation (Hitchins 1994, 163), and Jews were denied essential civil and political rights (Hitchins 1994, 164–166). Thus, despite some progress, the Romanian legal system did not fully meet the standards of the modern *Rechtsstaat*, while the Habsburg Empire was more advanced in the judicial realm (Bíró 1992, chap. 5; Deak 2015, 170–171; Foster 2003, 13–14; Judson 2016, 107; Küpper 2017).

To summarize, Wallachia and Moldavia began the development of modern state institutions in the 1860s. Both the Austro-Hungarian and Romanian administrations were centralized systems, but two crucial differences remained. First, the Habsburg bureaucracy and legal system were closer to the standards of the modern state than their equivalents in the Kingdom of Romania. Second, the former was associated with an undermining of Romanian political, administrative, and cultural autonomy, which led to strong local resistance against foreign rule in Transylvania.²⁶

²⁵ However, the absence of the printing press in large parts of the Ottoman Empire might have had an impact on human capital accumulation (see Popescu and Popa 2022).

²⁶ I discuss the special status of Bucovina in the [Appendix](#).

Hypotheses

Based on the previous discussion, it is clear that a significant tension was inherent to many forms of imperial domination. This tension can also be observed in the case of Habsburg rule in Romania. While the legal and administrative institutions imposed by the Habsburg Empire meant significant advancements compared to previous political-administrative practices (that is, a relatively modern bureaucracy and *Rechtsstaat* compared to prior rule through the landed elites), the denial of political autonomy and the comprehensive exclusion of Romanians from the state apparatus led to alienation from and resistance by the Romanian population. The administrative and legal systems of the Kingdom of Romania were similar, especially in terms of the degree of centralization, but they did not come as close to modern state standards as Habsburg institutions (cf. Mendelski and Libman 2014).²⁷

This inherent tension of imperial rule (more advanced institutions on one hand, coupled with resistance by the local population on the other) is reflected in my theoretical framework that allows for positive effects of foreign rule at higher levels of the administrative hierarchy (at which the Habsburg Empire invested more resources and was subject to less effective resistance by the local population). Specifically, for the elaborated reasons, I expect that the implementation of modern state institutions was more successful at the regional level and less successful—and subject to greater tensions with the population—at the local level. Thus, I anticipate *divergent* long-term effects of the imposition of administrative institutions at the regional and local levels. Yet it is difficult to assess the operational effectiveness of state institutions with perfect accuracy. Since I rely on survey data from Romanian citizens, my measurements represent *experiences with and perceptions of public institutions* and my testable hypotheses are focused on variations in these dimensions. In the following section, I discuss if and how this could be problematic for my analysis.

From the above discussion, I derive two hypotheses:

Hypothesis 1: State institutions at the regional level in the parts of Romania that were under the control of the Habsburg Empire (Austria-Hungary) will operate more efficiently and be perceived more positively than in the parts that were not under control of the Habsburg Empire.

Hypothesis 2: State institutions at the local level in the parts of Romania that were under the control of the Habsburg Empire (Austria-Hungary) will either show no difference to or operate less efficiently and be perceived less positively than in the parts that were not under control of the Habsburg Empire.

In the [Appendix](#), I discuss the mechanisms of intertemporal transmission in detail.

²⁷ Furthermore, for an overview of possible long-term divergence in political behavior, see Roper and Fesnic (2003).

Empirical Test

To empirically assess imperial legacies, I conducted an original survey focused on perceptions of public institutions in Romania. The main reason for the collection of an original dataset was that most existing surveys ask about broadly defined institutions, such as “the bureaucracy” or “the legal system,” without sufficiently *differentiating* between levels of the administrative hierarchy in the wording of questions. Yet exploring distinct legacies along the administrative hierarchy is the primary aim of my study.

Thus, I included questions on perceptions of *both* local and regional public institutions. The data represent a random sample of Romanian citizens. The interviews were executed face-to-face by trained specialists of the Romanian survey firm INSCOP. A total of 1,001 adults were surveyed in April and May 2017. While the analysis of further surveys at multiple other points in time (for instance, one shortly after the fall of communism) would have been ideal, due to the focus on differences along the administrative hierarchy—which are not sufficiently covered in most other datasets—the usefulness of data from other periods and sources (for example, Eurobarometer) is severely limited.

As my data are based on perceptions and experiences, I have to acknowledge the possibility that it is not the underlying performance of these institutions that differs, but merely views thereof. In this regard, Marvel (2016) demonstrates that deeply rooted attitudes toward bureaucracies can affect performance evaluations even when recent information is provided. Several responses can be given to this possible limitation. First, as Chamlee-Wright and Storr (2010) demonstrate, perceptions of government action affect citizen behavior even in the most critical situations, such as natural disasters. Furthermore, negative perceptions of governments, for example perceived corruption, could undermine the legitimacy of political rulers (Gingerich 2009; Seligson 2002). Thus, perceptions and expectations are highly socially relevant, in part because they affect the behavior of citizens and ultimately also the actual performance of public administrations, for example in terms of the quality of public services (Vogler 2019a).²⁸

Another potential problem is measurement error. Previous research has revealed that the “objective” quality of public services and citizen satisfaction with those services are not always correlated (Kelly and Swindell 2002). These concerns may be related to how exactly public service quality is measured or quantified (Andrews et al. 2006). I address concerns about possible measurement error in two ways. First, I abstain from asking questions about public service quality in areas that are difficult to observe or quantify for citizens. Instead, I focus on questions that are easy to quantify or do not require quantification at all. Second, in order to minimize bias

²⁸ Additionally, Vogler (2019b) shows that more positive views of the state lead to the self-selection of more applicants to the bureaucracy, which likely increases competitiveness and could thereby ultimately enable the provision of higher-quality public services.

from systematic differences in subjective scales (which could happen more easily if the true differences were only in perceptions instead of underlying performance), I ask questions about procedures that most citizens have direct exposure to and that are easy to put into numbers, such as waiting times. Finally, since trained survey specialists collected the data, I have no reason to believe that any systematic measurement error was induced by the interviewers. Nonetheless, following Andrews et al. (2006), future contributions considering similar issues could improve on the study at hand by considering additional indicators of bureaucratic performance.

Figure 4 shows the locations of respondents on a map of Romania with the present-day borders represented by a solid black line and the historical division superimposed. Information on the historical borders was obtained from Nüssli and Nüssli (2008) and information on the present-day borders from Eurostat (2017).

Among others, I apply a geographic RDD, with the imperial borders as the historical discontinuity.²⁹ In the [Appendix](#), I elaborate in detail on the assumption of quasi-randomness of the imperial border, and, below, on the specifications of my regressions.

In the empirical analysis, I evaluate the perceptions of state institutions at the local and regional levels. With respect to the local level, I primarily use the following variables:

1. Perceptions of the frequency of corrupt practices at the local public administration (at the level of the municipality, city, or commune)
2. Wait times to apply for a government issued ID, which is an administrative task at the local level (available in the nearest municipality)
3. Trust in the local public administration (at the level of the municipality, city, or commune) (results for this variable are primarily in the [Appendix](#))
4. Perceptions of the efficiency of the local public administration (at the level of the municipality, city, or commune) (results for this variable are primarily in the [Appendix](#))

An investigation of corrupt practices is particularly important from the perspective of political economy because corruption significantly inhibits development and economic activity/growth (Goudie and Stasavage 1998; Mauro 1995).³⁰

Moreover, in order to identify differences in regional-level institutions, I specifically consider the following two variables:

1. Trust in courts (at the lowest level, courts are responsible for a district or a county, which typically encompasses multiple communes or cities)
2. Wait times for a car registration or a driver's license, which are administrative tasks that are conducted for multiple administrative subunits by a regional bureaucratic institution responsible for the entire county (*Județ*)

²⁹ On the broader relevance of historical borders and border shifts for political, economic, and institutional outcomes, see also Braun and Kienitz (2022).

³⁰ Also, Treisman (2000) considers colonialism to be an important factor that impacts contemporary corruption levels.

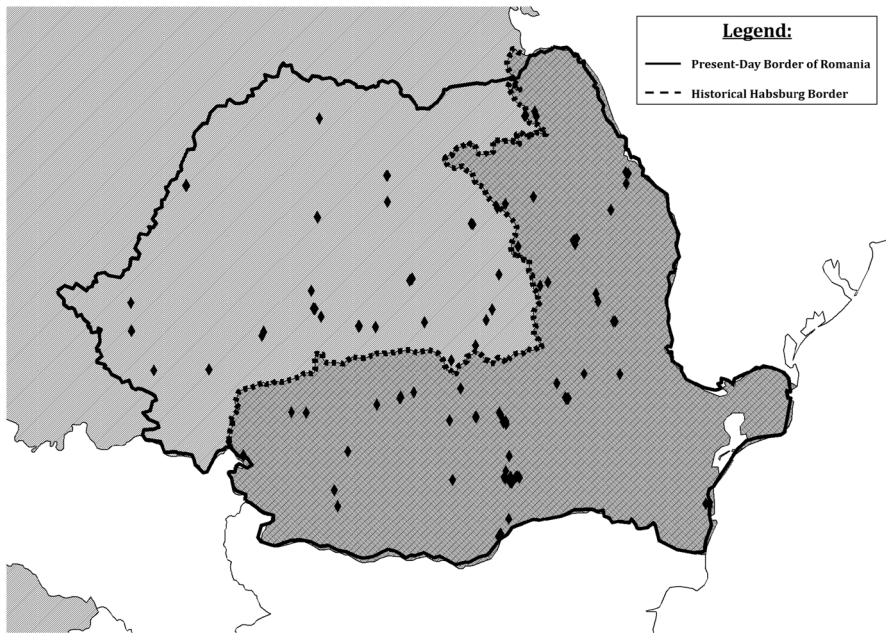


Fig. 4 Division of Romania (1866–1920) and the Survey Locations (2017). (This map is partly based on the following source: ©EuroGeographics for the administrative boundaries.)

In particular, the analysis of wait times is highly comparable between the regional and the local levels. In both cases, we deal with relatively common, uncomplicated, and frequent administrative requests that do not substantially deviate in their formal requirements across different territorial settings.³¹ While the more “objective” measure of wait times is thus extremely similar at both administrative levels, with respect to the more “subjective” measures, I chose several different operationalizations at the local level (including perceptions of both corruption and efficiency). My choice of measures at different levels was guided by a number of factors. First, “trust in courts” is the main variable used in one of the most prominent scholarly contributions on the Habsburg Empire’s legacies by Becker et al. (2016). Because this outcome (and the comparison to outcomes in other studies) was one of the motivations for my study (as detailed in the introduction), I chose to replicate their measurement.

Although I also use an additional measure of corruption at the local level, this measurement is still substantively related to the previous measurement (of trust) at the regional level. Specifically, the literature has found that corruption

³¹ In part for this reason, both measures were recommended by the Romanian survey firm INSCOP that executed the survey.

and trust in public institutions are not only closely related concepts, but there are indications that they mutually reinforce each other (see Morris and Klesner 2010; Putnam et al. 1993; Uslaner 2013). Moreover, the inclusion of further local-level measures (*perceptions of corruption* and *perceptions of efficiency*) was guided by the fact that, in line with my theory, citizens have the chance to more directly observe patterns of state employees' behavior at this level. Given (1) how closely related the two concepts are and (2) the fact that citizens have more opportunities for direct interaction with the local administration (which is in line with my theoretical framework), the inclusion of additional, more concrete measures that build on direct observations is justified here. Finally, more detailed information on the coding of the dependent variables is included in the [Appendix](#).

Empirical Techniques and Properties of the Regressions

To test if there are any long-term legacies of the Habsburg Empire, and if those legacies differ between the regional and local levels, I make use of several empirical techniques. Because each of these empirical techniques has individual benefits and shortcomings, we can only have a high level of confidence in results that show consistency across several different regression formats. I begin with a simple dummy variable framework. Then, I proceed to use a GRDD with distance to the border as the forcing variable. To address potential weaknesses of an RD analysis—including the smaller number of observations in the immediate vicinity of the border and possible spillover effects—I include a third alternative: matching based on covariates. Below, I elaborate on these methods and their respective empirical specifications.

Simple Dummy Variable Comparison: Before I conduct a geographic RD analysis, I use a simple dummy variable framework with the following properties:

$$y_i = \beta_0 + \beta_1 \text{Habsburg Empire}_i + \varepsilon_i \quad (1)$$

y_i is the dependent variable at the level of the individual respondent i . β_1 represents the difference between respondents in the formerly independent parts of Romania and respondents from the formerly Austro-Hungarian parts.

In the results section, I also briefly point to the results of a simple dummy variable analysis that includes covariates. In this case, the regression has the following format:

$$y_i = \beta_0 + \beta_1 \text{Habsburg Empire}_i + \mathbf{x}'_i \boldsymbol{\beta} + \varepsilon_i \quad (2)$$

In the above specification, \mathbf{x}' represents a vector of covariates and $\boldsymbol{\beta}$ represents a vector of the respective coefficients.

Geographic RD Analysis: Additionally, I implement a geographic RDD (Keele and Titiunik 2015), using distance to the border as the forcing variable:

$$y_i = \beta_0 + \beta_1 \text{Habsburg Empire}_i + \mathbf{x}'_i \boldsymbol{\beta} + f(\text{geographic location}) + \varepsilon_i \quad (3)$$

y_i is the dependent variable. β_1 represents the difference between answers by respondents from the two historically distinct parts of Romania. \mathbf{x}' represents a vector of covariates and $\boldsymbol{\beta}$ represents a vector of the respective coefficients. $f(\text{geographic location})$ is one of three functions of the geographic location described below.

Distance to Border: The first function represents the air distance to the historical border:

$$f(\text{geographic location}) = \gamma_1 \text{distance to border}_i + \gamma_2 \text{distance to border}_i * \text{Habsburg Empire}_i \quad (4)$$

In this format, distance is measured as the absolute distance to the historical border in kilometers. In each comparison, distance values are negative for respondents located in the parts that formerly belonged to Austria-Hungary and positive for respondents located in the parts that formerly belonged to independent Romania. Coefficients are represented by γ .

Latitude/Longitude: In addition to measuring the distance to the border, I use another specification, including controls for latitude and longitude and an interaction of the two:

$$f(\text{geographic location}) = \gamma_1 x + \gamma_2 y + \gamma_3 xy + \gamma_4 \text{distance to border}_i + \gamma_5 \text{distance to border}_i * \text{Habsburg Empire}_i \quad (5)$$

In this framework and in the one below, x represents a respondent's latitude and y represents a respondent's longitude. Coefficients are again represented by γ .

Latitude/Longitude Polynomials: Moreover, following Dell (2010), I use a function where the geographic location is a function of latitude, longitude, and interactions as well as polynomials of those variables:

$$f(\text{geographic location}) = \gamma_1 x + \gamma_2 y + \gamma_3 x^2 + \gamma_4 y^2 + \gamma_5 xy + \gamma_6 x^2 y + \gamma_7 xy^2 + \gamma_8 x^3 + \gamma_9 y^3 + \gamma_{10} \text{distance to border}_i + \gamma_{11} \text{distance to border}_i * \text{Habsburg Empire}_i \quad (6)$$

Matching: In the [Appendix](#), I also discuss the added benefits of matching and conduct further analyses based on this empirical technique.

Covariates

In some regressions, I also include a number of potentially relevant covariates. It is important to note that the inclusion of covariates may lead to posttreatment bias because the covariates themselves can be affected by past imperial rule. Accordingly,

while I include models with covariates for full transparency, models without them are generally preferable because they allow to rule out this specific form of bias.

Below, I distinguish between *local context variables* (i.e., variables that primarily reflect local contextual factors) and *respondent characteristics* (i.e., variables that primarily reflect personal characteristics of the respondent).

Unfortunately, to the best of my knowledge, reliable and comprehensive data on public finances or funding in Romania at the local level are not available for the relevant time period. However, even if some areas are richer or poorer, it would not explain inconsistencies between local and regional institutions in the same areas, which is the central object of inquiry here.

Finally, descriptive summary statistics of all variables as well as a covariate balance table can be found in the [Appendix](#).

Local Context Covariates

Location Type (Urban vs. Rural Distinctions): As I have argued earlier, other than many overseas empires (Benton 2009; Pierskalla et al. 2019; Sharman 2019), the Habsburg state sought a uniformly high level of control over its *entire* territory (cf. Deak 2015; Judson 2016). To address concerns that, contrary to this argument, the Habsburgs may have sought to exercise more control over urbanized areas for economic or strategic reasons (cf. Acemoglu et al. 2002), or that they might have had incentives to treat rural areas differently (cf. Boone 2003), I include a covariate of location type to ensure that my findings are genuinely driven by differences in *administrative hierarchies*. The baseline will be *cities* and I introduce a dummy for *communes* (more rural locations) and for *municipalities* (more densely populated and larger than cities).

Female Mayor: Parts of the existing literature on corruption suggest that a greater influence or proportion of female politicians reduces corruption levels (Dolmar et al. 2001; Swamy et al. 2001).³² Thus, I control for the gender of the mayor.

Same Party Continuously in Government: If the same party is continuously successful in elections, this indicates lower levels of electoral competition. When electoral competition is low, opportunities for corrupt behavior or fiscal irresponsibility by local officials may increase (cf. Kitschelt and Wilkinson 2007). Accordingly, I control for the perceived persistent electoral success of a single party.

Capital: The administrative organization of the Romanian capital city Bucharest is slightly different because it consists of sectors that each have their own mayor and council. Therefore, I add a control variable for the capital.

³² Recent contributions claim that this relationship is conditional (Esarey and Schwindt-Bayer 2018).

Respondent Characteristics Covariates

Years of Residence: The number of years someone has lived in a certain location could increase exposure to the public administration, including corrupt acts by bureaucrats.

Respondent Age: Older people might perceive public institutions differently than younger people.

Public Administration Work Experience: Work experience in the public administration could bias respondents' view of their employer.

Income Level: I distinguish between several household income levels because wealth could affect perceptions of public administrations.

Female: There may be differences in terms of exposure or perception of public institutions between male and female respondents.

Covariate Balance Table

Table 2 shows balance statistics for the covariates. 6 of the 8 covariates do not vary in a statistically significant way between the parts of present-day Romania that were historically controlled by the Habsburgs and the parts that were independent. However, two variables—(1) the perceived success of a single party in elections and (2) respondent age—vary systematically. While controlling for these covariates in the GRDD models is an imperfect first response, the more appropriate statistical technique to use to address this issue is genetic matching. The key advantage of genetic matching versus simpler matching methods (especially those that exclusively rely on propensity scores) is that genetic matching automatically ensures balance on all covariates (Diamond and Sekhon 2013). Accordingly, genetic matching effectively addresses the concern about covariate imbalance. As I show in the [Appendix](#), the additional results of applying this method are fully in line with the main results presented in the article, indicating that the imbalance in covariates does not drive the study's fundamental results.

Table 2 Covariate Balance Table

	Standardized Difference	z-statistic	Significance
Female Mayor	−0.05	−0.73	
Same Party Success	0.33	4.37	***
Years of Residence	0.01	0.12	
Age	0.19	2.65	**
Work in PA	0.12	1.49	
Educ. Level	−0.02	−0.23	
Income Level	0.11	1.44	
Female	−0.06	−0.86	

Empirical Test: Results

Initial Analysis: Simple Dummy Variables

I begin the empirical analysis with simple dummy regressions (Eq. 1). As described earlier, the Habsburg Empire implemented its modern state institutions more effectively at the regional level. Because informational asymmetries were not as significant at the regional level, there was less space for resistance, leading to fewer tensions with the population. Thus, I expect positive legacies with respect to the perception and performance of *regional* institutions. As shown in regressions 1 and 2 in Table 3, when using the simple dummy framework (at the optimal bandwidth, BW), my expectation is confirmed. Regional institutions enjoy higher levels of trust (the

Table 3 Regional Institutions (Simple Dummy Variables) (at Optimal Bandwidths (BWs))

	<i>Dependent variable:</i>	
	Trust in Courts	Wait Time (Car)
	Regional/Non-Local Institutions	
	(1)	(2)
Habsburg Empire	0.406*** (0.138)	−0.797*** (0.143)
Constant	0.528*** (0.087)	3.094*** (0.089)
Observations	719	641
R ²	0.012	0.046
Adjusted R ²	0.010	0.045

OLS *p<0.1; **p<0.05; ***p<0.01

Table 4 Local Institutions (Simple Dummy Variables) (at Optimal BWs)

	<i>Dependent variable:</i>			
	Corruption	Wait Time (ID)	Trust in Loc. PA	Efficiency of Loc. PA
	Local Institutions			
	(1)	(2)	(3)	(4)
Habsburg Empire	0.423*** (0.129)	0.050 (0.083)	−0.084 (0.101)	−0.079 (0.071)
Constant	0.064 (0.083)	1.078*** (0.054)	0.945*** (0.065)	0.771*** (0.046)
Observations	745	905	957	936
R ²	0.014	0.0004	0.001	0.001
Adjusted R ²	0.013	−0.001	−0.0003	0.0003

OLS *p<0.1; **p<0.05; ***p<0.01

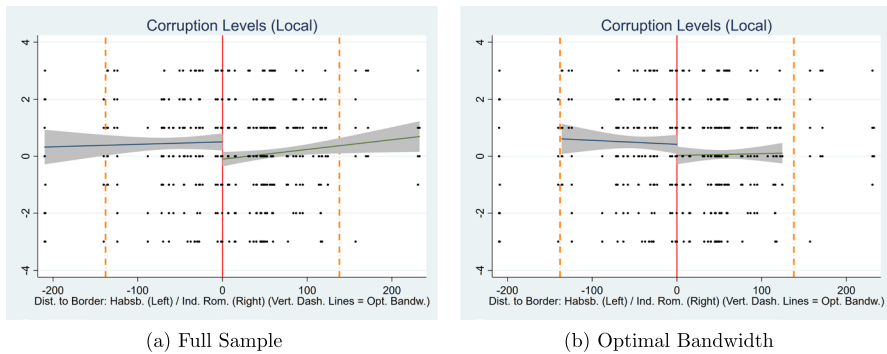


Fig. 5 Comparison: Corruption Levels (Local)

court system) and have significantly lower wait times for car registrations/driver's licenses (regional bureaucracies) in the formerly Habsburg part.³³

While the institutions of the modern public administration brought to Transylvania by the Habsburgs were more efficient and rational than the traditional administration, which had been dominated by the local landed nobility, I predict that a combination of informational and financial constraints allows for more effective resistance against these institutions. Accordingly, I expect that the long-term legacies of Habsburg rule are much less visible, or even negative, at the local level.

As shown in regressions 1 and 2 (Table 4), with respect to the local level, my expectations are generally confirmed as well. The level of perceived corruption in local-level public administrations is significantly higher in the formerly Habsburg part, and with respect to wait times for an ID, trust in the local administration, and the perceived efficiency of the local administration, there are no statistically significant differences.³⁴

However, since I do not include measurements for geographic factors yet, these results can only be seen as preliminary. A more rigorous geographic analysis of the first two variables follows. In short, while legacies are positive at the regional level, they are either negative or statistically insignificant at the local level.³⁵

Geographic Analysis: Local State Institutions

Next, I move on to a geographic analysis; with distance to the border as my forcing variable in an RDD. I begin with an analysis of local state institutions and then consider regional institutions. All regression result tables are included in the [Appendix](#).

³³ The sample sizes in various regressions differ because not every respondent had experience with the distinct administrative processes that they were asked about. In order to ensure that there is no differential (self-)selection into various response categories based on other measurable characteristics, I also present specifications with covariates as well as the results of genetic matching in the [Appendix](#).

³⁴ Moreover, results of further regressions that (1) are not limited to the optimal bandwidth and that (2) have covariates included do not substantively vary from the results presented here.

³⁵ Applying Holm-corrected p-values does not change the interpretation of these results. Furthermore, in line with my expectations, the results of a geographic RD analysis for the third and fourth variable generally show no statistically significant differences and are included in the [Appendix](#).

I also control for geographic location (Eq. 3), using multiple different measurements (Eqs. 4, 5, and 6). The results indicate that local-level institutions that are in the formerly Habsburg parts are perceived either negatively or there are no statistically significant differences.³⁶ In general, local public administrations are perceived as more corrupt, and the wait times for IDs are higher.³⁷

With respect to corruption levels, Fig. 5 shows the distribution of cases around the discontinuity graphically. Like all further figures of this kind, it includes 95%-confidence intervals, based on the regressions without covariates. Respondents from territories that historically belonged to the Habsburg Empire are on the left, while other respondents are on the right. I observe a decrease in perceived corruption when moving from the formerly Habsburg parts to the formerly Romanian parts. Interestingly, this accords with historical perceptions of discriminatory practices by the local public administrations and greater tensions with the citizens of Transylvania.

Further graphs using a quadratic regression are included in the [Appendix](#). When compared to graphs based on linear models, these additional graphs using a quadratic regression indicate the possibility of convergence in bureaucratic organization in the immediate vicinity of the historical border. This pattern could be caused by spillover effects, meaning a potential violation of SUTVA. I discuss this issue and an option for addressing it in the [Appendix](#) as well.

In the following analysis, I use different border samples around the threshold. The dependent variable is unchanged. To identify the optimal bandwidth for the discontinuity analysis, I use an estimator by Imbens and Kalyanaraman (2012). I find an optimal bandwidth of 138 km and test four different bandwidths around this optimal one. All regressions show results that are significant at $\alpha \leq 0.1$ or better.³⁸

Next, I consider the wait times when applying for an ID—an administrative task conducted at the local level in the nearest municipality. I find that the long-term effect of Habsburg rule is negative. In the formerly Habsburg parts, there are significantly longer wait times.

When taking the entire sample into consideration, the results are not statistically significant in one type of specification, namely, the regressions with multiple polynomials.³⁹ This means that these results are not as consistent across different specifications as the results for corruption levels.

Figure 6 shows the discontinuity graphically. I observe an increase in local-level wait times when moving from the formerly Habsburg parts to the formerly Romanian parts.⁴⁰

Regarding the variable that measures wait times for an ID, I obtain an optimal bandwidth of approximately 142 km. In addition to a test at this specific bandwidth, I also test different bandwidths around the optimal one. While the Habsburg effect is consistently positive, it is not statistically significant at three bandwidths.⁴¹ Accordingly, the results for wait times for an ID are less strong and less consistent across specifications than the results for corruption.

³⁶ Detailed results are in the [Appendix](#).

³⁷ In the [Appendix](#), I also provide additional analyses, including density and sensitivity tests.

³⁸ Detailed results are in the [Appendix](#).

³⁹ Detailed results are in the [Appendix](#).

⁴⁰ As with the other variables, additional graphs using a quadratic regression are included in the [Appendix](#).

⁴¹ Detailed results are in the [Appendix](#).

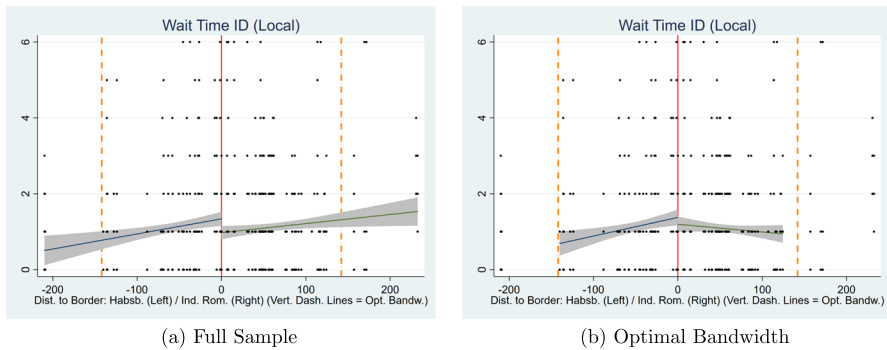


Fig. 6 Comparison: Wait Time ID (Local)

Geographic Analysis: Regional State Institutions

In this section, I take a closer look at regional-level institutions by including geographic controls (Eq. 3). The forcing variable again is the distance to the historical border. As with local institutions, I use all three measurements of geographic location (Eqs. 4, 5, and 6).

I begin with an analysis of the trust in courts by Romanian citizens. Courts are primarily organized at the regional level of the district or county, encompassing multiple localities. My analysis indicates that, regardless of how I measure geographic location and which covariates I include, people in the formerly Habsburg parts have significantly higher trust in courts. The results are highly statistically significant in each specification and in accordance with my framework.⁴²

In addition to the full sample regression, I create different subsets based on limited bandwidths around the historical border. I obtain an optimal bandwidth of 126 km and test bandwidths around this optimal one. I find general support for the effect of Habsburg rule in these regressions, even though the coefficient of Habsburg rule is not statistically significant in one of them.⁴³

Figure 7 shows the discontinuity graphically. I observe a decrease in trust in courts when moving from the formerly Habsburg parts to the formerly Romanian parts.⁴⁴

I also consider wait times for car registrations and driver's licenses. Here I find that the effect of Habsburg rule is positive as well. In the formerly Habsburg parts, there are lower wait times. Even though the results are not significant in one type of geographic specification, I find partial support for my expectations.⁴⁵

⁴² Detailed results are in the [Appendix](#). There, I also provide additional analyses, including density and sensitivity tests.

⁴³ Detailed results are in the [Appendix](#).

⁴⁴ As with the other variables, additional graphs using a quadratic regression are included in the [Appendix](#).

⁴⁵ Detailed results are in the [Appendix](#).

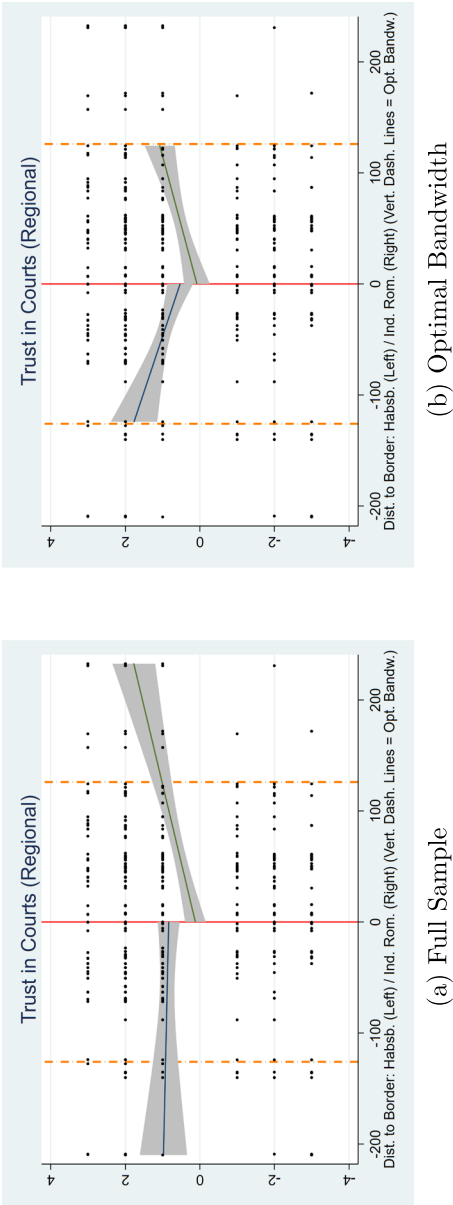


Fig. 7 Comparison: Trust in Courts (Regional)

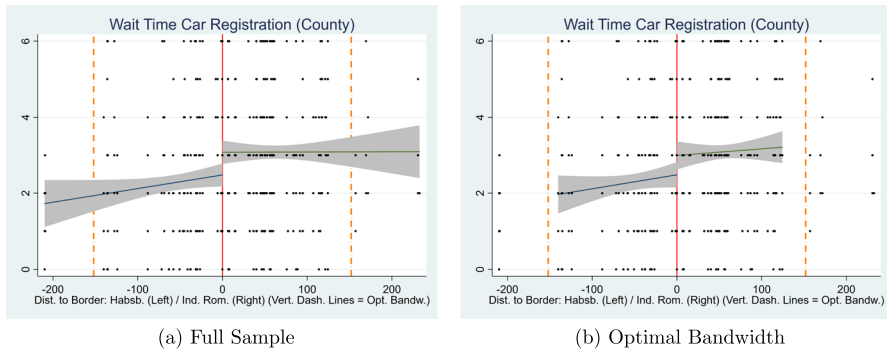


Fig. 8 Comparison: Wait Time Car Registration (County)

Figure 8 shows the discontinuity graphically. I observe an increase in regional-level wait times when moving from the formerly Habsburg parts to the formerly Romanian parts.⁴⁶

Next, I again limit the sample to different bandwidths around the historical border. I obtain an optimal bandwidth of 152 km and also test different bandwidths around the optimal one. Although I do not obtain significant results for one regression, the other regressions are highly significant.⁴⁷

Summary of Empirical Findings

Overall, confirming my expectations about a differential effect of foreign rule, the results of the statistical analysis indicate that there is a *positive* Habsburg legacy at the regional level and a *negative* or *non-existent* legacy at the local level.⁴⁸ Despite these crucial findings, a general weakness of the empirical results must be acknowledged: the explained variation in the dependent variable (R^2) is relatively low. While this could be related to the fact that the Habsburg Empire disintegrated a long time ago, making its legacy less visible in the present day, it is important to point out that, alternatively, there could be missing empirical factors that potentially further explain variation in the outcomes. Moreover, because there are several potential issues with the previous RD analysis, I also conduct an analysis based on genetic matching in the [Appendix](#). Both analyses again broadly confirm my theoretical expectations.

⁴⁶ As with the other variables, additional graphs using a quadratic regression are included in the [Appendix](#).

⁴⁷ Detailed results are in the [Appendix](#).

⁴⁸ It is unlikely that these results can be explained by generally lower trust in local-level government institutions for two reasons. First, citizens in (more decentralized) democratic political systems typically hold more positive attitudes toward local-level governments than toward central government institutions (e.g., Abrams and Lalot 2021; Fitzgerald and Wolak 2016). Second, even if there was a general trend of lower trust in local institutions, it would not explain the divergence in this dimension between the different regions of Romania.

Summary and Conclusion

There are numerous articles and books that investigate imperial legacies in political institutions, legal systems, or public bureaucracies, among others. Interestingly, those studies often present aggregate measures that disregard the levels of the administrative hierarchy. While they have yielded important results, the assumption that imperial rule has homogeneous effects across national, regional, and local state institutions can easily be called into question. It may be responsible for a number of puzzling and inconsistent results in the existing literature.

In response to this lacuna, I develop a framework of imperial pervasiveness. My argument is that resistance against foreign rule—in combination with financial and informational constraints on the imperial center⁴⁹—generally makes the implementation of institutions at lower levels of the administrative hierarchy less effective. When comparing the rule of the Habsburg Empire to the institutional development in the independent parts of Romania, I hypothesize that Habsburg legacies will be positive at the regional level and non-existent or negative at the local level. This hypothesis is compatible with key insights in the political economy literature about the deficiencies of large (externally imposed) bureaucratic apparatuses in controlling heterogeneous territories and populations (cf. Coyne 2008; Tullock 2005).

Accordingly, a few results in the literature may now be suspect. For instance, the finding by Grosfeld and Zhuravskaya (2015) that there are no significant legacies with respect to trust in government in Poland may be a result of differential trust in local, regional, and national institutions. Similarly, with respect to the United States, we might need to analyze if findings by La Porta et al. (1997) and many similar studies hold when differentiating among number of legal traditions at the state level (Berkowitz and Clay 2012).

My contribution also advances arguments related to heterogeneous *within-colonizer* effects. For instance, Bruhn and Gallego (2012) take into account regional differences in economic activities by colonizers, and Iyer (2010) discusses heterogeneity of British rule in India (distinguishing between direct and indirect rule by the same colonizer). I add to this literature by analyzing divergence in within-colonizer effects along the administrative hierarchy.

In addition to the literature on imperial legacies, my results may also be relevant to the broader historical persistence literature (Abad and Maurer 2021; Cirone and Pepinsky 2022). Specifically, I have highlighted the role of *resistance* against institutions as a key factor that diminishes their long-term effects. Future contributions focused on historical persistence could examine the (more general) effects of sustained resistance by specific actors against a variety of political, economic, administrative, and cultural institutions, even in contexts in which resistance is not related to foreign rule. Given the breadth of the historical persistence literature, such an analysis would be of enormous relevance.

⁴⁹ On these issues, see also Vogler (2022).

How generalizable are my insights? The external imposition of institutions in Transylvania shares certain characteristics with many other cases of Habsburg rule (e.g., in Serbia or Montenegro), where similar practices were followed. But some cases also deviate substantially: For instance, Austria granted rights to self-govern to Polish Galicia after 1867, fundamentally changing the potential long-term impact of its rule in the region (Vogler 2019b).

Since the theory presented here mainly focuses on cases in which a territory was directly incorporated into an empire's core boundaries, future studies could extend and modify the framework to the analysis of separate territorial entities, such as overseas colonies. In general, as the underlying tensions of externally imposed institutions and resistance by local populations are an essential part of many types of imperial domination, an analysis of the multifaceted/heterogeneous effects of empires in other contexts would be highly desirable.

Based on the knowledge we have gained through this article and other studies, we can simply no longer assume that the effects of empires are homogeneous across a multitude of different dimensions. Thus, despite the aforementioned limitations, the study at hand provides relevant and novel insights into how the legacies of imperial rule vary along the administrative hierarchy—insights of crucial importance to future studies on imperial legacies.

Appendix A

This [Appendix](#) includes additional empirical evidence and further discussion of claims that were made in the article. In [Appendix A.1](#), I discuss how the framework applies to the history of the smaller Romanian region of Bucovina. In [Appendix A.2](#), I examine different mechanisms of intertemporal transmission. In [Appendix A.3](#), I provide details on and rule out two alternative channels of intertemporal transmission. In [Appendix A.4](#), I present general information on the expert interviews that were conducted as a part of this study. In [Appendix A.5](#), I discuss the quasi-randomness of the Habsburg border. In [Appendix A.6](#), I consider the possibility of compound treatment effects. In [Appendix A.7](#), I analyze and compare pretreatment characteristics. In [Appendix A.8](#), I discuss the dependent variables of my analysis in more detail. In [Appendix A.9](#), I provide descriptive statistics. In [Appendix A.10](#), I show the full regression tables of all empirical tests discussed in the study. In [Appendix A.11](#), I extend the geographic analysis to the two additional measurements of local institutions (*trust in the local public administration* and *perceptions of the efficiency of the local public administration*). In [Appendix A.12](#), I conduct an additional empirical test based on genetic matching. In [Appendix A.13](#), I provide a large number of further statistical analyses to complement the ones in the main body of the study. In [Appendix A.14](#), I show several graphs that illustrate aspects of the matching process.

A.1 Additional Historical Discussion: Bucovina

In addition to Transylvania, another part of present-day Romania, namely *Bucovina*, did not belong to the Kingdom of Romania. Even though it was also under Habsburg rule, it was administratively disconnected from Transylvania. Despite the separate administrative status, Bucovina was similar to Transylvania in terms of its social and economic structures. Furthermore, in Bucovina, too, there were attempts to undermine the historically Romanian character of the province through immigration of Germans and the exclusion of Romanians from the civil service (Hitchins 1994, 231–239; Hitchins 2014, 146; Judson 2016, 73–74). Accordingly, similar patterns of the foreign imposition of institutions and local resistance against them can be observed in both Transylvania and Bucovina. Therefore, I expect the results of the analysis to be comparable in both regions.

A.2 Mechanisms of Intertemporal Transmission

Why would we expect any long-term effects of the historical imposition of administrative institutions in the present day? In other words, is it generally plausible to expect legacies of bureaucratic and legal structures that disintegrated long ago? In this section, I provide suggestions and discuss evidence for the plausibility of my hypotheses. In addition to the broader literature that has revealed imperial legacies in many different dimensions of political-administrative organization, several contributions demonstrate legacies in public administration and state institutions specifically (Becker et al. 2016; Lange 2004; Mkandawire 2010; Vogler 2019b). Based on these contributions and other strands of the political economy literature, I outline two inter-related mechanisms of transmission that could apply in the case of Romania.

First, the fiscal compliance literature demonstrates that perceptions of state institutions often have an impact on the interactions between citizens and agents/representatives of the state (Bräutigam et al. 2008; Fjeldstad and Semboja 2001; Levi 1989, 1997). Perceptions of public institutions could shape expectations toward them, which in turn might influence exchanges between citizens and bureaucrats (see Bustikova and Corduneanu-Huci 2017; Chamlee-Wright and Storr 2010; Vogler 2019a; Corbacho et al. 2016). Such perceptions of the state are part of a broader set of social attitudes. Those attitudes' intergenerational transmission can occur in the workplace (Van Maanen 1975), within social groups (Guimond 2000), or—most importantly—within the family (Dohmen et al. 2011).

A study by Becker et al. (2016) delivers concrete evidence that Habsburg legacies still influence perceptions of state institutions in Eastern Europe. Furthermore, Bustikova and Corduneanu-Huci (2017) demonstrate that historical levels of trust in the state have long-term effects on clientelism, which likely affects administrative performance. If imperial rule historically had a diverging impact on institutions at the regional and local levels—as suggested in the article's historical section—this might have also translated into varying perceptions of state institutions along the administrative hierarchy. These effects could still be visible in the long run.

Second, in addition to attitudes towards the state, cultural socialization could play a role in forming behavioral norms (that also impact administrators). A prominent literature has provided evidence for cultural persistence over time and its impact on a broad variety of institutions (Alesina and Giuliano 2015; Grosfeld and Zhuravskaya 2015). Comparable to the intergenerational transmission of attitudes that was outlined above, cultural norms and values could be acquired through the family (Bisin and Verdier 2001) or the workplace (Levine and Moreland 1991).⁵⁰

Evidence for the intergenerational transmission of cultural norms in Transylvania specifically is provided by Karaja and Rubin (2022), who find observable differences with respect to social trust along the historic borders; Bădescu and Sum (2005), who present evidence that there are denser social networks and higher support for civil society in Transylvania; and Levkin (2015), who finds that trust in strangers and even voting patterns differ across the Habsburg borders. Similarly, Roper and Fesnic (2003) identify differing patterns in voting behavior, linking them to imperial legacies, and Mendelski and Libman (2014) find that litigation practices still differ across historical boundaries. Additionally, Vogler (2019b) shows that such historically rooted cultural differences are likely to affect administrative organization and behavior.

To identify mechanisms of intertemporal transmission in this specific case, I have conducted eight semi-structured expert interviews in two major Romanian cities: Bucharest and Cluj-Napoca. Scholars of sociology and public administration as well as one local politician and two bureaucrats were interviewed. The result of the interviews is that persistent differences in regional culture and social memory could be responsible for enduring variations in the perceptions of state institutions. According to the interviews, public institutions in Transylvania work more effectively on average, meaning that the state is seen as more reliable and personal connections are less important. A different social and cultural memory makes Transylvanians proud of their heritage, and they perceive themselves as better organized and more civilized than people in the rest of Romania. This complex set of perceptions of the state, social memory, and culture could be responsible for persistent differences in socialization, attitudes towards institutions, and the real behavior of bureaucrats.⁵¹

To summarize, several studies have demonstrated the importance of attitudes toward the state and cultural norms for state–citizen interactions. With respect to Romania, there is support for regional differences in culture, social memory, and identity. Those are likely key reasons for differential effectiveness and perceptions of public institutions. However, while this section provides initial arguments and discusses some empirical evidence, a combination of research from multiple disciplines, including cultural anthropology, would be necessary to provide conclusive answers about the explanatory power of these mechanisms. Finally, below, I discuss

⁵⁰ In this respect, de Juan et al. (2021) show that workplace socialization (in this case through the military) can change bureaucrats' behavior even in the absence of deep norm internalization.

⁵¹ Below, I provide additional information on the interviews, specifically locations and participants.

and rule out two additional mechanisms, namely (1) *formal institutions* and (2) *nationalism*.

A.3 Ruling Out *Formal Institutions* and *Nationalism* as Alternative Channels of Transmission

As detailed in the article, considering (1) the existing literature on historical legacies, (2) scholarly work on Romania, and (3) a number of expert interviews conducted by the author, regional differences in culture and perceptions of public administration are crucial to explaining the observed variation in long-term outcomes. Some parts of the existing literature (e.g., Banerjee and Iyer 2005) have also considered legacies of *formal* institutions. Could such formal institutional legacies play a role here as well?

It is extremely unlikely that formal institutions play a role in this case. After the disintegration of the Habsburg Empire, Romania went through multiple fundamental changes in political regimes. Most importantly, the Romanian communist regime (1947–1989) comprehensively homogenized the countries’ political-administrative institutions (Bădescu and Sum 2005, 118; Hitchins 2014, chap. 6; Mendelski and Libman 2014). In general, communist regimes across Eastern Europe left legacies in terms of attitudes towards public institutions as well (Pop-Eleches and Tucker 2017), but—in part due to their high level of centralization—this “treatment” is either more centralizing than the strongly diverging “treatments” that institutions of different empires constituted (Mendelski and Libman 2014) or, alternatively, leads to a “reversal of fortunes,” reversing former differences between regions (Lankina et al. 2016). Accordingly, the *vast* regional differences observed here—that are in accordance with historical Habsburg rule—cannot primarily be attributed to communism.

In short, the combination of the communist regime’s decades-long rule with the subsequent emergence of a free Romanian state and its integration into the European Union has comprehensively transformed the official rules and regulations that guide the operation of public institutions. It means that persistence in formal institutions can be ruled out as a possible channel of transmission. This is also echoed by the fact that formal institutions were not considered a possible channel of transmission by any of the experts during the interviews.

Nationalism is another possible transmission mechanism (Darden and Grzymala-Busse 2006). In this respect, I verified if key results hold when adding two proxies for nationalism to my empirical analyses. Specifically, I added (1) *the perceived level of corruption in the EU administration* and (2) *the perceived economic effect of EU membership on Romania’s domestic development* to the main regressions that include control variables. Most nationalists in Europe share strong anti-EU sentiments, often related to perceived EU corruption. Thus, while these certainly are not perfect measures of nationalism, they represent reasonable proxies. When using these additional covariates, I do not find any significant change to previous results, indicating that nationalism is not a strong alternative explanation.⁵²

⁵² For a study on nationalism in the Habsburg Empire, see Howe et al. (2022).

A.4 General Information on the Expert Interviews

As touched upon above, expert interviews were conducted in June 2017 in two Romanian cities: Bucharest and Cluj-Napoca. Those semi-structured interviews focused on administrative culture, recruitment into the local public administration, and the history of the public administration. In total, 5 scholars, 2 employees of local public administrations, and 1 local politician participated in them. The three key goals of the interviews were to (1) confirm the historical differences between Transylvania and the formerly independent parts of Romania, (2) assess if regional differences still exist in the present day, and (3) identify the most likely mechanisms of intertemporal transmission.

This is a list of the interview partners: (1) Dr. Darie Cristea (sociologist, Bucharest), (2) Dr. Lucian Dumitrescu (sociologist/political scientist, Bucharest), (3) Alexandru Lazarov (local city councilor, Bucharest), (4) Dr. Bogdana Neamtu (public administration scholar, Cluj-Napoca), (5) Dr. Adrian Hudrea (public administration scholar, Cluj-Napoca), (6) Dr. Liviu Radu (public administration scholar, Cluj-Napoca), (7) Oana Buzatu (employee of the Cluj-Napoca city administration), and (8) Calin Cioban (employee of the Cluj-Napoca city administration).

A.5 The Quasi-Randomness of the Habsburg Border

For a natural experiment, the condition of quasi-randomness in border placement is crucial. I argue that the border placement primarily reflected military considerations and was not motivated by social, economic, or institutional characteristics of the separated areas. This means that, while there were some military-strategic and military-opportunistic aspects to their positioning, from the perspective of an investigation centered on *social organization*, the borders were placed quasi-randomly.

When the border between territories ruled by Austria on the one side and Moldavia and Wallachia on the other side was drawn in the eighteenth century, the entire Balkan region had been at the center of military rivalries among the great powers for centuries. Importantly, the second siege of Vienna in 1683 had shown the Habsburgs once again that the Ottomans posed a major threat (Hochedlinger 2003, 156–157). Because Ottoman rule over Transylvania meant a security risk to the Habsburgs, its occupation had military motivations (Ingrao 2000, 65–67; Judson 2016, 42; Veres 2014, 5).

Furthermore, the occupation of Wallachia and Moldavia was not prevented by their social, economic, or political characteristics but rather by military considerations. In fact, in the 1770s, Wenzel Anton, Prince of Kaunitz-Rietberg—the Habsburg State Chancellor—advocated occupying both regions in addition to Bucovina. But, for strategic reasons, Emperor Joseph II favored gaining access to the Adriatic Sea through the occupation of Bosnia (Hochedlinger 2003, 356). Accordingly, military considerations and the overall military strength of other great powers (specifically of the Ottoman Empire)—not the inherent social, economic, or political characteristics of those regions—prevented their occupation (Hochedlinger 2003, 356–361).

The final borders of the Austrian Empire were not only shaped by strategic military thinking but also by sheer military opportunism, further supporting the claim of quasi-randomness. When the Russo-Turkish War (1768–1774) distracted the two other great powers in the region, Austria acquired as much additional territory as possible (Hochedlinger 2003, 351–363; Judson 2016, 72; Veres 2014). During this period, uncertainty about the exact position of previous administrative boundaries allowed for opportunistic border shifts (Veres 2014). While the other great powers viewed Vienna's actions as highly aggressive, the Habsburgs themselves saw them as primarily defensive (Hochedlinger 2003, 363). Regardless of which interpretation is more accurate, military considerations were key to explaining these border shifts.

Above I have provided arguments for the view that military developments were the primary rationale for the border placement, indicating that social, political, or economic reasons were not decisive. Are there any data supporting the notion that pretreatment characteristics in social organization were not diverging significantly? Indeed, several sets of analysis support this statement. Becker et al. (2016) conduct a large number of tests to verify the quasi-randomness of the Habsburg borders. Specifically, they test for variations in “medieval city size, access to medieval trade routes and presence of a medieval diocesan town” (Becker et al. 2016, 42). They do not find systematic variation in those characteristics or in altitude across the imperial borders. Additionally, below, I use a subset of these data that only includes towns in Romania to compare pretreatment characteristics. Moreover, I also show that the vast majority of covariates is balanced across the Habsburg border. And, in the empirical test, I test regression specifications that account for all covariates, including those that are not balanced. In an attempt to address these imbalances and other potential problems with an RD analysis, I implement genetic matching as an alternative method. Finally, Levkin (2015) tests whether there are any jumps in geo-physical characteristics at the historical border and finds that the only feature with a significant difference is latitude.

There are some aspects of social organization for which I do not have reliable pretreatment data. This includes data on ethnic heterogeneity and religious tolerance. As I do not have data for these characteristics, my study has a potential weakness. Considering the historical analyses in favor of a primarily military rationale of the border placement, there are strong arguments for the validity of this natural experiment nevertheless.

A.6 The Possibility of Compound Treatment Effects

Keele and Titiunik (2015) and Keele and Titiunik (2016) discuss the issue of *compound treatments* in natural experiments. Theoretically, this phenomenon occurs when a single research design-relevant cutoff is associated with multiple and substantively distinct treatments. Among a wide range of research tools, geographic regression discontinuity approaches are prone to this issue as two separate geographic areas are frequently subject to more than one treatment effect. For instance, in the concrete case that Keele and Titiunik use to illustrate the phenomenon, they examine a specific administrative boundary in the United States and suggest that

this boundary is constitutive of two substantively different treatment effects: (1) the ‘external’ factor of association with different national media markets and (2) the ‘internal’ factor of distinctions in local governance. Compound treatments such as these create possible challenges for identifying the actual causal factor of interest.

In the specific case of Habsburg rule in Romania, however, such concerns about compound treatments, especially in the form of a mixture of external and internal treatment effects, are less significant because the external and internal dimensions of Habsburg Rule are both theoretically and substantively connected in a way that it would not make sense to differentiate between them. Specifically, the Habsburg Empire represented both an external factor that forced its own institutions on the population in parts of Romania. At the same time, these externally imposed institutions by a foreign empire were also directly responsible for internal governance. Accordingly, these treatment dimensions (that are substantively different in some empirical cases) are not only impossible to separate, but it makes more sense to view them as a single treatment from a substantive perspective.

Furthermore, a second possible issue that could be seen as a compound treatment effect is that the impact of the Habsburg state was not limited to the political-administrative and legal domains, but could have also affected the cultural dimension in particular (as an essential byproduct of the imposition of political-administrative institutions). Does this create a challenge for this study’s theory or research design? Arguably it does not, because changes to cultural dynamics are an *integral* part of the theory and the intertemporal mechanisms developed and described here. Specifically, in my theoretical framework, I suggested that externally imposed institutions have a significant impact on state–citizen interactions and citizens’ norms/expectations toward public institutions. Accordingly, one aspect of Habsburg rule (changes to these concrete dimensions of culture) that may be considered a compound treatment in other studies/contexts is actually a key part of the framework. Moreover, as discussed in the main theory part, other than the dimension of state–citizen interactions and attitudes toward public institutions, the Romanians in Transylvania fiercely resisted additional forms of external cultural imposition and did everything they could to maintain the same cultural legacy as the Romanians in the independent Romanian state. Therefore, from a historical perspective, given their persistence and success at preserving their distinct cultural heritage, other dimensions of culture (that are not related to state–citizen interactions and attitudes toward public institutions) are unlikely to differ in a way that it would explain the key findings.

Additionally, as touched upon in the article itself, a possible theoretical counter argument to the framework presented here is that there could also be differences in wealth (as a potential consequence of Habsburg rule), which may constitute yet another form of a compound treatment effect. However, such an explanation cannot account for the vast differences we observe *between regional and local institutions in the same areas* (that should not occur if wealth was the driving factor). Therefore, both the possibility of compound economic effects and the possibility of compound cultural effects are not a significant threat to inference or a plausible alternative explanation in the specific case of diverging legacies that result from Habsburg rule in Transylvania.

A.7 Pretreatment Characteristic Comparison

Above, I discussed evaluations by Levkin (2015) and Becker et al. (2016) to support the claim of quasi-randomness regarding the Habsburg border. Becker et al. (2016) use data on medieval city size, access to medieval trade routes, and presence of a medieval diocesan town to test the claim of quasi-randomness of the Habsburg imperial borders. Considering a large number of towns in Eastern Europe, they find support for this claim. Moreover, I use a subset of the data by Becker et al. (2016) to compare pretreatment characteristics of towns in Romania. The purpose of this comparison is to address arguments that historically deeply rooted pretreatment characteristics could have varied so significantly that they might be responsible for the observed long-term effects. The results indicate that there were some differences, but they were either small, not statistically significant, or both. In all of the comparisons below, I fail to reject the null hypothesis at $\alpha \leq 0.1$. For more details, see Table 5.

Importantly, Pepinsky et al. (2020) suggest that spatial unit effects could interfere with analyses focused on historical persistence. However, the specific study that is discussed by Pepinsky et al. (2020) is centered on the effects of exposure to concentration camps in Germany, which is a polity that has significantly greater historical inequality in pretreatment characteristics than the case discussed here (see, for instance, the detailed account by Gingerich and Vogler (2021), on deeply rooted and comprehensive cross-sectional differences in political-economic equilibria in the German-speaking lands of Central Europe). Specifically, prior to the placement of the Habsburg imperial border, there were no comparable diverging historical legacies in Romania and the above discussion of pretreatment characteristics supports this perspective.

A.8 Coding of the Dependent Variables

This section provides information on the coding of key dependent variables. In total, I have used six dependent variables in the analysis: (1) *local corruption levels*, (2) *wait times for ID applications at local public administrations*, (3) *trust in courts* (which are found at the district/county level and above), (4) *wait times for car registrations at the county level*, (5) *trust in the local public administration*, and (6) *perceptions of the efficiency of the local public administration*. In the following paragraphs, I show both the question and the answer options for each variable.

1. Question on local corruption levels (local level): “Thinking about your own experiences and what you have heard from others, how common is it that

Table 5 Pretreatment Characteristic Comparison: Habsburg and Non-Habsburg Towns

Variable	\bar{x}	\bar{y}	Test Statistic	p-value
Medieval City Size	5.40	12.67	$t = -1.0694$	0.37
Access to Medieval Trade Route	0.31	0.40	$z = -0.43$	0.67
Medieval Diocesan Town	0.19	0.10	$z = 0.62$	0.54

people make informal payments to the local public administration to speed up bureaucratic procedures or ensure a positive response to a request (for example, to ensure that a request for a business permit will be approved)?”

Answer options: Extremely common (3); Very common (2); Slightly common (1); Neither common nor uncommon (0); Slightly uncommon (-1); Very uncommon (-2); Extremely uncommon (-3)

2. Question on wait times for IDs (local level, nearest municipality): “This question is about applying for an ID at your local public administration [at the city level]. Thinking about your own experiences and what you have heard from others, about how long is the wait to make the initial application for the ID?”

Answer options: Less than 1 hour (0); 1 hour (1); 2 hours (2); 3 hours (3); 4 hours (4); 5 hours (5); 6 or more hours (6)

3. Question on trust in courts (regional level): “How much do you trust or distrust the courts?”

Answer options: Completely trust (3); Mostly trust (2); Slightly trust (1); Neither trust nor distrust (0); Slightly distrust (-1); Mostly distrust (-2); Completely distrust (-3)

4. Question on applications for driver’s licenses (county level): “This question is about applying for a driver’s license or registering a car at your local public administration [at the county level]. Thinking about your own experiences and what you have heard from others, about how long is the wait at the administration to make such an application?”

Answer options: Less than 1 hour (0); 1 hour (1); 2 hours (2); 3 hours (3); 4 hours (4); 5 hours (5); 6 or more hours (6)

Additional Local Measure 1 — 5. Question on trust into the local public administration (at the level of the municipality, city, or commune): “How much do you trust or distrust the local public administration?”

Answer options: Completely trust (3); Mostly trust (2); Slightly trust (1); Neither trust nor distrust (0); Slightly distrust (-1); Mostly distrust (-2); Completely distrust (-3)

Additional Local Measure 2 — 6. Question on perceptions of the efficiency of the local public administration (at the level of the municipality, city, or commune): “Generally speaking, how efficient or inefficient is the local public administration?”

Answer options: Extremely efficient (3); Very efficient (2); Efficient (1); Neither efficient nor inefficient (0); Inefficient (-1); Very inefficient (-2); Extremely inefficient (-3)

A.9 Descriptive Summary Statistics

Table 6 shows descriptive statistics for all variables. Furthermore, in the main study, I also provide a covariate balance table.

Table 6 Descriptive Statistics

Variable	n	Min	q ₁	\bar{x}	\tilde{x}	q ₃	Max	IQR
Corruption Levels	805	−3	−1	0.26	1	1	3	2
Wait Time ID	960	0	0	1.12	1	2	6	2
Trust in Courts	797	−3	−1	0.71	1	2	3	3
Wait Time Car	671	0	1	2.77	2	4	6	3
Trust in Local PA	997	−3	0	0.93	1	2	3	2
Efficiency of Local PA	956	−2	0	0.75	1	1	3	1
Austria	1001	0	0	0.41	0	1	1	1
Commune	1001	0	0	0.49	0	1	1	1
City	1001	0	0	0.17	0	0	1	0
Municipality	1001	0	0	0.34	0	1	1	1
Female Mayor	994	0	0	0.09	0	0	1	0
Same Party Success	860	0	0	0.64	1	1	1	1
Years of Residence	984	1	25	38.38	38	50	86	25
Age	997	18	35	48.67	49	62	89	27
Work Experience in PA	970	0	0	0.04	0	0	1	0
Education	991	0	0	1.46	2	2	4	2
Income	893	0	2	2.61	3	3	6	1
Female	1001	0	0	0.51	1	1	1	1
Capital	1001	0	0	0.04	0	0	1	0

A.10 Empirical Test: Regression Tables

On the following pages, I provide all the regression result tables that are referenced in the empirical results section. The first set of tables shows results with full samples and the second set of tables shows results with border samples (Tables 7, 8, 9, 10, 11, 12, 13, 14).

A.11 Extension of the Geographic Analysis: Trust in the Local Public Administration and Perceptions of Efficiency

In the previous section, I have shown the full results for two of the local response variables. In this section, I present the results of the two additional variables: (1) *trust into the local public administration* (Table 15) and (2) *its perceived efficiency* (Table 16).

The results indicate that there are no significant Habsburg legacies in terms of trust in the local public administration. This is in accordance with the expectation that Habsburg legacies are weaker or negative at the local level as hypothesized in the historical background section.

Similarly, in terms of the overall perceived efficiency, there are also no significant Habsburg legacies. This is also in accordance with the expectation that Habsburg legacies are weaker or negative at the local level as hypothesized in the theory

Table 7 Full Sample Comparison: Corruption Levels (Local)

<i>Dependent variable:</i>								
Corruption Levels (Local)								
Simple Distance			Lat./Long.			Lat./Long. Polyn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Habsburg Empire	0.606*** (0.197)	0.653*** (0.200)	0.540* (0.230)	0.599*** (0.198)	0.632*** (0.201)	0.506** (0.230)	0.546** (0.248)	0.483* (0.282)
Commune		0.292* (0.173)	0.339* (0.200)		0.228 (0.169)	0.309 (0.196)	0.184 (0.177)	0.282 (0.203)
Municipality		0.401** (0.184)	0.422* (0.225)		0.299* (0.180)	0.418* (0.221)	0.231 (0.194)	0.312 (0.235)
Female Mayor			−0.115 (0.337)			−0.465 (0.338)		−0.362 (0.348)
Same Party			−0.512*** (0.151)			−0.422*** (0.150)		−0.503*** (0.152)
Residence Years			−0.013*** (0.005)			−0.014*** (0.005)		−0.014*** (0.005)
Age			−0.0004 (0.006)			0.001 (0.006)		0.0001 (0.006)
PA Work Exper.			−1.616*** (0.399)			−1.508*** (0.392)		−1.593*** (0.394)
Educ. Level			−0.058 (0.071)			−0.084 (0.070)		−0.065 (0.070)
Income Level			0.044 (0.071)			0.047 (0.070)		0.053 (0.070)

Table 7 (continued)

<i>Dependent variable:</i>								
Corruption Levels (Local)								
Simple Distance			Lat./Long.		Lat./Long. Polyn.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		−0.013 (0.143)			0.011 (0.140)			−0.002 (0.139)
Capital		0.0002 (0.558)			0.465 (0.553)			0.379 (0.579)
Dist.	0.003** (0.002)	0.003* (0.002)	0.008*** (0.002)	0.007*** (0.002)	0.009*** (0.003)	−0.006 (0.006)	−0.005 (0.006)	−0.009 (0.007)
Dist. * Habsburg Emp.	−0.003 (0.002)	−0.001 (0.003)	0.005 (0.004)	0.006 (0.004)	0.008 (0.005)	0.022*** (0.008)	0.021*** (0.008)	0.031*** (0.009)
Constant	−0.102 (0.137)	−0.363* (0.196)	−336.729*** (90.919)	−336.480*** (90.873)	−388.653*** (110.379)	7,254.758 (8,008.634)	6,229.795 (8,057.846)	9,899.146 (9,238.099)
Observations	805	805	805	805	600	805	805	600
R ²	0.014	0.020	0.066	0.069	0.130	0.078	0.080	0.154
Adjusted R ²	0.010	0.014	0.059	0.060	0.104	0.064	0.064	0.120

OLS *p<0.1; **p<0.05; ***p<0.01

Table 8 Full Sample Comparison: Wait Time ID (Local)

<i>Dependent variable:</i>								
Wait Time ID (Local)								
Simple Distance	Lat./Long.				Lat./Long. Polyn.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Habsburg Empire	0.366*** (0.130)	0.387*** (0.131)	0.457*** (0.157)	0.313** (0.131)	0.331** (0.132)	0.440*** (0.158)	0.061 (0.165)	0.134 (0.196)
Commune		0.179 (0.114)	0.140 (0.137)		0.181 (0.113)	0.157 (0.137)	0.198* (0.117)	0.178 (0.139)
Municipality		0.337*** (0.122)	0.446*** (0.155)		0.320*** (0.122)	0.478*** (0.154)	0.363*** (0.128)	0.550*** (0.160)
Female Mayor			−0.169 (0.252)			−0.347 (0.254)		−0.612** (0.254)
Same Party			−0.053 (0.103)			−0.058 (0.104)		0.003 (0.105)
Residence Years			−0.001 (0.003)			−0.001 (0.003)		−0.003 (0.003)
Age			−0.004 (0.004)			−0.004 (0.004)		−0.003 (0.004)
PA Work Exper.			−0.368 (0.252)			−0.286 (0.251)		−0.340 (0.248)
Educ. Level			−0.024 (0.049)			−0.032 (0.049)		−0.036 (0.048)
Income Level			0.031 (0.049)			0.023 (0.049)		0.024 (0.049)

Table 8 (continued)

<i>Dependent variable:</i>								
Wait Time ID (Local)								
Simple Distance			Lat./Long.			Lat./Long. Polyn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		−0.130 (0.098)			−0.135 (0.097)			−0.133 (0.095)
Capital		−0.388 (0.389)			−0.266 (0.388)			0.069 (0.400)
Dist.	0.002** (0.001)	0.003* (0.001)	0.001 (0.002)	0.0002 (0.002)	0.002 (0.002)	−0.0003 (0.004)	0.0004 (0.004)	0.007 (0.005)
Dist. * Habsburg Emp.	0.002 (0.002)	0.003 (0.002)	0.009*** (0.003)	0.010*** (0.003)	0.010*** (0.003)	0.013*** (0.005)	0.012** (0.005)	0.011* (0.006)
Constant	0.971*** (0.090)	0.799*** (0.129)	−225.261*** (60.586)	−222.888*** (60.445)	−263.697*** (76.686)	24,010.260*** (5,431.920)	22,714.890*** (5,449.419)	26,273.730*** (6,305.953)
Observations	960	960	960	960	707	960	960	707
R ²	0.016	0.024	0.039	0.046	0.067	0.065	0.073	0.110
Adjusted R ²	0.013	0.019	0.033	0.038	0.044	0.053	0.059	0.080

OLS *p<0.1; **p<0.05; ***p<0.01

Table 9 Full Sample Comparison: Trust in Courts (Regional)

<i>Dependent variable:</i>								
Trust in Courts (Regional)								
Simple Distance			Lat./Long.			Lat./Long. Polyn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Habsburg Empire	0.717*** (0.205)	0.637*** (0.207)	0.921*** (0.244)	0.799*** (0.210)	0.718*** (0.212)	0.919*** (0.249)	0.594*** (0.267)	0.817** (0.320)
Commune		−0.437** (0.178)	−0.356* (0.209)	−0.478*** (0.178)	−0.376* (0.210)	−0.370** (0.184)	−0.370** (0.184)	−0.339 (0.216)
Municipality		−0.474** (0.193)	−0.206 (0.242)	−0.530*** (0.194)	−0.243 (0.243)	−0.384* (0.205)	−0.384* (0.205)	−0.250 (0.254)
Female Mayor			−0.249 (0.368)		−0.327 (0.376)			−0.096 (0.384)
Same Party			−0.287* (0.163)		−0.245 (0.165)			−0.285* (0.166)
Residence Years			0.002 (0.005)		0.002 (0.005)			0.003 (0.005)
Age			−0.002 (0.007)		−0.001 (0.007)			−0.001 (0.007)
PA Work Exper.			0.732** (0.353)		0.769** (0.355)			0.769** (0.354)
Educ. Level			−0.059 (0.077)		−0.072 (0.077)			−0.044 (0.077)
Income Level			−0.083 (0.078)		−0.065 (0.079)			−0.064 (0.079)

Table 9 (continued)

<i>Dependent variable:</i>								
Trust in Courts (Regional)								
Simple Distance			Lat./Long.		Lat./Long. Polyn.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		0.009 (0.155)			0.003 (0.155)			−0.0003 (0.153)
Capital		0.544 (0.620)			0.692 (0.628)			0.893 (0.653)
Dist.	0.007*** (0.002)	0.008*** (0.002)	0.007*** (0.002)	0.011*** (0.002)	0.012*** (0.003)	0.011*** (0.003)	0.003 (0.007)	0.002 (0.008)
Dist. * Habsburg Emp.	−0.008*** (0.003)	−0.009*** (0.003)	−0.006* (0.003)	−0.012*** (0.004)	−0.013*** (0.004)	−0.004 (0.005)	−0.017** (0.008)	−0.012 (0.010)
Constant	0.121 (0.139)	0.494** (0.200)	0.753 (0.466)	70.189 (95.459)	62.809 (95.154)	−95.391 (120.303)	−16,415.620* (8,776.081)	−16,915.380* (10,233.380)
Observations	797	797	586	797	797	586	797	586
R ²	0.028	0.037	0.053	0.036	0.046	0.059	0.077	0.089
Adjusted R ²	0.024	0.031	0.030	0.028	0.037	0.031	0.060	0.052

OLS *p<0.1; **p<0.05; ***p<0.01

Table 10 Full Sample Comparison: Wait Times Car Registration (County)

<i>Dependent variable:</i>								
Wait Times Car Registration (County)								
Simple Distance	Lat./Long.			Lat./Long. Polyn.				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Habsburg Empire	−0.597*** (0.221)	−0.598*** (0.224)	−0.626** (0.259)	−0.633*** (0.222)	−0.630*** (0.224)	−0.551*** (0.259)	−0.282 (0.271)	−0.284 (0.273)
Commune		−0.0003 (0.194)	0.229 (0.221)		0.021 (0.191)	0.254 (0.220)		−0.018 (0.196)
Municipality		0.018 (0.208)	−0.020 (0.249)		0.017 (0.204)	0.062 (0.247)		−0.004 (0.215)
Female Mayor			−0.289 (0.374)			−0.550 (0.382)		−0.753** (0.381)
Same Party			−0.135 (0.162)			−0.150 (0.164)		−0.143 (0.163)
Residence Years			0.009 (0.006)			0.008 (0.006)		0.003 (0.006)
Age			−0.008 (0.007)			−0.008 (0.007)		−0.008 (0.007)
PA Work Exper.			−0.686* (0.365)			−0.565 (0.363)		−0.442 (0.358)
Educ. Level			−0.019 (0.078)			−0.036 (0.078)		−0.084 (0.077)
Income Level			−0.019 (0.074)			−0.048 (0.074)		−0.060 (0.073)

Table 10 (continued)

<i>Dependent variable:</i>								
Wait Times Car Registration (County)								
Simple Distance			Lat./Long.		Lat./Long. Polyn.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		0.220 (0.156)			0.211 (0.155)			0.215 (0.152)
Capital		0.960 (0.604)			1.085* (0.606)			0.634 (0.631)
Distance	0.0001 (0.002)	0.00001 (0.003)	−0.007** (0.003)	−0.007** (0.003)	−0.003 (0.003)	0.019*** (0.007)	0.019*** (0.007)	0.020*** (0.007)
Dist. * Habsburg Emp.	0.004 (0.003)	0.003 (0.004)	0.013*** (0.004)	0.013*** (0.004)	0.011** (0.005)	−0.017** (0.008)	−0.017** (0.009)	−0.013 (0.009)
Constant	3.078*** (0.151)	3.076*** (0.218)	3.120*** (0.459)	−273.974*** (100.654)	−274.833*** (101.112)	−270.051** (124.257)	−8.855.379 (8,874.360)	−1,922.854 (9,970.238)
Observations	671	671	496	671	496	671	671	496
R ²	0.054	0.054	0.094	0.094	0.119	0.145	0.145	0.171
Adjusted R ²	0.049	0.046	0.068	0.086	0.083	0.129	0.127	0.131

OLS *p<0.1; **p<0.05; ***p<0.01

Table 11 Border Samples: Corruption Levels (Local)

	<i>Dependent variable:</i>				
	Corruption Levels (Local)				
	< 100 km	< 125 km	< 138 km	< 150 km	< 175 km
	(1)	(2)	(3)	(4)	(5)
Habsburg Empire	0.458*	0.574**	0.391*	0.417*	0.551**
	(0.277)	(0.242)	(0.231)	(0.229)	(0.220)
Dist.	0.001	0.001	0.001	0.001	0.003
	(0.004)	(0.003)	(0.003)	(0.003)	(0.002)
Dist. * Habsburg Emp.	−0.001	0.004	−0.002	−0.001	−0.004
	(0.006)	(0.004)	(0.004)	(0.004)	(0.003)
Constant	0.003	0.029	0.029	0.029	−0.106
	(0.197)	(0.168)	(0.168)	(0.168)	(0.154)
Observations	656	720	745	754	772
R ²	0.013	0.012	0.015	0.014	0.014

OLS *p<0.1; **p<0.05; ***p<0.01

Table 12 Border Samples: Wait Times ID (Local)

	<i>Dependent variable:</i>			
	Wait Times ID			
	< 125 km	< 142 km	< 150 km	< 175 km
	(1)	(2)	(3)	(4)
Habsburg Empire	0.218	0.182	0.182	0.247*
	(0.157)	(0.147)	(0.147)	(0.144)
Dist.	−0.002	−0.002	−0.002	−0.001
	(0.002)	(0.002)	(0.002)	(0.001)
Dist. * Habsburg Emp.	0.008***	0.007***	0.007***	0.006***
	(0.003)	(0.002)	(0.002)	(0.002)
Constant	1.193***	1.193***	1.193***	1.128***
	(0.107)	(0.107)	(0.107)	(0.101)
Observations	867	905	905	924
R ²	0.011	0.012	0.012	0.010

OLS *p<0.1; **p<0.05; ***p<0.01

section. The fact that a single regression reaches statistical significance (only at $\alpha \leq 0.1$) is likely caused by statistical noise rather than actual underlying differences.

Table 13 Border Samples: Trust in Courts (Regional)

	<i>Dependent variable:</i>			
	Trust in Courts			
	< 100 km	< 126 km	< 150 km	< 175 km
	(1)	(2)	(3)	(4)
Habsburg Empire	0.386 (0.278)	0.452* (0.251)	0.722*** (0.238)	0.661*** (0.229)
Dist.	0.013*** (0.004)	0.008*** (0.003)	0.008*** (0.003)	0.007*** (0.002)
Austria * Dist.	−0.030*** (0.006)	−0.018*** (0.005)	−0.010** (0.004)	−0.008** (0.003)
Constant	−0.096 (0.197)	0.080 (0.170)	0.080 (0.172)	0.141 (0.159)
Observations	656	719	750	765
R ²	0.056	0.034	0.022	0.020

OLS *p<0.1; **p<0.05; ***p<0.01

Table 14 Border Samples: Wait Times Car Registration (County)

	<i>Dependent variable:</i>			
	Wait Times Car Registration			
	< 125 km	< 150 km	< 152 km	< 175 km
	(1)	(2)	(3)	(4)
Habsburg Empire	−0.368 (0.269)	−0.509** (0.254)	−0.509** (0.254)	−0.539** (0.247)
Dist.	0.002 (0.003)	0.002 (0.003)	0.002 (0.003)	0.001 (0.003)
Austria * Dist.	0.007 (0.005)	0.002 (0.004)	0.002 (0.004)	0.003 (0.004)
Constant	2.994*** (0.181)	2.994*** (0.182)	2.994*** (0.182)	3.024*** (0.172)
Observations	611	641	641	649
R ²	0.053	0.050	0.050	0.049

OLS *p<0.1; **p<0.05; ***p<0.01

A.12 Additional Analysis: Matching

Although we can treat the historical Habsburg border as quasi-random (as I have detailed above), which is crucial to a natural experiment based on geography (Keele and Titiunik 2016), a strong assumption is built into this RD design: that no spillover

Table 15 Full Sample Comparison: Trust in Local P.A.

<i>Dependent variable:</i>								
Trust in Loc. PA								
Simple Distance	Lat./Long.			Lat./Long. Polyn.				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Habsburg Empire	-0.061 (0.154)	-0.043 (0.156)	0.207 (0.185)	0.096 (0.156)	0.105 (0.158)	0.305 (0.187)	0.147 (0.194)	0.302 (0.232)
Commune		0.099 (0.138)	0.153 (0.165)		0.049 (0.137)	0.087 (0.165)	0.029 (0.141)	0.056 (0.168)
Municipality		0.062 (0.149)	0.240 (0.187)		0.004 (0.148)	0.166 (0.187)	-0.006 (0.154)	0.102 (0.194)
Female Mayor			-0.253 (0.281)			-0.174 (0.285)		-0.024 (0.289)
Same Party			-0.352*** (0.125)			-0.303** (0.126)		-0.249* (0.127)
Residence Years			0.002 (0.004)			0.002 (0.004)		0.004 (0.004)
Age			0.006 (0.005)			0.006 (0.005)		0.006 (0.005)
PA Work Exper.			0.231 (0.298)			0.259 (0.298)		0.161 (0.295)
Educ. Level			-0.042 (0.058)			-0.041 (0.058)		-0.014 (0.058)
Income Level			-0.073 (0.059)			-0.075 (0.059)		-0.060 (0.058)

Table 15 (continued)

<i>Dependent variable:</i>								
Trust in Loc. PA								
Simple Distance			Lat./Long.			Lat./Long. Polyn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		0.187 (0.117)			0.176 (0.117)			0.175 (0.115)
Capital		−0.605 (0.461)			−0.545 (0.463)			−0.249 (0.482)
Dist.	0.001 (0.001)	0.001 (0.002)	0.004* (0.002)	0.004* (0.002)	0.003 (0.002)	−0.0002 (0.005)	−0.0001 (0.005)	−0.001 (0.006)
Dist. * Habsburg Emp.	−0.001 (0.002)	−0.001 (0.002)	−0.010*** (0.003)	−0.010*** (0.003)	−0.010*** (0.004)	−0.006 (0.006)	−0.007 (0.006)	−0.004 (0.007)
Constant	0.926*** (0.105)	0.847*** (0.155)	225.001*** (72.695)	224.605*** (72.770)	209.978*** (91.999)	−9.036.754 (6,301.860)	−9,178.055 (6,363.457)	−5,306.683 (7,487.639)
Observations	997	997	997	997	730	997	997	730
R ²	0.001	0.002	0.025	0.025	0.054	0.060	0.060	0.092
Adjusted R ²	−0.002	−0.003	0.019	0.017	0.032	0.048	0.047	0.062

OLS *p<0.1; **p<0.05; ***p<0.01

Table 16 Full Sample Comparison: (Perceived) Efficiency of Local P.A.

	<i>Dependent variable:</i>								
	Efficiency of Loc. PA								
	Simple Distance			Lat./Long.			Lat./Long. Polyn.		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Habsburg Empire	−0.041 (0.110)	−0.022 (0.111)	0.158 (0.129)	0.118 (0.110)	0.133 (0.111)	0.243* (0.130)	−0.038 (0.135)	−0.028 (0.136)	0.010 (0.159)
Commune		0.080 (0.100)	0.093 (0.117)		0.046 (0.098)	0.051 (0.117)		0.025 (0.100)	0.017 (0.118)
Municipality		−0.065 (0.108)	0.042 (0.132)		−0.100 (0.106)	−0.005 (0.132)		−0.122 (0.110)	−0.108 (0.135)
Female Mayor			0.033 (0.193)			0.154 (0.195)			0.294 (0.196)
Same Party			−0.092 (0.087)			−0.071 (0.088)			−0.052 (0.088)
Residence Years			0.0005 (0.003)			0.0001 (0.003)			0.002 (0.003)
Age			0.001 (0.003)			0.001 (0.003)			0.001 (0.003)
PA Work Exper.			0.525** (0.208)			0.513** (0.207)			0.417** (0.203)
Educ. Level			−0.108*** (0.041)			−0.101** (0.041)			−0.070* (0.040)
Income Level			−0.031 (0.041)			−0.037 (0.042)			−0.030 (0.041)

Table 16 (continued)

<i>Dependent variable:</i>								
Efficiency of Loc. PA								
Simple Distance			Lat./Long.			Lat./Long. Polyn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female		0.029 (0.082)			0.028 (0.081)			0.028 (0.079)
Capital		−0.430 (0.331)			−0.468 (0.331)			−0.058 (0.342)
Dist.	0.0003 (0.001)	0.001 (0.001)	0.002* (0.001)	0.003** (0.001)	0.002 (0.002)	−0.010*** (0.003)	−0.010*** (0.003)	−0.009** (0.004)
Dist. * Habsburg Emp.	0.0002 (0.001)	−0.001 (0.001)	−0.011*** (0.002)	−0.012*** (0.002)	−0.010*** (0.003)	−0.002 (0.004)	−0.002 (0.004)	−0.006 (0.005)
Constant	0.763*** (0.075)	0.713*** (0.112)	0.799*** (0.248)	288.259*** (50.911)	242.234*** (63.936)	959.719 (4,468.222)	895.380 (4,504.022)	−657.583 (5,216.051)
Observations	956	956	956	956	702	956	956	702
R ²	0.002	0.006	0.048	0.051	0.061	0.098	0.102	0.116
Adjusted R ²	−0.001	0.0004	0.018	0.043	0.038	0.087	0.089	0.086

OLS *p<0.1; **p<0.05; ***p<0.01

Table 17 Genetic Matching: Regional Institutions

	<i>Dependent variable:</i>	
	Trust in Courts	Wait Time (Car)
	Regional/Non-Local Institutions	
	(1)	(2)
Habsburg Empire	0.338* (0.199)	−0.778*** (0.197)
Constant	0.537*** (0.158)	2.965*** (0.155)
Observations	368	302
R ²	0.008	0.049
Adjusted R ²	0.005	0.046
Gen. Match. *p<0.1; **p<0.05; ***p<0.01		

effects occurred at the boundaries after the unification of Romania.⁵³ Spillovers after the unification could lead to convergence in administrative organization close to past borders, which would violate the stable unit treatment value assumption (SUTVA)—a major problem for an RD analysis. In light of the fact that the border was removed more than one hundred years ago, such spillover effects have to be considered.⁵⁴ Additionally, the application of a GRDD is ideally based on a high number of observations very close to the historical borders, but I have more observations at intermediate distances, which is not optimal.

In short, the smaller number of observations in the immediate vicinity of the border and a potential violation of SUTVA are problematic for the application of an RD design and make an additional empirical analysis imperative. An analysis based on the matching of observations might provide such an alternative. The key difference of matching vis-à-vis the RDD approach is that the latter relies much more strongly on a large number of observations near the border.

Moreover, as detailed in the main document, I found statistical imbalance on two covariates. Some matching techniques, such as genetic matching (Diamond and Sekhon 2013), address issues related to imbalance in covariates as they do not solely rely on the computation of propensity scores, but automatically generate comparison groups that have full covariate balance. Since I confirm previous results from the main analysis here (after I have achieved balance on all covariates), I am confident that imbalance in covariates does not drive my main results.

For these reasons, I implement genetic matching (Diamond and Sekhon 2013). As already touched upon in the article, genetic matching isolates two groups of observations that have a comparable distribution of covariates (covariate balance), but differ in terms of the treatment. By doing so, this matching method effectively

⁵³ In the section regarding the mechanisms of intertemporal transmission, I elaborate in more detail on several factors (such as culture) that could be affected by cross-border spillovers.

⁵⁴ Some patterns observed in the main study's results section and in this Appendix indicate the possibility of such convergence close to the historical borders.

addresses the possibility of between-group imbalances in secondary characteristics. In contrast to an RDD, matching generally does not rely as strongly on observations in the immediate vicinity of the historical borders, making it less sensitive to spillover effects in this narrow geographic area.

For the matching process, I use the same set of covariates as in previous regressions. Results of the analysis of matched data can be found in Table 17 for regional institutions and Table 18 for local institutions. They are broadly compatible with the results that were previously obtained. Although these results slightly diverge from the RDD results presented above—since my predictions also allowed for the possibility of a null effect with respect to local institutions—these additional findings generally confirm my hypotheses.

A.13 Regression Discontinuity Analysis: Additional Tests

A.13.1 Density Tests

Sorting at the threshold would call the assumptions of the regression discontinuity design into question. Therefore, I use a procedure by McCrary (2008) to conduct a number of density tests. Three of the four tests conducted fail to reject the null hypothesis that the density is continuous around the threshold (at levels of $\alpha \leq 0.1$), but I do find some evidence for changes in density with respect to the first measurement (local corruption levels) ($p < 0.05$). This could be due to the social sensitivity of the question. Yet as the plots for all variables show (Figs. 9, 10), there is a general trend in all responses to drop slightly on the right side of the border (the part that belonged to independent Romania), including non-sensitive questions.

Table 18 Genetic Matching:
Local Institutions

	<i>Dependent variable:</i>	
	Corruption	Wait Time (ID)
	Local Institutions	
	(1)	(2)
Habsburg Empire	0.147 (0.203)	−0.001 (0.135)
Constant	0.143 (0.164)	1.110*** (0.109)
Observations	378	441
R ²	0.001	0.00000
Adjusted R ²	−0.001	−0.002
Gen. Match. *p<0.1; **p<0.05; ***p<0.01		

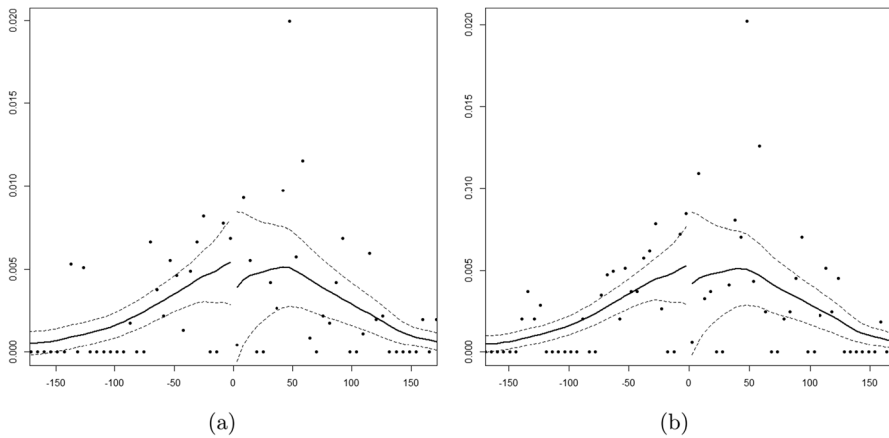


Fig. 9 Density Tests: Local Level

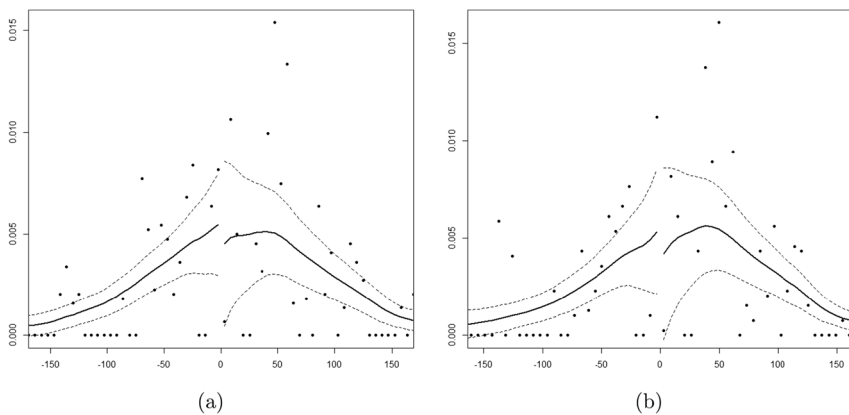


Fig. 10 Density Tests: Regional Level

A.13.2 Sensitivity Tests

I conduct multiple sensitivity tests to investigate the sensitivity of my results to different bandwidths and specifications. The results of these additional tests indicate that most relationships I observe do not change substantially across different specifications, even though I cannot always reject the null hypothesis at $\alpha \leq 0.1$. The following plots show those sensitivity tests for corruption levels, wait times for IDs (Fig. 11), trust in courts, and wait times for cars (Fig. 12). These graphs include 90%-confidence intervals.

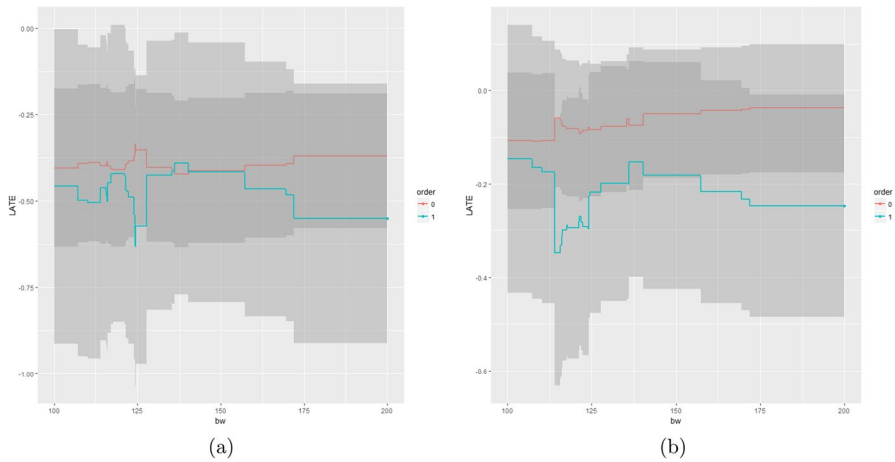


Fig. 11 Sensitivity Tests: Local Level

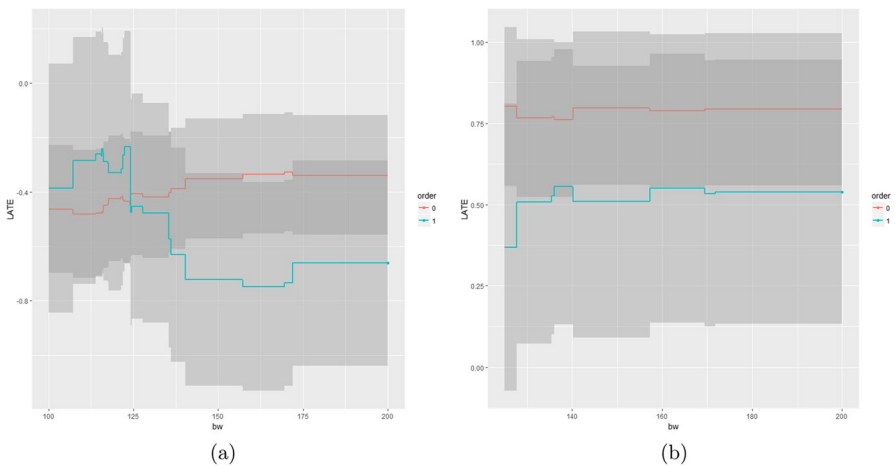


Fig. 12 Sensitivity Tests: Regional Level

A.13.3 Further Graphs

Figure 13 and 14 show quadratic regressions at the optimal bandwidth. These graphs indicate the possibility of convergence in the quality of public institutions in the immediate vicinity of the historical borders, which may be caused by spillover effects. Both in the main study's empirical results section and in the [Appendix](#) at hand, I discuss this problem and matching as a possible alternative empirical test.

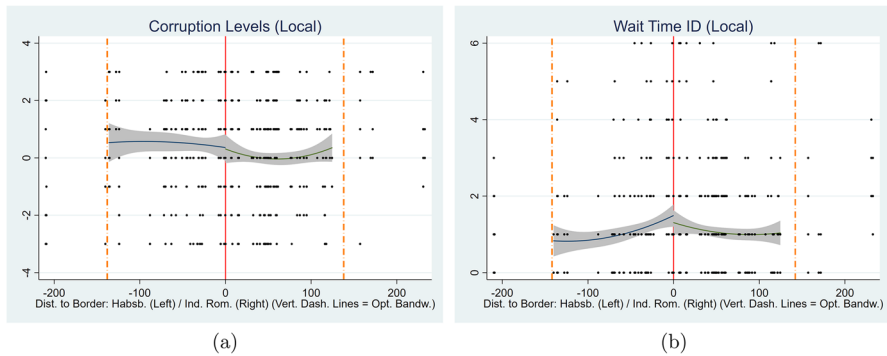


Fig. 13 Comparisons: Local Level

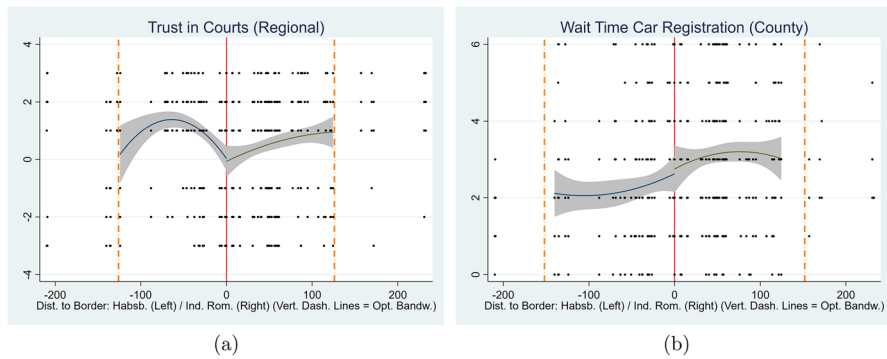


Fig. 14 Comparisons: Regional Level

A.14 Matching: Additional Graphs

Above, I have presented the results of regressions based on genetic matching. Below, I show several figures that include detailed visual information on the distribution of propensity scores before and after matching. These graphs show to what extent the matching procedure has led to a more balanced comparison between treatment and control units.

Figure 15 shows the results for the level of *trust in courts*. Figure 16 shows the results for the *wait times for car registration*. Figure 17 shows the results for the *level of corruption (of local public administrations)*. Figure 18 shows the results for the *wait times for ID*. Figure 19 shows the results for the level of *trust in local public administrations*. Figure 20 shows the results for the *level of efficiency of the local public administration*.

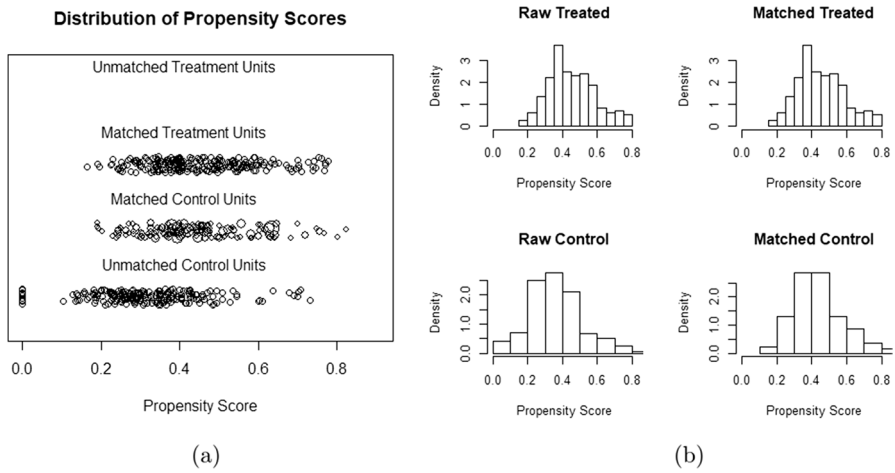


Fig. 15 Propensity Scores: Trust in Courts

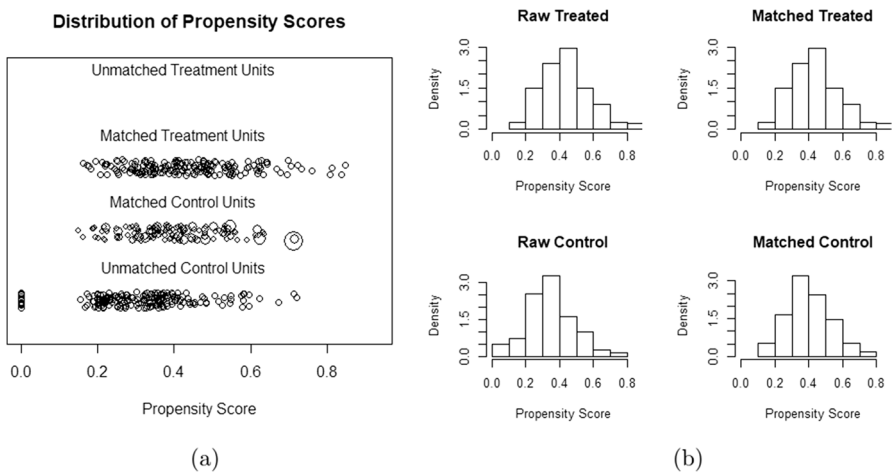


Fig. 16 Propensity Scores: Wait Time Car Registration

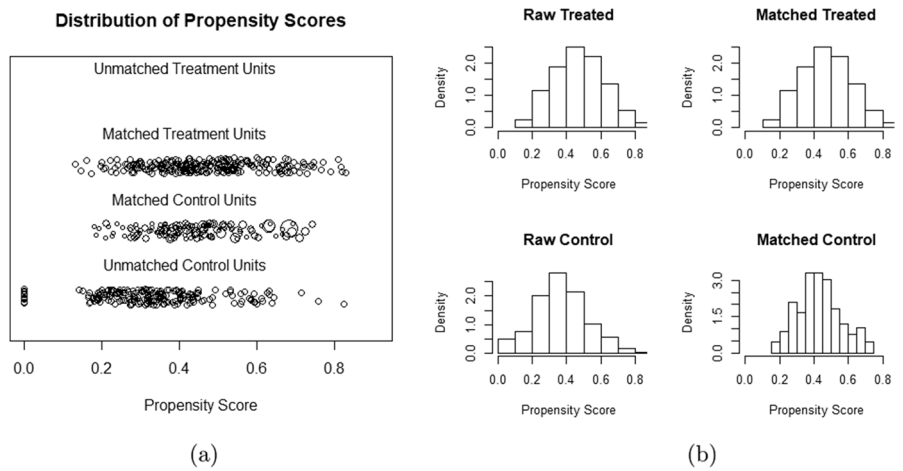


Fig. 17 Propensity Scores: Corruption Levels

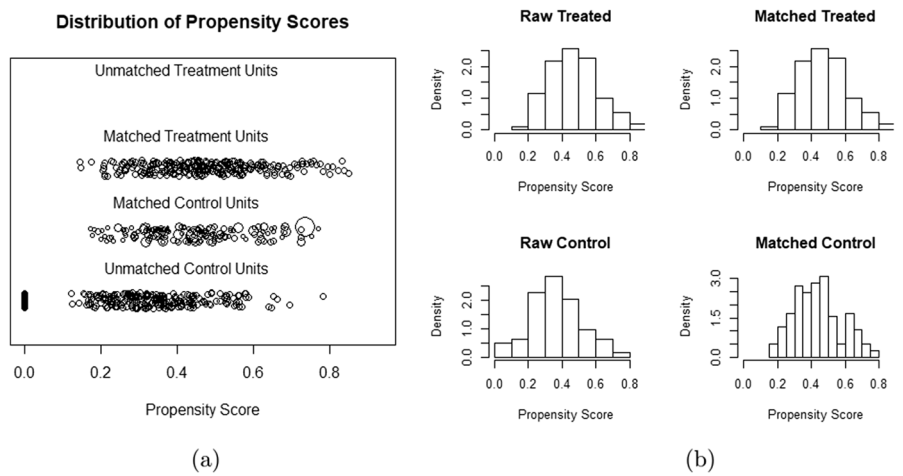


Fig. 18 Propensity Scores: Wait Time ID

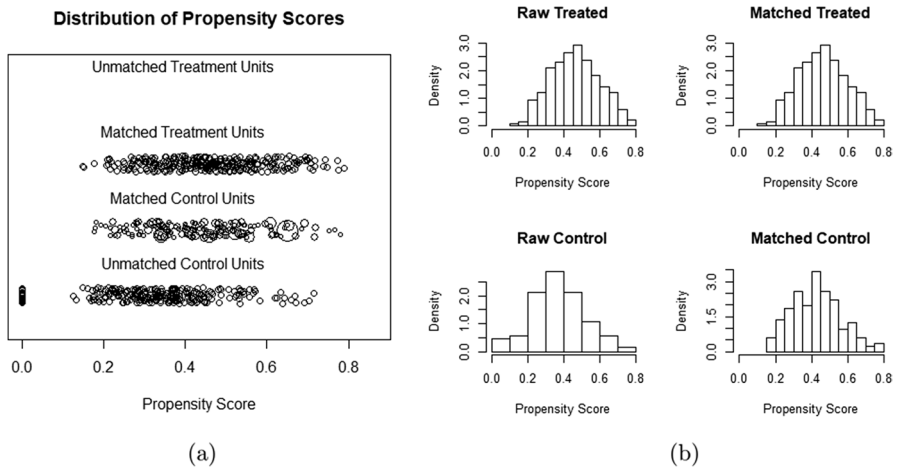


Fig. 19 Propensity Scores: Trust in Local P.A.

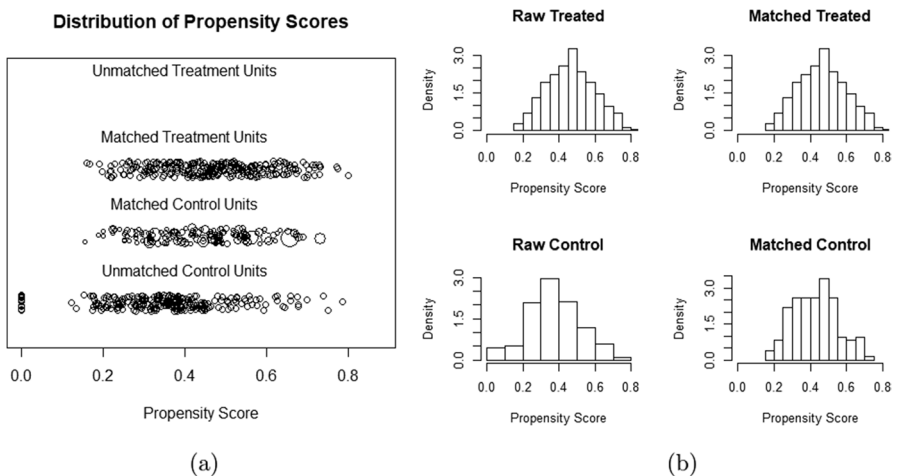


Fig. 20 Propensity Scores: Efficiency of Local P.A.

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