Shadowless theocracies*

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Job Market Paper

Abstract

I study the long-term effect of theocracy on religiosity, pro-religious political preferences and support for gender equality. I exploit a quasi-experiment in Italy, where a large river constituted the border between the theocratic Papal States and a secular, progressive state for three centuries. I propose a novel Difference-in-Geographic Discontinuities (DIG) estimator to disentangle the effect of theocracy from other confounders changing at the river, most notably inheritance norms. I find that theocracy has no effect on attendance of Catholic classes in schools, on pro-Catholic votes in the XXth century and on the opposition to the legalization of divorce and abortion. I then provide suggestive evidence that inheritance norms that predate theocratic institutions might be driving religiosity and voting patterns, and might have prevented long-term theocratic influence impact of theocracy by fostering high social capital.

JEL Codes: D72, N14, C21, Z12
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1 Introduction

A theocracy is "a country that is governed by religious leaders" (Dictionary, 2023). Nowadays, theocracies are particularly relevant in the Middle East, where they limit individual freedoms significantly, especially for girls and women. One example is the Islamic Republic of Iran, established in 1979, where recently the government has been brutally suppressing widespread protests over issues related to freedom of expression and women's rights (Parent, 2023; Parent and Habibiazad, 2023).[1] The fear of a Christian theocratic threat has also attracted attention in the West. Christian nationalism is a political ideology supported by about 20% of the US population that rejects the idea of separating the Church and the state (Whitehead and Perry, 2020).[2] It is believed to have played a key role in the insurrection on Capitol Hill on January 6th, 2021, and that it will constitute an important driver of US politics in the decades to come (BJC and FFRF, 2022). The perceived threat of theocracy also permeates western pop culture (Keishin Armstrong, 2018): an example is Margaret Atwood's speculative science-fiction novel "The Handmaid's tale", inspired by Evangelical political movements in the 1980s, which has recently become an extremely popular TV series.

How persistent are theocratic institutions? Among the most relevant contributions, Drelichman et al. (2021) show that a more intense activity of the Spanish Inquisition reduced economic performance in the long term by eroding social capital.[3] To my knowledge, however, the existing literature on long-term persistence has not yet investigated the long-term effects of theocratic states on religiosity and pro-religious political preferences.

In this paper, I study whether the Papal States, a theocratic state in Italy between the XVIth and the XIXth century, had long-term effects on current pro-Catholic votes. They were the first European state to develop into a modern state (Le Goff, 2012) and became a centralized state governed by the Catholic clergy in the XVIth century. Under the rule of the Pope-king and its government of Cardinals, the Papal States applied religious laws and had a more intense and longer presence of the Inquisition compared to the other secular states in Italy (Prodi, 1982; Tavuzzi, 2007). I test whether territories that were part of the Papal States displayed significantly different pro-Catholic votes from 1948 to 1992 and different religiosity in 2018. For political outcomes, I focus on votes for the main Catholic party, *Democrazia Cristiana*, and on votes against the legalization of divorce and abortion in two dedicated referenda held in 1974 and 1981. For religiosity, my outcome

[1] Another example which has recently attracted considerable media attention for its limitation of individual freedoms is the Islamic Emirate of Afghanistan (e.g. Amnesty International, (2022)).

[2] By conducting a series of nationally representative surveys in 2017, Whitehead and Perry (2020) conclude that 20% of the US population was explicitly against the separation of Church and State and an additional 30%, while still in favour of the separation of powers, strongly supported the public display and support of Christian values, for instance by introducing Christian prayer time in public schools.

[3] The Spanish Inquisition was created by friar orders within the Catholic Church (Tavuzzi, 2007). While the Pope intended to use it to preserve religious unity in the kingdoms on the Iberic peninsula, he soon lost control of it, and the Spanish Inquisition became an institution used for political repression controlled by the Spanish Crown (Vidal-Robert, 2014).

is the voluntary attendance of Catholic classes whose syllabus is set by the Vatican, which are offered by default in all Italian schools.

To obtain causal identification, I exploit a quasi-experiment in northern Italy. In this area, a large river was a hard border between the Papal States and a secular state. The north-most province of the theocratic Papal States was located south of the river Po whereas north of the Po the Republic of Venice was a secular state known for its progressive and liberal institutions.[4] From 1948 through 1992, pro-Catholic votes jump discontinuously at the river: in particular, they are much lower in the former Papal States.

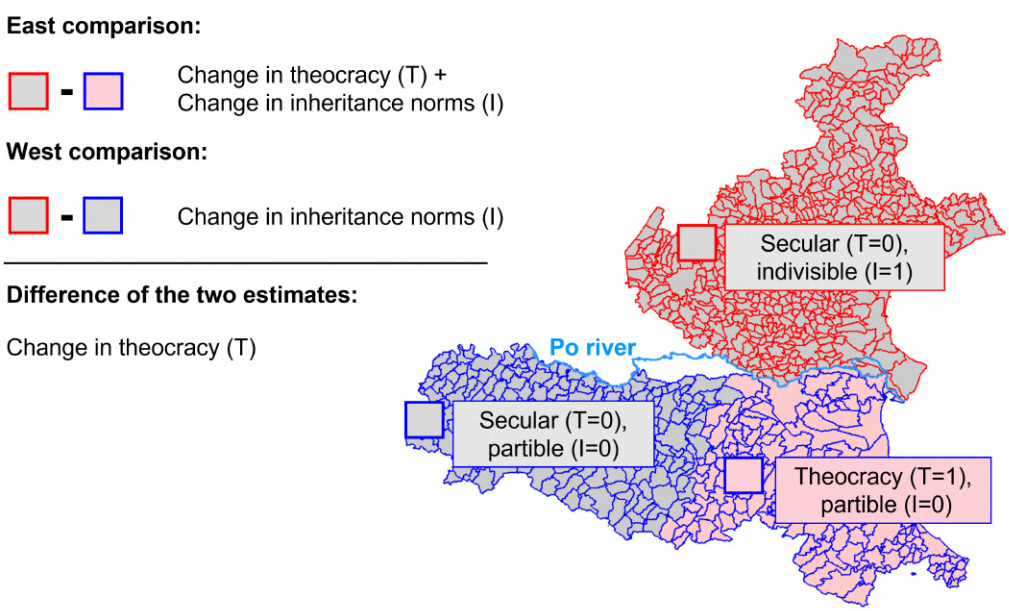
However, estimating a geographic regression discontinuity at river Po is not sufficient to identify the effect of theocracy because other relevant variables change discontinuously at the river. In particular, Todd (1990) posits that inheritance norms that developed since the XIth century could explain the observed differences in religiosity and pro-Catholic votes. To attain causal identification and exclude the effect of any confounders that change discontinuously at the Po river, I formalize an extension to geographic regression discontinuity designs.

Causal identification exploits the hard border constituted by the river and the mismatch in the spatial disposition of theocracy (T) and inheritance norms (I). In particular, I use a third area south of Po (bordering the theocratic Papal States from the West) that was characterized by secular states but, like the Papal states, had partible inheritance norms. The disposition of theocratic/secular states and inheritance norms is plotted in the map in Figure 1. In the figure, I also show the intuition behind my novel estimator, the Differences-in-Geographic discontinuities (DIG). I divide the area into a West and an East section: for each one, I compare the south and north riversides by geographic regression discontinuity. The East comparison identifies a change from a theocratic to a secular state and from partible to indivisible inheritance, whereas the West comparison only identifies the change in inheritance norms, since there were secular states on both sides of the river. I then take their difference, the DIG. Under some assumptions, the DIG identifies the causal effect of theocracy. It subtracts the effect of any confounder that changes discontinuously at river Po.

I find that the theocratic institutions of the Papal States have no effect on current religiosity and political preferences. The null effect is robust to a wide set of robustness checks on the estimation. I then propose inheritance norms as an explanation for the null effect of theocracy. Specifically, I rely on historical arguments and several analyses suggesting that inheritance norms might be driving the observed difference in pro-Catholic votes and religiosity at river Po, a theory already proposed in qualitative research (Todd, 1990). One possible explanation is that the theocratic Papal States, while establishing institutions that could have depleted social capital similar to the Spanish Inquisition in Drelichman et al. (2021), were ineffective because they were super-imposed on a culture

[4] As detailed in Section 3, the Republic of Venice imposed secular control over Inquisition tribunals and greatly reduced their impact. It was also home to a florid printing industry that disseminated pro-Protestant ideas and other views the Catholic Church actively contrasted (Black, 2009).

Figure 1: Geographic disposition of treatments and DIG estimator



Notes: The figure shows the geographic disposition of the theocratic Papal States (pink fill colour for theocracy $T = 1$, grey fill colour for secular states, $T = 0$) and inheritance norms (red borders for indivisible inheritance $I = 1$, blue borders for partible inheritance $I = 0$). This disposition allows disentangling the effect of theocracy on votes for the Catholic party (1948-1992), and votes against divorce and abortion (1974, 1981). This is done by estimating a "West " and an "East" regression discontinuity and taking their difference (DIG).

that had already fostered high social capital. This culture, based on partible inheritance, developed long before the Papal States became a centralized theocratic state. I show quantitative evidence that inheritance norms predict social capital nowadays whereas theocracy does not. However, due to restricted data availability a clear causal identification is not possible and these results remain only suggestive.

The rest paper proceeds as follows: Section 2 reviews the literature and presents the contributions; Section 3 clarifies the historical setting and discusses why both the Po river and the border between the Papal States and other states south of the Po were hard borders; Section 4 describes the data; Section 5 presents the empirical strategy and formalizes the DIG estimator; Section 6 presents the results; Section 7 discusses inheritance norms as an explanation of theocracy's null effect; Section 8 lists robustness checks. Finally, Section 9 concludes the paper.

2 Literature review

This paper contributes to the literature on culture and institutions, reviewed by Alesina and Giuliano (2015). I isolate the effect of theocracy, a set of formal institutions, from inheritance norms,

typically regarded as culture. It is closely related to Drelichman et al. (2021), who show that the Spanish Inquisition reduced economic growth in the long run by eroding social capital, and to Malik and Mirza (2019), who find that Muslim shrines in Punjab Pakistan have a negative long-term impact on development. I depart from these studies in terms of both treatment and outcomes. I focus on a centralized theocratic state rather than on religious institutions, and I investigate its long-term effects on religiosity and political preferences. I show that theocratic institutions in place for several centuries are not persistent after their formal dissolution. This is in contrast with findings on other types of formal institutions: for instance, Acemoglu et al. (2011) and Buggle (2016) show that the progressive institutions brought by Napoleon had a long-term positive impact on economic development, cooperation and trust in Germany.

This paper also contributes to the literature on the origin of political preferences, where the most relevant contributions focus on extreme political preferences. Voigtländer and Voth (2014) and Caesmann et al. (2021) analyze the role of infrastructure investments and personal networks in building consensus for the Nazist party in Germany. Acemoglu et al. (2020) explain the rise of fascism in Italy as a response to socialism in the aftermath of WWI. Fontana et al. (2018) use a geographic RD design in central-northern Italy and attribute the root of widespread communist preferences in Emilia-Romagna (where my setting is located) to Nazi occupation during WWII. Rather than extreme preferences, I focus on conservative political preferences related to religion, i.e. votes for the Catholic mass party *Democrazia Cristiana*. My findings suggest that theocratic institutions do not drive pro-Catholic votes, and suggest inheritance norms as a possible determinant. Closer to my analysis, Basten and Betz (2013) also use a geographic RD design to show that Protestant cantons in Switzerland are more resistant to redistributive policies due to Protestant doctrine.

I contribute to the economics of religion (e.g. see Rubin and Woessmann (2021)) by showing that a theocracy that conditioned European history from the Middle Ages to the mid-XIXth century had no long-term effects on political preferences and religiosity. In the short term, Alquézar-Yus (2023) shows that foreign Catholic priests in Spain revive religiosity and influence political attitudes towards more Catholic-oriented positions. To my knowledge, this paper is the first to investigate the long-term impact of a formal theocracy, the Papal States, rather than specific Catholic institutions. Schulz et al. (2019) find that a longer exposition to the Catholic Church, through its control of marriages and kinship, increased the likelihood of forming a Commune in early medieval cities; on the other hand, Belloc et al. (2016) show that following earthquakes, bishops who governed cities in medieval Italy increased their political authority and thus delayed the formation of Communes. Andersen et al. (2017) and Akçomak et al. (2016) show that in England and the Netherlands, exposition to monastic orders and religious communities that emphasized specific values fostered economic development. Squicciarini (2020) finds instead a negative effect of the French Catholic Church on economic development through the delay of industrialization. Looking at a developing context beyond Christian Europe, Bhalotra et al. (2021) show that the election of Muslim politicians in India leads to a decrease in abortions. While they focus on sex-selective abortions, my results

concern religious political preferences and the acceptance of abortion in a developed country.

By assessing the long-term effect of theocracy on the acceptance of divorce and abortion, this paper is also marginally related to the causal literature on the origins of gender norms. Teso (2019), for instance, shows that the gender imbalance caused by slave trades in Africa had persistent effects on contemporary gender norms and female labour participation. Lippmann et al. (2020) find that Eastern Germany institutions prevailed over traditional gender roles in shaping female labour market outcomes. My residual analysis of inheritance norms as a driver of pro-Catholic votes also relates to the correlational evidence on Todd (1990)'s family systems – my definition of inheritance norms – and contemporary education, regional growth, gender norms and labor market outcomes (Duranton et al., 2009; Baudin and De Rock, 2021; Carmichael et al., 2016; Bertocchi and Bozzano, 2015, 2016; De Pleijt et al., 2019; Szołtysek and Poniat, 2018). To my knowledge, this is the first study that brings Todd's theories on the nexus between family systems, religiosity, and political preferences to the data.

Finally, to attain causal identification, I propose and formalize an extension to geographic regression discontinuity designs, the Difference-in-Geographic RD estimator (DIG). The proposed extension allows tackling the issue of compound treatments discussed by (Keele and Titiunik, 2015) by exploiting spatial heterogeneity in the assignment of multiple treatments. Methodologically, it relates to Grembi et al. (2016), who proposed a similar strategy to disentangle compound effects in traditional RD studies, when the adoption of multiple treatments is staggered over time rather than across space. The DIG can be used with any underlying geographic RD estimator: in my application, I rely on the Distance Adjusted Propensity Score Matching (DAPSm) (Papadogeorgou et al., 2019) and on Dell (2010)'s estimators.

3 Historical background

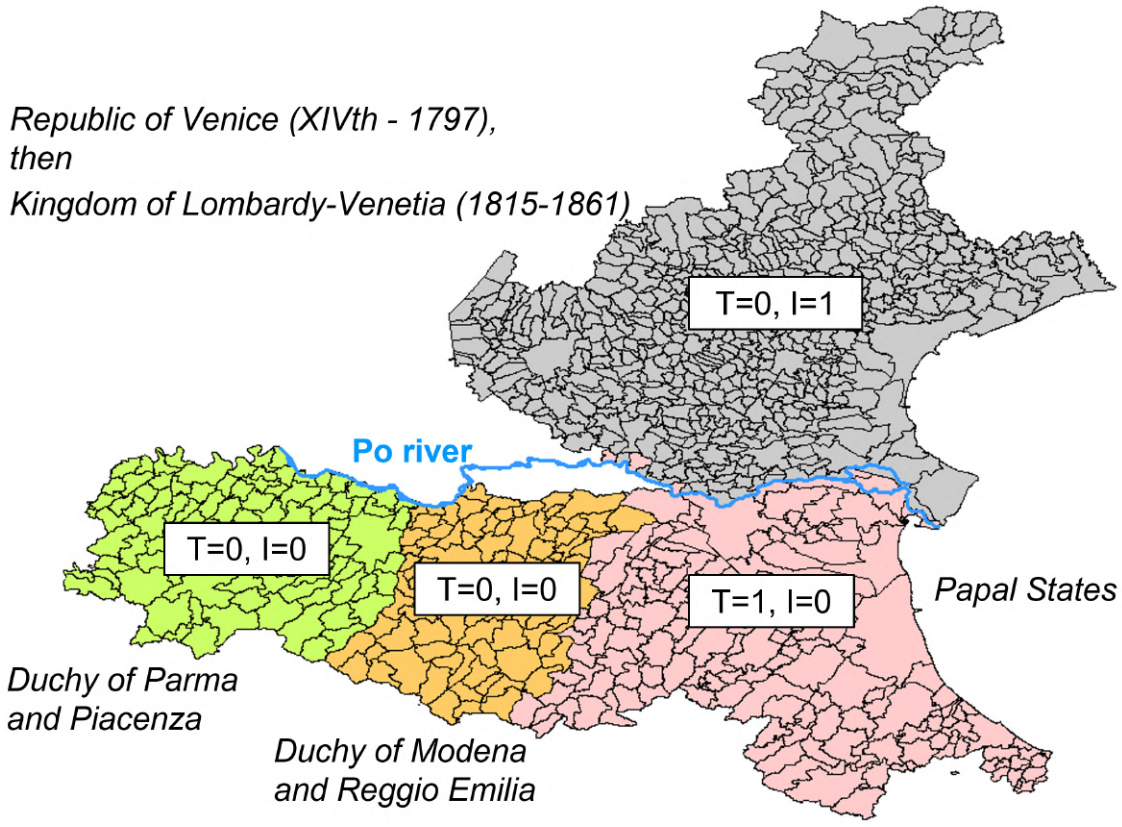
This section is divided in two parts. First, Section 3.1 highlights the main features of the history of states in the area: their institutional relationship with religion, with each other, and what is known about their borders. Then, Section 3.2 discusses the history and geography of the Po river in relation to the identifying assumptions of the geographic discontinuity design. Finally, Section 3.3 provides a concise description of the history of Italian politics across the XXth century to clarify the outcome variables.

3.1 Papal states, secular states and religion

The map in Figure 2 shows the states in the area between 1598 and 1797, and then again from 1815 to 1861, following a brief period of Napoleonic occupation. This is the period of interest for the analysis for two reasons. First, in this period the river Po constituted the northern border of the Papal States. Second, in the XVIth century, the Papal States reorganized as a centralized

theocratic state and developed important differences with respect to secular states. In the historical Appendix, I provide a more detailed account of the history that occurred before the period under consideration. This includes how the borders in Figure 2 and relationships between states came to be.

Figure 2: Territorial divisions: 1598-1861



Notes: $T = 1$ indicates theocracy, $T = 0$ indicates secular institutions. $I = 0$ for partible inheritance norms and $I = 1$ for indivisible inheritance norms. This territorial division was interrupted between 1797 and 1815 when Napoleon established the Cisalpine Republic.

During the XVIth century, it becomes reasonable to refer to states as unified entities within this region.

The Republic of Venice controlled the entire region of Veneto, north of the Po, in the XVth century (Moro, 2008). While in the first half of the XVIth century the Republic left large autonomy to local authorities – remnants of the age of Communes –, in the second half it created a centralized judicial body with jurisdiction over the entire territory (Guerini Fasaro, 1994; Povolo, 1994, 1980).

The Papal States, already in the XIVth and XVth centuries, were pioneers in building a fiscal

capacity (Le Goff, 2012) and defining clear borders, because of their longstanding collection of tithes and administration of religious tribunals, which led to numerous jurisdictional conflicts with other secular authorities (Le Goff, 2012; Tavuzzi, 2007). However, in the XVIth century, they underwent a radical process of centralization and "Catholicization" (Prodi, 1982). This consisted in depriving local administrators of their authority and posing them under the direct control of legates sent from Rome, with the aim of harmonizing the administration, controlling it centrally, and ensuring the application of Catholic values. The process of defending Catholicism and strengthening control went hand in hand with a broader reaction to the Reformation. The main action taken in this direction was the foundation of the Roman Inquisition in 1542 (Black, 2009).

The Roman Inquisition was created on the model of the Spanish Inquisition and reported directly to cardinals in Rome. While it made more limited use of torture – which had to be approved in Rome – it still operated in such a way as to deplete interpersonal trust (Black, 2009; Bellabarba, 2008; Cherubini, 1984). It made frequent use of Easter confessions and encouraged to accuse others in exchange for leniency (Black, 2009). For what concerns this paper, there are two important observations to make:

- Roman Inquisition tribunals gradually fell into disuse in the XVIIIth century everywhere except in the Papal States, where they remained intensively active until 1861 (Black, 2009).[5]
- Inquisitors led the investigations and trials, but their penalties had to be administered in collaboration with the local authorities (Tavuzzi, 2007).[6] In particular, Canon Law prevented members of the clergy from spilling blood (torture and executions). The legal basis for said collaboration with secular authorities was in agreements made with single cities in the XIIIth century. However, these dispositions were increasingly overlooked in subsequent centuries, leading to numerous conflicts over jurisdiction (Tavuzzi, 2007). Clearly, while cardinals in Rome exhorted inquisitors to leniency in other secular states, they were easily enforced within the Papal States, where the religious and temporal powers were indistinguishable (Fragnito, 1994; Prodi, 1982). For instance, there are direct recounts of severe corporal punishments against blasphemy in 1800 (Cantini, 1800).

There is historical evidence of these conflicts with all secular states in the area. At the end of the XVth century, a very violent witch hunt from the local inquisition tribunal (before the centralization of the Roman Inquisition) caused the intervention and complaints of local secular authorities from the Duchy of Parma and Piacenza and the Republic of Venice (Tavuzzi, 2007).

The Republic of Venice, while it has always been very religious, has a long history of opposing the Church's claim for jurisdiction. Already in Medieval times, its tribunals were assigned to Franciscan friars, less prepared and notably more lenient than the more common Dominican friars. Moreover, the flourishing printing industry made Venice a main hub for the diffusion of Reformation views in

[5] P. 55.
[6] Pp. 36-38.

the Italian peninsula (Tavuzzi, 2007). Between 1598 and 1861, it is important to emphasize that the Republic of Venice:

- Created its own secular tribunal against blasphemy precisely to avoid jurisdiction claims from the Roman Inquisition (Derosas, 1980; Piasentini, 1999), called *Esecutori contro la bestemmia*. It was known for being particularly lenient, and it built on a long history of lenient penalties towards blasphemy.

- For all other crimes, it reserved its government (*Consiglio dei Dieci*) the right to assign jurisdiction of each case to the Inquisition or to secular tribunals. It also imposed the presence of members nominated by secular authorities in every Inquisition tribunal. This led to (i) strong opposition to the practice of secret accusations, which implied that many anonymous accusations were not followed up by the Inquisition; (ii) no use of torture and very few executions, especially of women (Black, 2009; Seitz, 2011; Piasentini, 1999).

- Was the target of several mass ex-communications from the pope as the result of jurisdictional conflicts (Piasentini, 1999; Bouwsma, 1968). The most famous one, known as the Interdict War (1606), led the Republic to banish all friar orders: Jesuits were banished permanently (Loughlin, 1913). It is important to mention that these conflicts were of an institutional nature and did not affect religiosity: in all these occasions, despite the papal interdiction to do so, Venetians kept celebrating mass with soldiers outside churches

  The Duchy of Modena was also a hub of Protestant ideas in the XVIth century. Moreover, the local inquisitor was particularly inactive, which led the Holy See to send a roving inquisitor to temporarily increase the number of trials (Black, 2009). The Duchy of Modena was under the central control of the *Estensi* family, who appointed feudal lords well into the XVIIth century. Specific attacks of the Roman Inquisition towards feudal lords led to violent conflicts between the lords and the local population on one side and clergy on the other, and led Cardinals to reproach the inquisitors in charge and command leniency (Rambaldi, 1991). Moreover, to contrast the Papal States' expansionary campaigns, the *Estensi* appointed feudal lords who had pre-existing conflicts with papal authorities in the areas close to the border, to insure the border's military control. This also led to almost zero migration from the Papal States into the Duchy of Modena (Rambaldi, 1991). This is particularly important for the identification strategy, which requires this border to be a strict one of difficult access for common people.

  From the end of the Napoleonic occupation in 1815, it is possible to speak of modern states and thus compare codified laws in these states (Povolo, 1994; Mazzacane, 1994).

  Table 1 shows that religious crimes were punished much more harshly in the theocratic Papal States where, on top of criminal courts, the Inquisition was still active. The same is true for abortion, except for the Duchy of Modena and Reggio Emilia, which prescribes 5 additional years of imprisonment compared to the Papal States. The Lombardy-Venetia's code and the Duchy of Parma and Piacenza's codes are far less detailed concerning crimes against religion.

Table 1: Comparison of 19th-century penalties for religious and moral crimes

	$I = 1$	$I = 0$	$I = 0$	$I = 0$
Crime	**Papal States**	**Duchy of Modena and Reggio Emilia**	**Duchy of Parma and Piacenza**	**Kingdom of Lombardy-Venetia**
Abortion	10 years imprisonment	15 years imprisonment	3-5 years imprisonment	1-5 years imprisonment
Blasphemy	1-3 years forced labour	6 months imprisonment if due to anger outburst, 5 years forced labour if heretical and deliberate	Unmentioned	Unmentioned
Theft of sacred objects	Death	Death for sacramental bread, for other sacred objects ≥5 years forced labour	Forced labour for life for sacramental bread, not mentioned for other sacred objects	Unmentioned
Scandalous interruption of religious function	15-20 years imprisonment	Max 7 years imprisonment if the priest is outraged	1-3 years imprisonment	6-12 months imprisonment, 1-5 years imprisonment if public safety is put at risk

Notes: Based on the direct comparison of post-Napoleonic criminal codes (1815-1866)– (Ducato di Modena e Reggio, 1852; Ducato di Parma, Piacenza e Guastalla, 1850; Catholic Church, 1862; Regno Lombardo-Veneto, 1852). The Kingdom of Lombardy-Venetia includes all territories north of the Po that were previously part of the Republic of Venice.

3.2 The Po as a hard border

The identification strategy is based on the idea that the Po river acted as a natural border for people and states. The presence of the river would have restricted the movement of common people, while simultaneously serving as a boundary between the Papal States and the Republic of Venice, and later the Kingdom of Lombardy-Venetia. The following section provides evidence in support of these points.

The Po is the longest and one of the largest Italian rivers and it generates the Po Valley, the widest plain in the country. At its narrowest point within the setting, it is more than 600 metres wide and it used to be already back in the XVth century (Uggeri, 2004).[7] It is also characterized by heavy currents: within the setting, its mean daily discharge between 1921 and 2011 is estimated between 180 and 280m^3/s: due to the lower exploitation of its waters for agriculture and to more intense precipitations, climatologists and historians estimate a higher discharge the further back in time. As a result, the areas just around the Po were characterized by frequent floods until the construction of embankments by Napoleon in 1806 (Zanchettin, 2008).

These floods made the area uninhabitable for most of the year, due to the high prevalence of malaria and the absence of permanent roads over humid terrains, and prevented the formation of large, stable communities (Bocchi, 1861). Indeed, the first small villages on both sides of the river (XIth century) were located approximately 12 km away from the river (Bondesan, 2001; Bocchi, 1861). This is particularly important because:

[7]The direct recount by "Marin Sanudo the Young", in 1483, reports that the pontoon bridge in Pontelagoscuro was 410 Roman steps long (23 boats), corresponding to approximately 607m. The current bridge in the same locality is 610m long.

1. Travelling across the river was particularly cumbersome not just due to the crossing per sé, but because on top of the rip currents[8] and the control of borders across the two states, the conditions of the terrain and the roads on the riverbanks increased the dangers of travelling (Bocchi, 1861);
2. These conditions delayed the beginning of the riverbanks' colonization until the XVth century and in some areas until the XIXth century (Sonnino, 1996), a colonization that arrived from the respective inlands.[9] As a result, inheritance norms developed separately on the inlands on the two sides of the river and then spread to the riverbanks, generating a discontinuity at the river in inheritance norms;[10]

For a common person, crossing the Po became feasible only at the end of the XIXth century, for several reasons. First, quite trivially, because that is when the first permanent bridges were built (Romanoni, 2008). Second, because although the Po had a higher discharge in the past, the width of the Po in this trait has remained constant over time, implying stronger currents and more dangerous navigation (Orlando, 2011; Zanchettin, 2008).

Finally and most importantly, the Po has always been the border between different states in conflict with each other for many centuries over the control of navigation. As such, the river itself has been the theatre of several conflicts from the 9th to the XVIth century, to the extent that all existing (temporary) bridges before the XIXth century were guarded pontoons or fortified wooden bridges, controlled by soldiers from either river bank. Their function was to monitor, tax and often block each other's commercial traffic on the river (Romanoni, 2008; Uggeri, 2004; Bocchi, 1861). Wooden bridges were also the target of destructive attacks from enemy ships (Romanoni, 2008). For all these reasons, already in the XIIIth century, the Republic of Venice established an armed fluvial police force on the Po, aimed at preventing any form of unauthorized mobility, escorting ships to protect them from attacks, and supporting them in case of shipwrecks due to currents (Orlando, 2011).[11] At that time, south of the last tract of the Po there was the Duchy of Ferrara. Its territories, which corresponded to those shown in Figure 2 from 1484 (Moro, 2008), were later acquired by the Papal States when the last duke died without an heir. River Po remained a highly controlled border between the Papal States and the Republic of Venice.

[8] Direct historical recounts of the dangers of navigation due to rip currents can be found from the 13th to the 19th century (Uggeri, 2004; Bocchi, 1861).

[9] The area was populated during the Roman era, but after the fall of the Western Roman Empire (A.D. 569-774), during the Langobard Kingdom, increased precipitation, frequent and massive floods caused a drastic demographic fall around the river, coupled by frequent Germanic incursions that the river contained to the northern riverside (Uggeri, 2004; Sonnino, 1996).

[10] The Germanic populations responsible for the incursions that were contained to the north riverside followed indivisible inheritance norms. These incursions are likely to be the origin of different inheritance norms on the two riversides (Todd, 1990).

[11] In the Peace of Costanza (1186), the Republic of Venice had also sanctioned that building pontoons was an exclusive right of state institutions.

3.3 A primer on Italian Catholic politics after WWII

My political outcomes are pro-Catholic votes in all political elections and two referenda held between 1948 and 1992.

The first openly Catholic party, *Partito Popolare Italiano* (PPI) was founded in 1919 and first ran for elections between 1919 and 1924. Those elections, however, were characterized by widespread fascist violence aimed at preventing Catholics and socialists from voting, especially in the Po valley. Therefore, I exclude them from the main analysis. In Section B in the Appendix, I provide further historical details and I present results for those 3 elections.
Democrazia Cristiana (DC) was founded as the successor of PPI in 1943 and became a key element of the Italian Resistance. The first post-war political elections were held in 1948, for the first time with male and female universal suffrage. The 1948-1994 period, known as the *first republic*, was characterized by large mass parties: DC (the largest one) and, most notably, the red *Partito Comunista Italiano* (PCI) and *Partito Comunista Italiano* (PSI). The end of the *first republic* coincided with the dissolution of all three parties. PCI was the first to dissolve, in 1991, following the fall of the U.S.S.R.. On the other hand, PSI and DC dissolved after a series of scandals on party financing and corruption known as *Tangentopoli*, which began in 1992 and led to the redefinition of the entire Italian political scene and to the end of the mass-party era in Italy.

4 Data

I combine data from several sources. I employ data from the Italian Ministry for Internal Affairs (Ministero dell'Interno, 2020a,b,c) on the results on the two referenda, which were held in 1974 (on divorce) and 1981 (on abortion), and of every political election from 1948 to 1992 for the Chamber of Deputies, a total of 11 elections.[12] For all voting occasions, no municipality reported missing data ($N = 923$). Since several municipalities underwent mergers and separations between 1948 and 1994, I harmonize all years to the municipalities in place in 1979, that is the mid-election and also the one between the two referenda.

Other covariates at the municipality level, measured every 10 years from 1951 to 1991, are taken from the decennial census (ISTAT, 2020). Since they are contemporaneous to the outcome variables, they are not used as baseline covariates in my model. However, they are used in robustness checks (see Section 8). For each municipality, I also compute the number of urban inhabitants within 20 km of the modern city hall in year 1300, based on population

[12] Perfect bicameralism implies that at political elections, voters above 25 years old could vote for both the Chamber of Deputies and the Senate, whereas the voting age (18 since the 1976 elections) only allows voting for the Chamber of Deputies. Moreover, in Section B I repeat the analysis for the 1919, 1921, and 1924 elections: for those, I only have access to results for the Chamber of Deputies.
While the results of the 1972 political elections and the referendum on divorce from 1974 are available online, the results of the 1981 referendum on abortion at the municipal level are kept at physical archives of the Ministry of Internal Affairs and were digitized manually.

data from Sonnino (1996) – shown in Figure F.8. Coordinates and altitude of municipalities are taken from ISTAT (2015): in computing distances from rivers, I take the coordinates of the city hall.[13] Raster data on rivers are from ISPRA (2020). Data on the attendance of Catholic religion classes in schools and the total number of students are from the Italian Ministry of Education (UAAR, 2022).

Summary statistics by treatment groups are presented in Section C in the Appendix.

5 Empirical Strategy

5.1 Geographic Regression Discontinuity Estimator

In intuitive terms, a DIG point estimate is the difference between two geographic regression discontinuity (GRD) estimates. These, in turn, must be estimated with an underlying GRD estimator. In what follows, I will briefly define GRD estimators in generic terms, as it will be useful to formalize the Difference-in-GRD (DIG) estimator in the next section. For a more detailed presentation of GRDs, I refer the reader to Keele and Titiunik (2015).

Consider a municipality i, with $i \in \{1, 2, ..., N\}$, uniquely identified by its coordinates (latitude and longitude), $\boldsymbol{L}_i = (L_i^1, L_i^2)$. For the sake of illustrating a generic GRD estimator, let there be a single binary treatment indicator Treat $= \{0, 1\}$, which changes discontinuously at a geographic threshold denoted $\mathcal{B}$, the border. In this setting, the border $\mathcal{B}$ corresponds to a line (the river), and it is composed of a set of points characterized by latitude and longitude and denoted $\boldsymbol{b}$, where $\boldsymbol{b} = (L^1, L^2) \in \mathbb{R}^2$. Let $\mathcal{B}$ separate space in two non-overlapping regions, defined as the sets of treated and control units, $\boldsymbol{L_t} \equiv \{(L_i^1, L_i^2) : \text{Treat}_i = 1\}$ and $\boldsymbol{L_c} \equiv \{(L_i^1, L_i^2) : \text{Treat}_i = 0\}$. Define average potential outcomes as $Y(\text{Treat}) \equiv \mathbb{E}(Y_i(\text{Treat}_i) \mid \text{Treat}_i)$. Finally, let subscript t index treated units, $t \in \{1, 2, .., N_t\}$ and c index control units, such that $c \in \{N_t + 1, N_t + 2, .., N\}$, so that $N_t + N_c = N$. Under continuity of potential outcomes, the GRD at border point $\boldsymbol{b}$, for an observed outcome Y, is identified by:

$$E_{\mathcal{B}}[\tau(\boldsymbol{b})] \equiv E_{\mathcal{B}}\Big[\lim_{\mathbf{L_t} \to \boldsymbol{b}} E\left\{Y_i \mid \mathbf{L}_i \in \boldsymbol{L_t}\right\} - \lim_{\mathbf{L_c} \to \boldsymbol{b}} E\left\{Y_i \mid \mathbf{L}_i \in \boldsymbol{L_c}\right\}\Big]$$

Note that one could potentially identify $\tau(\boldsymbol{b})$ for each $\boldsymbol{b} \in \mathcal{B}$ and obtain their distribution. This formulation indicates that the GRD estimator of interest is the mean of that distribution, i.e. $E_{\mathcal{B}}[\tau(\boldsymbol{b})]$. For simplicity, in the remainder of this paper I will restrict to the neighbourhood of $\mathcal{B}$ implicitly: I will omit from the notation the limits and the expectation over the distribution

[13] As an alternative, I also computed the distance between the river and the average latitude and longitude within a municipality's polygon, and taking the minimum distance of each polygon from the river: the results are not affected. However, the procedure is much more computationally intensive. Note that the oldest available geographic data are from 2011: in cases when municipalities underwent mergers from the period of analysis to 2011, I assign the coordinates of the new city hall to all the original municipalities.

of $\mathcal{B}$, and I will refer to $E_{\mathcal{B}}[\tau(\boldsymbol{b})]$ as:

$$\tau(\boldsymbol{b}) \equiv E[Y(1)] - E[Y(0)]$$

There are many possible estimators for GRDs. The one I will adopt in my analysis is the Distance Adjusted Propensity Score Matching estimator (DAPSm) by Papadogeorgou et al. (2019). The DAPSm estimates the Average Treatment Effect on the Treated (ATT, the estimand) by performing 1:1 nearest-neighbour matching without replacement on the DAPS score:

$$DAPS_{tc} = w \times |PS_t - PS_c| + (1 - w) \times \text{Dist}_{tc} \tag{1}$$

where n and s indicate that the two elements of each pair are one north and south of the border; $w \in [0, 1]$ determines the relative importance of the geographic distance between two elements of each pair, and of their propensity scores PS, which models assignment to treatment conditional on a vector of observables $\boldsymbol{X}$. Let me anticipate that I also include in $\boldsymbol{X}$ the closest tract of the river. Namely, I separate the river into 10 equally long tracts and for each municipality, I define a factor variable indicating the closest one, to ensure that matching is also based on longitude. In my analysis, I compute Dist_{tc} as the Euclidean distance between paired t and c's city halls, and I set $w = 0.5$. In Section E.2 in the Appendix, I show that results remain comparable with different values of w (estimates become slightly larger as w approaches 1). I also specify a caliper equal to 0.4 for the propensity score PS, such that two municipalities whose propensity scores differ by more than 0.4 cannot be matched. Moreover, even though DAPSm relies on propensity score matching, I include a limit on the standardised difference in means across treated and control group on single covariates in $\boldsymbol{X}$, equal to 0.5. In other words, if for any observed covariate the standardised difference in means between the treated and control group exceeds 0.5, the matched dataset is not considered valid and the matching algorithm starts over.

The choice of DAPSm is motivated by two observations. First, as noted by Keele et al. (2015), in traditional RD designs that restrict to a small neighbourhood of $\mathcal{B}$, unconfoundedness holds regardless of conditioning on covariates: this, however, requires a sufficient density mass of observations located around the border $\mathcal{B}$. Conditioning on pre-treatment covariates can guarantee unconfoundedness in contexts where it is necessary to enlarge the bandwidth beyond the immediate proximity of $\mathcal{B}$. In this setting, out of 923 municipalities, only 78 are located within 10 km of the river Po, 176 within 20 km: it is a natural consequence of using municipal rather than individual data. Incidentally, by showing robust estimates across specifications that include increasing numbers of covariates, I can test and show evidence of unconfoundedness even in the largest sample, where the maximum distance is 175 km (the 75th percentile is 81 km). Second, precisely because municipal data imply a limited sample size compared to standard matching studies, and because of computational feasibility, I prefer

propensity score matching to exact and distribution-based matching methods: because of these two specific advantages, I chose the DAPSm over Keele et al. (2015)'s GRD estimator. Section E.3 in the Appendix presents a robustness check with a different underlying GRD estimator – Dell (2010) – that does not rely on matching.

5.2 Difference-in-Geographic discontinuities: the DIG estimator

Keele and Titiunik (2015) formalized and discussed, in the context of GRDs, the assumption of Compound Treatments Irrelevance. If multiple treatments change at $\mathcal{B}$, one must assume that all treatments except the one of interest are either continuous at $\mathcal{B}$, or that they have no effect on the outcome. Keele and Titiunik then hint towards a design à la Grembi et al. (2016): the intuition is that, if the confounding treatments vary at the same border but are introduced at different points in time, one could estimate one GRD for each of the two periods and take their difference, and in this way isolate the effect of the policy of interest.

However, in this setting and in most long-term persistence studies, treatments are assigned in a distant past in which the only quantitative information available are geographic variables, and the outcomes are only measured in the present. The DIG estimator exploits geographic mismatches in the assignment of multiple treatments to identify the effect of (at least) one of them.

In the Po valley, two treatments are changing discontinuously at the river, which corresponds to the border $\mathcal{B}$. As in the previous sections, these treatments are denoted as T_i (theocracy) and I_i (inheritance norms):

$$T_i = \begin{cases} 1, & \text{if } i \text{ was under the Papal States' theocracy} \\ 0, & \text{if } i \text{ was under a secular state} \end{cases}$$

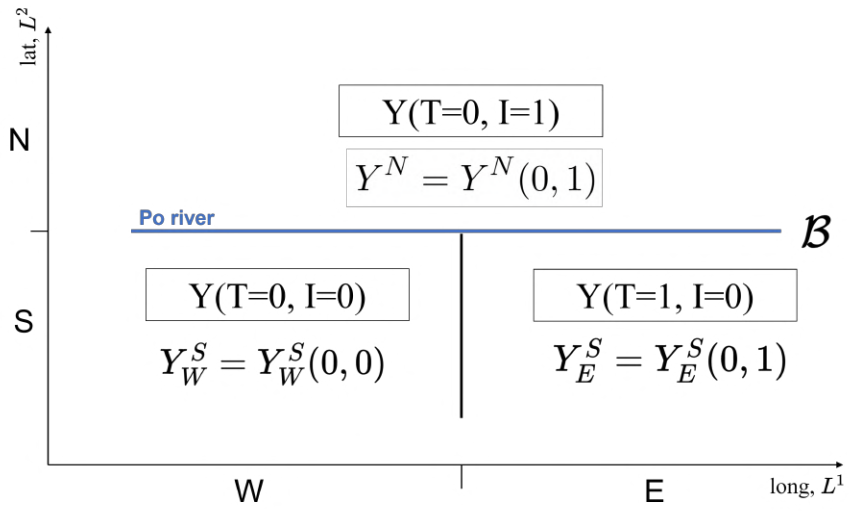
$$I_i = \begin{cases} 1, & \text{for } \boldsymbol{L}_i \text{ north of } \mathcal{B} \implies \text{indivisible inheritance} \\ 0, & \text{otherwise} \implies \text{partible inheritance} \end{cases}$$

The aim is to identify the ATT of theocracy (Papal States' domination), unconditional from I_i and any other confounder changing discontinuously at river Po – which can be thought of as being captured by I_i.

I denote average potential outcomes as $Y(T, I)$ and identify three geographic areas based on the observed values of T and I. In Figure 3, I summarize the correspondence of observed and potential outcomes in this setting. For observed outcomes, I use superscripts N, S to denote the areas north and south of the river, respectively, and subscripts E, W to denote the east and west within the southern area.

I make the following identifying assumptions:

Figure 3: Correspondence of observed and potential outcomes



Assumption 1. ***(Continuity)***

All potential outcomes are, in expectation, continuous in latitude and longitude at the border. That is, for $T, I = (0,1)$ *and* $\forall \boldsymbol{b} \in \mathcal{B}$*:*

$$\lim_{\mathbf{L_i} \to \boldsymbol{b}} E[Y_i(T,I) \mid \mathbf{L}_i \in \boldsymbol{L_t}] = \lim_{\mathbf{L_i} \to \boldsymbol{b}} E[Y_i(T,I) \mid \mathbf{L}_i \in \boldsymbol{L_c}] = E[Y_i(T,I) \mid \mathbf{L}_i = \boldsymbol{b}] \tag{A1}$$

After separating the setting in a West and East areas (Figure 1, Figure 3), I specify a homogeneity assumption.

Assumption 2. ***(Spatial homogeneity)***

The ATT of inheritance norms and other confounders (I) is the same in the West and East areas. Namely, for $T = 0, 1$*, in a neighbourhood of* $\mathcal{B}$*:*

$$E_{i=t}[Y^N(T,1)] - E_{i=t}[Y_W^S(T,0)] = E_{i=t}[Y^N(T,1)] - E_{i=t}[Y_E^S(T,0)] \tag{A2}$$

Note that this formulation of A2 is specific to this application for three reasons. First, I define my estimand as the ATT, Average Treatment Effect on the Treated, denoted by $i = t$. To identify the ATNT, the expectation could be taken only over untreated units ($E_{i=c}$), or unconditionally if the estimand of interest is the ATE. Second, in other settings spatial homogeneity might be required over latitude, or both latitude and longitude, depending on the "location" of the treatment whose effect needs to be subtracted when taking the difference. Third, in other settings where the potential outcome $Y(1,1)$ is observed and be used to identify the treatment effect of both treatments, the assumption should be generalized to both treatments.

With A1-A2, I can drop superscripts N, S and subscripts E, W from potential outcomes.

Assumption 3. ***(Additivity)***
The ATT of theocracy is independent of inheritance norms I in the neighbourhood of border $\mathcal{B}$, when $I = 0$ (south of river Po):

$$\begin{aligned} &E_{i=t}[Y(1,1) \mid I=0] - E_{i=t}[Y(1,0) \mid I=0] \\ &= E_{i=t}[Y(0,1) \mid I=0] - E_{i=t}[Y(0,0) \mid I=0] \end{aligned} \tag{A3}$$

Note that, in a setting that allowed identifying the unconditional ATT of inheritance norms I, one would need to write out the corresponding condition. While the latter entails different potential outcomes, the intuition is not different: it would also require that T and I do not have interactive effects on outcome Y. Let me underline two observations concerning A3. First, because of the disposition of treatments, I only need to assume this for territories south of the Po, denoted by conditionality on $I = 0$. In other words, I only need that partible inheritance does not interact with theocratic institutions in determining my outcomes. Second, this assumption is only required to identify unconditional effects. Identifying the effect of theocracy conditional on partible inheritance ($I = 0$) does not require A3. Note that the realization of theocracy (the Papal States) conditional on partible inheritance ($I = 0$) is what actually realized in history in my setting. While identifying the unconditional effect is attractive in terms of external validity, it remains a rather abstract exercise.

Finally, I assume SUTVA, which in this setting must be formalized for two treatments. Define matrix $\mathbf{Z} \equiv [\mathbf{T}, \mathbf{I}]$, with row elements $\mathbf{Z}_i = [T_i, I_i]$, defining each unit's treatment status.

Assumption 4. ***(SUTVA)***

4.1 Consistency. *$\forall i$:*

$$Y_i = Y_i(\mathbf{Z}_i) \text{ if } \mathbf{Z}_i = T_i, I_i \tag{A4.1}$$

4.2 No spillover effects. *For both treatments T and I and for any two distinct municipalities $i \neq j$, the outcome for unit i does not depend on the treatment of unit j:*

$$Y_i(\mathbf{Z}) = Y_j(\mathbf{Z}') \text{ if } \mathbf{Z}_i = \mathbf{Z}'_i \tag{A4.2}$$

Define now the two following GRDs, one for the West and one for the East areas:

$$\begin{aligned} \tau_W(\boldsymbol{b}) &\overset{(A4)}{\equiv} E_{i=t}[Y^N(0,1)] - E_{i=t}[Y^S_W(0,0)] \\ \tau_E(\boldsymbol{b}) &\overset{(A4)}{\equiv} E_{i=t}[Y^N(0,1)] - E_{i=t}[Y^S_E(1,0)] \end{aligned} \tag{2}$$

The DIG estimator is the difference between these GRDs:

Proposition 1 (DIG estimator)**.** *Under assumptions A1-A4, the DIG estimator identifies the ATT of having been dominated by the theocratic Papal States in the neighbourhood of $\mathcal{B}$:*

$$\tau_{DIG} \equiv \tau_W(\boldsymbol{b}) - \tau_E(\boldsymbol{b}) \tag{DIG}$$

Proof.

$$\begin{aligned}
\tau_{DIG} &\equiv \tau_W(\boldsymbol{b}) - \tau_E(\boldsymbol{b}) \\
&\overset{(A1-A2)}{=} E_{i=t}[Y(0,1)] - E_{i=t}[Y(0,0)] \\
&\qquad - E_{i=t}[Y(0,1)] + E_{i=t}[Y(1,0)] \\
&\overset{(A4)}{=} E_{i=t}[Y(1,0)] - E_{i=t}[Y(0,0)] \\
&\overset{(A3)}{=} E_{i=t}[Y(1,I)] - E_{i=t}[Y(0,I)]
\end{aligned}$$

□

The DIG estimator allows me to estimate the effect of theocracy (under A3), unconditionally from inheritance norms and any other confounder changing discontinuously at river Po.

6 Estimation and results

In this section, I describe the estimation by Distance-Adjusted Propensity Score matching (DAPSm) and I discuss the results. The DAPSm estimator is described in Section 5.1.

I first present the results when the outcome is Catholic votes at political elections (1948-1992) and resistance to the legalization of divorce and abortion in dedicated referenda. For each voting occasion, I estimate two geographic regression discontinuities (GRDs). These are the west comparison $\widehat{\tau}_W(\boldsymbol{b})$, which compares the secular states south of the river Po with the secular Republic of Venice, and the east comparison $\widehat{\tau}_E(\boldsymbol{b})$, which compares the theocratic Papal States with the secular Republic of Venice.[14]

I set $w = 0.5$, such that geographic distance and the propensity score are given the same importance by the DAPS matching algorithm. The covariates included in the propensity scores are:

- The municipality's minimum altitude, which proxies agricultural characteristics;
- The disposition along the river Po in terms of longitude. Namely, I divide the river into 10 equally long segments and for each municipality, I indicate the closest segment with a factor variable. These proxy the easiness of crossing the river in the tract closest to the municipalities;

[14] Estimation is carried out in R. DAPSm estimation of the individual GRDs is carried out with the DAPSm R package by Papadogeorgou et al. (2019), available at this github repository. Standard errors for the DIG are obtained by non-parametric bootstrapping.

– The urban inhabitants located in cities within one day of travel (20 km) in the year 1300. The year 1300 is considered the apex of Medieval urban expansion, after several centuries of growth and right before the XIVth-century demographic crisis. Therefore, urban population in 1300 proxies the availability of infrastructures and connections between rural and urban areas in the Low Middle Ages. This variable is highly correlated with the presence of *Communes* in the XIII-XIVth centuries, which were shown to affect contemporary cultural traits by Guiso et al. (2016). However, population size is more informative, since it allows us to capture the intensity of commerce and thus the presence of roads and infrastructures used for the local movement of people. Figure F.8 in the Appendix plots this data on a map.

Section E.4 presents balance tables, whereas the continuity of altitude and 1300 urban inhabitants around the Po river can be inspected visually on maps, in Figure F.14 in the Appendix and in Figure F.8, respectively.

Since the list of existing municipalities varies slightly across years, the DAPSm matching algorithm selects pairs in each year for both the West and East subsamples.[15] Then, for each voting occasion, I manually compute the Difference-In-Geographic discontinuities (DIG), which identifies the causal effect (ATT) of theocracy, as $\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$, and I estimate its standard error by non-parametric bootstrapping. I apply a Bonferroni correction for the presence of 4 hypotheses, one for each class of outcomes.[16] Table 2 summarizes results for 1948-1992 political elections, whereas Figure 4 and Figure 5 plot them graphically.

All DIG estimates are equal to zero. Moreover, for most years and regardless of the specific geographic area considered for the estimation, the Po river corresponds to a discontinuity in voting patterns of at least 20 percentage points. The only exceptions are concentrated in the year 1992: they mirror the growing mistrust towards the party system, recently invested by the fall of U.S.S.R. and the first *Tangentopoli* scandals, which eventually led to the collapse of the entire Italian party system. Indeed, 1992 political elections hit the minimum turnout since 1948 and, as expected, the discontinuity at the Po is lower in magnitude but consistent across the West and East subsamples. The stability of all estimates is also interesting in light of the changing conditions experienced between 1948 and 1992, and suggests they are capturing the effect of long-term differences. Those years saw the alternation of economic expansions (in the 1950s-1960s) and recessions (in the 1980s), the age of terror attacks attributed to political extremism known as *Anni di piombo* in the 1970s, and the introduction of regional governments in the year 1970. The slight differences in point estimates for 1948 are due to the fact that the different set of municipalities in the east subsample in that year leads the matching algorithm to select a smaller number of pairs.

[15] While I harmonize for mergers of municipalities to the year 1979, the newly created municipalities or those that are suppressed still change in the data.

[16] 1948-1992 elections, the referenda on divorce and abortion, attendance of Catholic classes in school, and pre-war political elections (discussed in Section B of the Appendix).

Table 2: Results: political outcomes

	$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$ Effect of theocracy	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.
(%) votes for the Catholic party in year:								
1948	29.094***	(4.416)	40	23.599***	(2.002)	160	5.494	(2.579)
1953	23.501***	(3.811)	40	24.998***	(1.474)	294	-1.497	(2.214)
1958	26.082***	(3.714)	40	26.722***	(1.501)	296	-0.641	(2.261)
1963	26.536***	(3.374)	40	28.955***	(1.423)	306	-2.419	(2.230)
1968	27.537***	(3.215)	40	28.503***	(1.368)	308	-0.967	(2.056)
1972	27.888***	(3.126)	40	27.928***	(1.359)	308	-0.04	(2.170)
1976	25.954***	(2.98)	40	26.121***	(1.257)	308	-0.166	(1.936)
1979	26.256***	(2.96)	40	26.239***	(1.256)	308	0.017	(1.946)
1983	24.236***	(2.776)	40	23.581***	(1.182)	316	0.655	(1.818)
1987	22.754***	(2.999)	40	23.936***	(1.146)	308	-1.183	(1.843)
1992	16.12***	(1.996)	40	15.852***	(0.904)	308	0.268	(1.424)
(%) votes against legalization of:								
Divorce (1972 referendum)	28.32***	(3.363)	40	27.353***	(1.287)	316	0.967	(2.180)
Abortion (1981 referendum)	27.385***	(2.878)	40	24.506***	(1.105)	316	2.879	(1.905)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates control for altitude, urban population in 1300, and longitude along the river in the propensity score component of the DAPSm estimator. DIG standard errors are obtained by non-parametric bootstrapping.

Table 3: Results: religion class in schools

	$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$ Effect of theocracy	
School level	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.
Elementary schools	9.361***	(1.478)	296	4.036***	(0.811)	1070	5.325	(3.346)
Middle schools	10.970***	(1.700)	116	5.018***	(1.256)	462	5.952	(9.317)
High schools	14.484***	(4.323)	88	11.014***	(2.190)	334	3.470	(9.411)

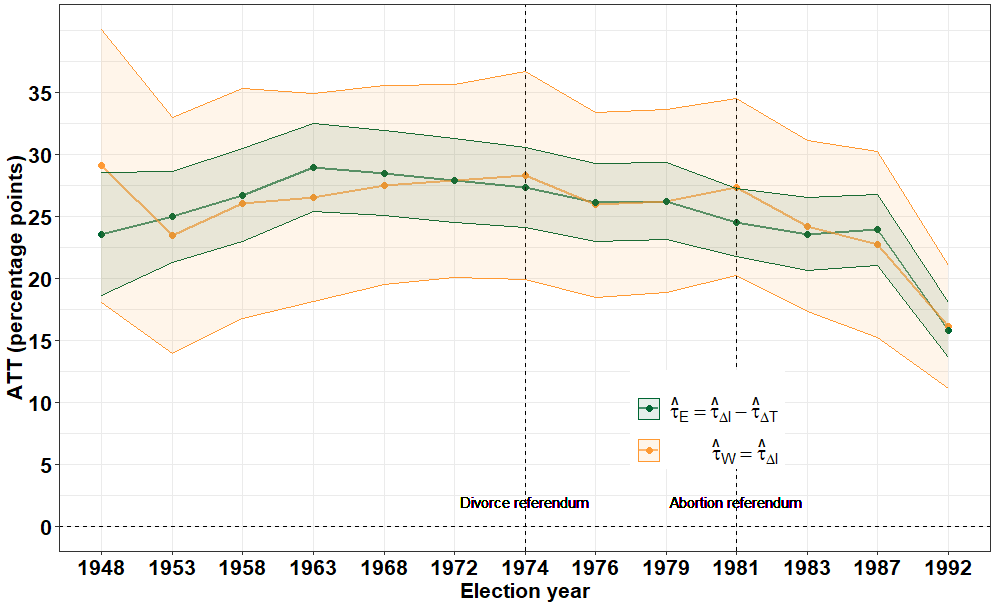
Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

In general, the small sample sizes are not a concern. In Section 8, I use Dell (2010) as an alternative underlying GRD estimator: since it is based on OLS, it uses all available observations ($N = 923$) and returns the same results.

I now turn to the religiosity outcome, namely the attendance of Catholic religion classes in schools, measured at the school level in the school year 2018-2019.[17] In both public and private Italian schools of every level, curricula include one weekly hour of Catholic religion classes. The teachers must have graduated in theology from an institute approved by the Vatican, and they are appointed by bishops. The syllabus is set at the national level by the Vatican. These classes are taught by default to all students, but parents can voluntarily opt out. Doing so, however, is a visible signal in the community and entails a reputational cost in communities that hold religiosity as a shared value. Unlike the political outcomes which are measured at the municipality level, the religiosity outcome relies on using school-level data. The outcome is the percentage of students who attend Catholic classes, and the propensity score includes the total number of students, whether the school is public or private, and a dummy which takes value 1 if the school is in an urban location. Table 3 presents the results. The effect of theocracy estimated by DIG is always null. The individual discontinuities estimated by the west and east comparisons have the lowest magnitude for elementary schools and the highest for high schools. This could reflect that older students also have older parents who decide about Catholic classes attendance, and suggests that the differences in religiosity between the two riversides are dying out.

[17] Data are available in this school year, and then for school years 2019-2020 and 2020-2021. I exclude them from the analysis because due to Covid-19, most of the teaching took place online and thus the reputational cost of opting out of Catholic religion classes could be different.

Figure 4: Results: political outcomes



Notes: The figure shows, for each voting occasion, the point estimates and Bonferroni-corrected 95% C.I (4 hypotheses) for the two comparisons $\widehat{\tau}_E(\boldsymbol{b})$ and $\widehat{\tau}_W(\boldsymbol{b})$. Their difference (the DIG) identifies the effect of theocracy and is shown in Figure 5.

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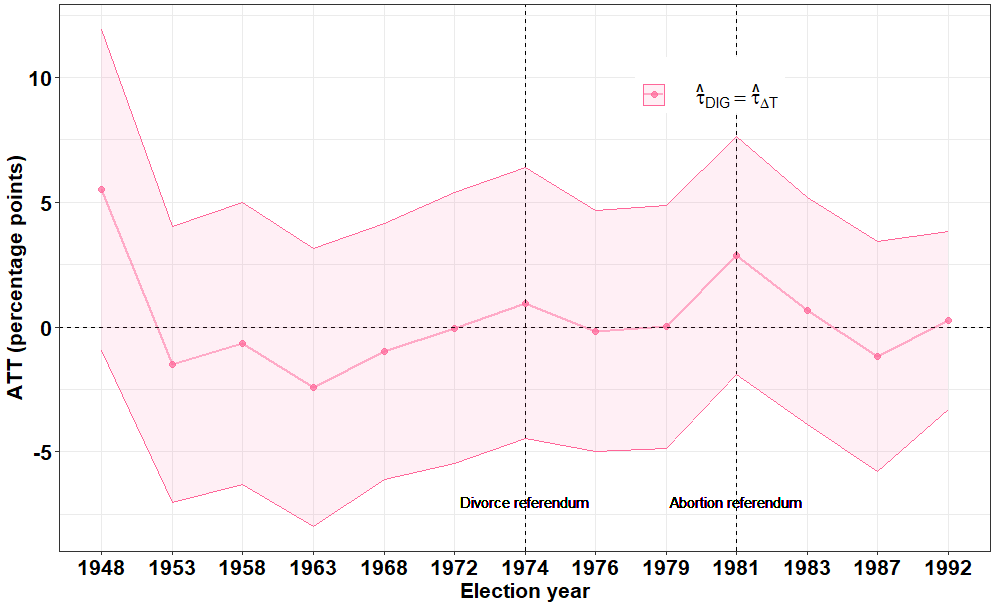
Figure 5: Results: DIG, the effect of theocracy



Notes: The figure shows, for each voting occasion, the point estimates and Bonferroni-corrected 95% C.I (4 hypotheses) for $\widehat{\tau}_{DIG}$, which identifies the effect of theocracy. Standard errors are obtained by non-parametric bootstrapping.

7 The role of inheritance norms

The previous section presents the main result from the paper: the theocratic Papal States had no long-term effects on pro-Catholic votes and religiosity. Two questions remain open. The first is motivated by the fact that both outcomes jump discontinuously at river Po. In particular, the area of the Papal States, south of the Po, exhibits lower religiosity and few pro-Catholic votes. Indeed, this region was supportive of the Socialist and Communist parties. If this is not the long-term effect of theocracy, what can be the cause? The second, related question, is why theocracy had no effect.

In this section, I attempt to answer both questions by considering the role of inheritance norms. While the setting does not allow me to make clear causal inference, in Section 7.1 will provide suggestive evidence that indivisible inheritance might be the driver of higher religiosity, pro-Catholic votes, and the opposition to divorce and abortion. I will begin by discussing how inheritance norms relate to religiosity and gender norms, and by showing evidence of these norms' persistence. Then, I will provide some quantitative tests to exclude the effect of confounders.

Then, in Section 7.2, I suggest that the theocratic Papal States had no effect because they were superimposed on a culture that fostered high social capital, and theocratic institutions might have not been enough to curb them. I base my discussion on the fact that inheritance norms preceded states in the area by several centuries, and I test the qualitative theory by Todd (1990) that partible inheritance South of the Po should promote social capital. Due to constraints on data availability, this discussion is also limited to mere suggestions.

7.1 From inheritance norms to religiosity, pro-Catholic votes and gender norms

My definition of inheritance norms is based on Todd (1990)'s classification of family systems. It is carried out using parish-registry data at the NUTS-3 level and, while the classification is not as granular as for other countries (e.g. Hager and Hilbig (2019) and Huning and Wahl (2021) for Southern Germany), to the best of my knowledge it is the only available classification for Italy (for instance, it has been used by Bertocchi and Bozzano (2015) and Bertocchi and Bozzano (2016)).

The family system characterized by indivisible inheritance north of river Po ($I = 1$) is known as *Incomplete STEM*. Within this system, only one son inherits the family's wealth and is allowed to marry: in its mature phase, the family is composed of grandparents, and the married son with his wife and children, plus any unmarried child who decides to remain under the authority of the married son. The family system characterized by partible inheritance south of the Po ($I = 0$) is known as *Communitarian*. Within this system, all male sons inherit, marry and eventually become household heads: in its mature phase, each household is a smaller nuclear family. Evidence of the persistence of these norms comes from data on

family size in the XXth century: not only did the indivisible inheritance region north of the Po have larger families, but the spatial distribution of family size correlates spatially with Catholic votes until the 1970s, as shown in the maps in Section F in the Appendix.

Todd (1990) had the explicit objective to show, qualitatively, that his classification predicted religiosity and political affiliation. In particular, the *STEM* family system ($I = 1$) should be more religious and vote for conservative parties associated with religion, whereas the *Communitarian* family system ($I = 0$) should be less religious and vote for red parties (this last point is discussed in more detail in the next subsection). He posits that the more substantial authority of the household head in the *STEM* system ($I = 1$) mirrors Catholic doctrine more closely, and that the unmarried children resorted more often to joining the clergy to sustain themselves. The last point is substantiated by recent aggregate data: the indivisible inheritance region north of the river ($I = 1$), the only one with historical indivisible inheritance in Italy, nowadays experiences the highest number of vocations, i.e. of young people who join a seminary to become a priest Cipriani (2020).[18]

To provide quantitative evidence that inheritance norms might be driving the effect, in Section D.3 I consider the case of a province outside my setting (Mantua) where the Po river could be crossed more easily due to historical reasons. This province was under secular formal institutions that were autonomous from those in the setting. This province had indivisible inheritance ($I = 1$). However, the fact that within the province the Po could be crossed more easily – it was not a border between states – the easier contact with partible inheritance areas ($I = 0$) in modern times led to more moderate differences in Catholic votes: the municipalities that are closer to partible inheritance areas are those that display more votes for the socialist and communist party, whereas those that are closer to other indivisible inheritance areas ($I = 1$) display more Catholic-oriented preferences. In absence of a hard border, the convergence of political preferences to those of neighbouring areas suggests that those preferences are not driven by formal institutions, but rather by cultural factors like inheritance norms.

Another channel goes through farm size in the pre-industrial period and its link with gender norms. Indivisible inheritance implies that farms were larger and required the use of machinery over which men have a competitive advantage. This, in turn, led indivisible inheritance families to specialize their tasks by gender, and led women who could work in the farms to enjoy higher social status (Hager and Hilbig, 2019; Barbagli, 2000; Barbagli and Kertzer, 1990).

Different gender norms also developed because of the power of the household's head over the sexual life of children. This power was particularly strong in the indivisible inheritance region ($I = 1$) where sharecropping remained the main form of working until the first four decades

[18] Cipriani (2020) reports regional statistics from the Vatican offices on vocations: in the indivisible inheritance region ($I = 1$), 15.2 every 10000 inhabitants is a Catholic priest (the national maximum), versus 6.9 in the partible inheritance region south of the Po ($I = 0$).

of the XXth century (Alfieri, 2018). In a sharecropping system, the head of the household entered yearly contracts with landowners. It was the head's responsibility to ensure that there were enough workers for the entire duration of the contract. Therefore, any weddings had to be officially approved by both the household head and the landowner to control births. Quantitative evidence comes from births out of wedlock at the end of the XIXth century, measured by the national census at the NUTS-3 level (MAIC, 1874, 1883, 1900). Once again, the indivisible inheritance region north of the Po shows the national minimum, and a clear jump is present at the river Po.

Excluding confounders There are two variables that correlate spatially with inheritance norms and could be driving differences between the north and the south riverside: modern administrative regions and Napoleonic occupation. Modern administrative regions were established in 1970, and the effect of their policies on voting outcomes could be a concern. However, the stability of both the West and East Geographic RD estimates around that year is evidence that they are not driving votes (see Table 2 and Figure 4).

In 1797, in his first Italian campaign, Napoleon founded the Cisalpine Republic. South of the Po, it included all territories except the Duchy of Parma and Piacenza. North of the Po, it included only 49 municipalities: the rest of the territory north of the Po was almost immediately ceded to the Habsburg Empire (Zaghi, 1991). Napoleon imposed the laws created by French revolutionaries (Hager and Hilbig, 2019). Among other progressive reforms, they prescribed equal inheritance for all children and the legalization of divorce. Recent research shows that Napoleonic reforms in Germany had positive long-term effects on economic growth, interpersonal trust and cooperation (Acemoglu et al., 2011; Buggle, 2016).

To exclude that the difference in outcomes could be driven by the Napoleonic occupation, I perform two robustness checks in Section D.2. First, I replicate the main analysis excluding the Duchy of Parma and Piacenza and those municipalities north of the Po that were under Napoleon, in order to compare territories south of the Po that had Napoleonic occupation with territories north of the Po that had no Napoleonic occupation. The results are quantitatively equivalent to the main analysis.

As a second check, I look only at territories north of the Po: within this region, the border of the Cisalpine Republic was another large river, the Adige. I estimate a Geographic RD and I find that Napoleon does not drive voting outcomes and religiosity.

Finally, I exploit the presence of river Piave, another large river within the indivisible inheritance region ($I = 1$) north of the Po, which separated cultural dimensions other than inheritance norms. The two sides of the river Piave have slightly different dialects and celebrate different festivities. In Section D.1, I estimate a Geographic RD at this river and find no effect on any of the outcomes.

7.2 Explaining the null effect of theocracy: the theory of social capital

As mentioned earlier, Todd (1990)'s qualitative theory posits that the *Communitarian* family system south of the Po (partible inheritance, $I = 0$) leads to a higher degree of cooperation and to socialist or communist political preferences (as indeed seen in the data). The cooperation stems from partible inheritance: each male sibling is the head of a nuclear household and is entitled to a limited bequest. Siblings cooperate to join their labour force (e.g. in the case of sharecropping, to form a larger working unit) and to insure each other against negative income shocks.

The first piece of evidence comes from NUTS-2 level data on the workers employed by cooperatives. The partible inheritance region ($I = 0$) displayed the national maximum percentage of workers employed by cooperatives from 1951 to 2001 (Menzani, 2015). These cooperatives appeared in the XIXth century and aimed at providing basic welfare services to its members, such as education and basic healthcare, as well as a network for mutual support (Menzani, 2015).[19]

The second piece of evidence comes from estimating the two GRD comparisons and the DIG with an indicator of social capital as the outcome. I use the measures of social capital from Guiso et al. (2016), namely (i) the number of non-religious NGOs per capita and (ii) the probability of having a local chapter of the only Italian NGO for organ donations (*AIDO*) in the municipality, which is also not religious and does not have any religious competitors. Following the reasoning above, one would expect to find that theocracy has no effect on social capital (DIG= 0), whereas all the GRDs should have a negative estimate (less social capital in the indivisible inheritance region north of the river). As shown in Table 4, there is a discontinuity in the number of *AIDO* local chapter in both the west and east comparisons, whereas the effect of theocracy is zero.[20] None of the results for the overall number of non-religious NGOs are significant. This could be caused by a consistent number of religious NGOs instituted south of the Po by the Papal States that remained in place until now and crowded out non-religious NGOs, i.e. it could signify a supply of religious NGOs rather than demand for NGOs, which is the idea behind using NGOs as measures of social capital. The maps for these indicators of social capital are shown in Figure F.15 and Figure F.16 in the Appendix.

Todd (1990) places the beginning of the development of family systems around AD 1000. As discussed in Section 3, modern state institutions in the area make their appearance in the XVIth century. Before then, the differences were not clearly defined, since the prevailing institution was feudalism. This means that when theocracy and secular states emerged, family

[19] On the contrary, the *STEM*, indivisible inheritance region ($I = 1$) north of the Po has very few workers employed in cooperatives, but it has among the highest number of small dynastic family enterprises (Caboni and Tomeo, 2021). Amore (2017) shows that family firms are mostly found in presence of low social capital.

[20] $\hat{\tau}_E$ is negative and only marginally not significant, due to the Bonferroni correction. The T statistics equals -2.033.

Table 4: GRD and DIG estimates: social capital

$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$				
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
Non-religious NGOs per capita:								
	1.201	(0.602)	652	-0.216	(0.407)	588	1.417	(0.667)
Probability of a local organ donation chapter:								
	-0.279**	(0.110)	652	-0.185	(0.091)	588	-0.093	(0.152)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are obtained by Dell. Their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

systems and their inheritance norms had been in place for approximately least 5 centuries. One possible theory is that when the Papal States established their theocratic institutions, they superimposed them on a culture that was characterized by a high social capital. In this situation, a conjecture is that theocratic institutions might have been unable to worsen social capital to the same degree that the Spanish Inquisition did in Spain (Drelichman et al., 2021). To prove this theory and claim that this is a mechanism, it would be necessary to show that inheritance norms drove social capital before the Papal States established theocratic institutions in the XVIth century (Voth, 2021). To my knowledge, it is not possible to conduct the analysis for social capital with older data. Moreover, these results are only conclusive about the presence of a discontinuity in social capital at river Po and the ineffectiveness of theocracy. To claim that the results are driven by inheritance norms/family systems, one must rely on the exclusion of confounders changing discontinuously at river Po, that I presented in Section 7.1. Therefore, these results only have a suggestive interpretation.

8 Robustness checks

In this section, I list a series of robustness checks on both the identification strategy and the estimation. They are described in detail in dedicated sections of the Appendix.

In Section 7.1, I discussed three robustness checks in the Appendix that concern the identification strategy. First, in Section D.2, I perform two checks to show that the length of Napoleonic occupation does not drive the voting and religiosity outcomes. Second, in Section D.1, I show that some cultural dimensions other than inheritance norms are also not a concern. Finally, then provide quantitative evidence that the Po river was a hard border in Section D.3, where I consider the case of a province outside my setting where the Po was

more easily crossed.

I show the robustness of results to the following variations in the estimation of Geographic RDs:

1. In Section E.1, I use alternative sets of covariates in the specification of the Distance-Adjusted-Propensity-Score (DAPS).
2. In Section E.2, I consider four alternative values of w ($w = 0, 0.25, 0.75, 1$) in the DAPS matching algorithm. w indicates the relative importance given to geographic distance and to the propensity score component;
3. In Section E.3, I replicate results using Dell (2010)'s GRD estimator instead of DAPSm. Dell's estimator is not ideal in this setting from an econometric point of view: since my discontinuity is a line, the border fixed effect terms are collinear with longitude terms, and the collinearity is more severe for narrow bandwidths. However, using Dell's estimator as an alternative estimation strategy has three advantages due to the fact that, unlike matching estimators, Dell's GRD exploits all observations within a pre-specified bandwidth. First, this allows replicating estimates of τ_W, which were based on a small sample using DAPSm ($N_{DAPSm} = 40$), with a much larger sample ($N_{Dell} = 321$): this shows that DAPSm estimates were not driven by outliers. Second, it includes municipalities in the west-most provinces south of the Po, which were not selected by the DAPS matching algorithm. These are the municipalities that are farther away from the Papal States: the fact that their inclusion does not alter point estimates is suggestive of no spillover effects from the Papal States to other municipalities (since geographic proximity is likely to increase potential spillovers).
   Finally, Dell (2010) uses the OLS estimator. This allows estimating standard errors with Conley (1999)'s variance-covariance matrix, which takes into account spatial correlation in residuals, and allows making different assumptions on the decay of spatial correlation with the distance between units. This approach follows Colella et al. (2019) and in particular Voth (2021)'s reply to Kelly (2019)'s critique on spatial autocorrelation driving results in the long-term persistence literature. Kelly (2019) argues that the majority of long-term persistence studies show unreasonably high T-statistics, inflated by spatial autocorrelation and the resulting spurious spatial correlations. My main result is a null one: theocracy does not explain political preferences in the long run. However, in order to obtain the DIG I first estimate two Geographic RDs whose estimates have a high magnitude and are highly statistically significant. In Section E.3 I show that estimates using Dell (2010)'s GRD estimator are robust to correcting for spatial autocorrelation even when I assume that spatial correlation never decays in my setting (i.e. cutoff = 100km).

9 Conclusion

To the present day, theocracies limit individual rights, especially women's rights. In autocratic theocracies, this limitation of individual rights is often implemented by oppressive means. In democratic countries like the United States, the demand for religious involvement in political decision-making is on the rise and up to one-fifth of the population is in favour of openly theocratic institutions.

In this paper, I investigate the long-term persistence of theocracies. Specifically, I study the long-term effects of oppressive theocratic institutions on pro-religious political preferences and religiosity.

I focus on a quasi-experiment in northern Italy. In this area, the Po river constituted a hard border between a theocratic state (the Papal States) and a progressive secular state (the Republic of Venice and later the Kingdom of Lombardy-Venetia) for nearly three centuries (1598-1861). However, a single geographic RD design at the river is not sufficient to identify the long-term effect of theocracy, because other variables change discontinuously at the river. One such variable is inheritance norms that developed since the XIth century: Todd, who classified them, also theorizes that they should predict religiosity and political affiliation.

To obtain causal identification, I exploit the presence of a third area neighbouring the theocratic Papal States where state institutions were secular, but inheritance norms were partible as in the Papal States. This area can be compared to the Republic of Venice to estimate the effect of inheritance norms plus any other confounder changing discontinuously at the river, since states are secular on both sides, and then subtract this effect from the comparison between the theocratic Papal States and the Republic of Venice.

I formalize this into a novel Difference-in-Discontinuity estimator (DIG), an extension of Geographic Regression Discontinuity designs (GRDs). My main result is that the theocratic Papal States have no effect on current religiosity and pro-Catholic votes. Religiosity is measured as the voluntary attendance of Catholic classes set by the Vatican in all Italian schools. For pro-Catholic votes, I consider votes for the main Catholic party (*Democrazia Cristiana*) in every election between 1948 and 1992, and the opposition to the legalization of divorce and abortion in two referenda held in 1974 and 1981, respectively.

In seeking to explain the null effect of theocracy on current religiosity and political preferences in the Papal States, I put forward inheritance norms as a possible explanation, based on a qualitative theory proposed by Todd (1990). I provide suggestive evidence based on historical arguments and several quantitative analyses that inheritance norms may be responsible for the observed differences in pro-Catholic votes and religiosity at the river Po. One possible reason for this is that the theocratic institutions established by the Papal States were superimposed on a culture (partible inheritance) that had been in place for several centuries and that fostered high social capital. As a result, theocratic institutions might have been ineffective in

depleting social capital as in the case of the Spanish Inquisition studied by Drelichman et al. (2021).

This second set of results, however, remains only suggestive. First, my inheritance norms' classification is the one by Todd (1990) and is carried out at the NUTS-3 level: this leaves little variation in the area to disentangle the effect of inheritance norms from other potential confounders changing discontinuously at the river. Second, due to data availability constraints, it is not possible to provide clear causal evidence of the mechanisms from inheritance norms to religiosity and pro-Catholic political preferences. Following Voth (2021), a clear mechanism analysis would require social capital information before the Papal States became a centralized theocratic state in the XVIth century.

A causal analysis of the effect of inheritance norms on religiosity and political preferences could constitute the objective of future research in this field.

References

D. Acemoglu, D. Cantoni, S. Johnson, and J. A. Robinson. The consequences of radical reform: The French Revolution. *American economic review*, 101(7):3286–3307, 2011.

D. Acemoglu, G. De Feo, G. De Luca, and G. Russo. War, Socialism and the Rise of Fascism: An Empirical Exploration. *National Bureau of Economic Research Working Paper*, (No. w27854), 2020.

S. Akçomak, D. Webbink, and B. ter Weel. Why Did the Netherlands Develop So Early? The Legacy of the Brethren of the Common Life. *Economic Journal*, 126(593):821– 860., 2016.

A. Alesina and P. Giuliano. Culture and institutions. . *Journal of Economic Literature*, 53 (4):898–944, 2015.

A. Alesina, P. Giuliano, and N. Nunn. On the origins of gender roles: Women and the plough. *The Quarterly Journal of Economics*, 128(2), 2013.

G. Alfieri. *Questo Piatto di Grano*. Atlandide editore, Latina, 2018.

M. Alquézar-Yus. The Reversal of the Mission: The Influence of Religious Leaders on Sociopolitical Attitudes. *Working Paper*, 2023.

Amnesty International,. Afghanistan: Death in slow motion. women and girls under taliban rule. Report ASA 11/5685/2022, Amnesty International, London, 07 2022. URL https://www.amnesty.org/en/documents/asa11/5685/2022/en/. Accessed on: February 25, 2023.

M. D. Amore. Social capital and family control. *Explorations in Economic History*, (65): 106–114, 2017.

T. B. Andersen, J. Bentzen, C.-J. Dalgaard, and P. Sharp. Prereformation Roots of the Protestant Ethic. *Economic Journal*, 127(604):1756–1793, 2017.

M. Barbagli. *Sotto lo stesso tetto: mutamenti della famiglia in Italia dal XV al XX secolo*. Il Mulino, 2000.

M. Barbagli and D. Kertzer. An introduction to the history of Italian family life. *Journal of Family History*, 15(4):369–383, 1990.

C. Basten and F. Betz. Beyond work ethic: Religion, individual, and political preferences. *American Economic Journal: Economic Policy*, 5(3):67–91, 2013.

T. Baudin and B. De Rock. Economics and Family Structures. *CEPR Discussion Paper DP16516*, 2021.

M. Bellabarba. *La giustizia nell'Italia moderna. XVI-XVIII secolo.* Rome, Laterza, 2008.

M. Belloc, F. Drago, and R. Galbiati. Earthquakes, religion, and transition to self-government in Italian cities. *The Quarterly Journal of Economics*, 131(4):1875–1926, 2016.

G. Bertocchi and M. Bozzano. Family structure and the education gender gap: evidence from Italian provinces. *CESifo Economic Studies*, 61(1):263–300, 2015.

G. Bertocchi and M. Bozzano. Origins and Implications of Family Structure across Italian Provinces in Historical Perspective. *IZA Discussion Paper*, (10327), 2016.

S. Bhalotra, I. Clots-Figueras, and L. Iyer. Religion and abortion: The role of politician identity. . *Journal of Development Economics*, 153(102746), 2021.

BJC and FFRF. Christian nationalism at the january 6, 2021, insurrection. Report, Baptist Joint Committee for Religious Liberty (BJC) and the Freedom From Religion Foundation (FFRF), 02 2022. URL https://bjconline.org/jan6report/. Accessed on: February 25, 2023.

C. Black. *The Italian Inquisition.* Yale University Press, 2009.

F. Bocchi. *Il Polesine di Rovigo.* Grande illustrazione del Lombardo-Veneto, ossia delle città, dei borghi, comuni, castelli, ecc. fino ai tempi moderni. Robert Laffont, coll. "Bouquins", Paris, 1861.

M. Bondesan. *L'evoluzione idrografica e ambientale della pianura ferrarese negli ultimi 3000 anni.* Corbo Editori, 2001.

W. J. Bouwsma. *Venice and the Defense of Republican Liberty.* University of California Press, 1968.

J. C. Buggle. Law and social capital: Evidence from the Code Napoleon in Germany. *European Economic Review*, 87:148–175, 2016.

F. Caboni and V. Tomeo. Proprietà e gestione. *Rapporto sulle imprese 2021. Struttura, comportamenti e performance dal censimento permanente. Istituto Nazionale di Statistica (ISTAT)*, 2021.

M. J. Caesmann, B. Caprettini, H. J. Voth, and D. Yanagizawa-Drott. Going viral: propaganda, persuasion and polarization in 1932 Hamburg. *Centre for Economic Policy Research Discussion Paper Series,* , ((16356)), 2021.

L. Cantini. *Legislazione Toscana raccolta e illustrata.* Firenze: nella Stamp. Albizziniana da S. Maria in Campo, 1800.

S. Carmichael, S. Dilli, and L. Van Zanden. Introduction: Family Systems and Economic Development, Economic History of Developing Regions. *Economic History of Developing Regions*, 31(1):1–9, 2016. doi: 10.1080/20780389.2015.1132625.

Catholic Church. *Regolamento sui delitti e sulle pene del 20 settembre 1832*. Tipi di Giuseppe Vitali, alle scienze, 1862.

Catholic Church. *Corpus iuris canonici. Graz : Akademische Druck- u. Verlagsanstalt. Electronic reproduction. Vol 1-2*. New York, N.Y. : Columbia University Libraries, 2007., 1959.

G. Cherubini. Parroco, parrocchie e popolo dell'Italia centro-settentrionale alla fine del medioevo. *Pieve e parrocchie in Italia nel basso medioevo (secoli XIII-XV), Atti del Convegno di storia della Chiesa in Italia* , 1984.

G. Chittolini. *La formazione dello stato regionale e le istituzioni del contado*. Unicopli, 2005a.

G. Chittolini. *L'Italia delle civitates: dalle invasioni al Quattrocento*. Laterza, 2005b.

R. Cipriani. Preti e società in Italia. 2020.

F. Colella, R. Lalive, S. O. Sakalli, and M. Thoenig. Inference with arbitrary clustering. *IZA Discussion Paper No. 12584*, 2019.

T. G. Conley. GMM estimation with cross sectional dependence. . *Journal of econometrics*, 92(1):1–45, 1999.

P. Corbetta and S. Piretti. *Atlante storico-elettorale d'Italia. 1861–2008*. Bologna, Zanichelli, 2009.

A. Cova. I cattolici e il sindacato: dall'estraneità alla partecipazione. In I. della Enciclopedia Italiana fondata da Giovanni Treccani, editor, *Cristiani d'Italia*, chapter 7, pages 1165–1183. 2011.

A. De Pleijt, J. L. Van Zanden, and S. Carmichael. Gender Relations and Economic Development: Hypotheses about the reversal of fortune in Eurasia. *Cliometrics of the Family*, pages 149–172, 2019.

M. Dell. The persistent effects of Peru's mining mita. *Econometrica*, 78(6):1863–1903, 2010.

R. Derosas. Moralità e giustizia a venezia nel '500-'600. gli esecutori contro la bestemmia. In G. Cozzi, editor, *Stato società e giustizia nella Repubblica veneta (sec. XV - XVIII), Vol. I*, chapter 6, pages 431–528. Roma, 1980.

G. Di Brenna and C. Cantù. *Grande illustrazione del Lombardo-Veneto, ossia, Storia delle città, dei borghi, comuni, castelli, ecc: fino ai tempi moderni per cura di letterati italiani, Vol. 5 Part 2*. Tranquillo Ronchi, Padova, 1861.

O. Dictionary. Theocracy, 2023. URL https://www.oxfordlearnersdictionaries.com/definition/american_english/theocracy. Accessed on February 25, 2023.

M. Drelichman, J. Vidal-Robert, and H. J. Voth. The long-run effects of religious persecution: Evidence from the Spanish Inquisition. *Proceedings of the National Academy of Sciences*, 118, 2021.

Ducato di Modena e Reggio. *Codice penale 1855: Codice criminale e di procedura criminale per gli Stati Estensi.* Modena: Per gli Eredi Soliani Tipografi Reali, 1852.

Ducato di Parma, Piacenza e Guastalla. *Codice penale 1820: Codice penale per gli Stati di Parma, Piacenza ecc. ecc. ecc. : ristampato con note e con un indice per materie.* . Parma, della Reale Tipografia, 1850.

G. Duranton, A. Rodriguez-Pose, and R. Sandall. Family Types and the Persistence of Regional Disparities in Europe. *Economic Geography*, 85(1):23–47, 2009.

Enciclopedia Treccani. Stato Pontificio. Enciclopedia Treccani, https://www.treccani.it/enciclopedia/stato-pontificio/, . Accessed on: 27 02 2023.

Enciclopedia Treccani. venezia. Enciclopedia Treccani, https://www.treccani.it/enciclopedia/venezia. Accessed on: 27 02 2023.

Enciclopedia Treccani. Battaglie del Piave. *Enciclopedia Italiana Treccani, Dizionario di Storia*, 2011.

Encyclopaedia Britannica. *The Fascist era - the rise of Mussolini.* Encyclopaedia Britannica, London, 2021a. URL https://www.britannica.com/place/Italy/The-Fascist-era.

Encyclopaedia Britannica. *War and its aftermath - Economic and political crisis: the "two red years".* Encyclopaedia Britannica, London, 2021b. URL https://www.britannica.com/place/Italy/Economic-and-political-crisis-the-two-red-years.

A. Folchi. *I contadini del duce: Agro Pontino, 1932-1941.* Pieraldo, 2000.

N. Fontana, T. Nannicini, and G. Tabellini. Historical roots of political extremism: The effects of Nazi occupation of Italy.. *CESifo Working Paper*, (No. 6838), 2018.

G. Fragnito. Istituzioni ecclesiastiche e costruzione dello stato. Riflessioni e spunti. In P. S. Giorgio Chittolini, Anthony Molho, editor, *Origini dello stato : processi di formazione statale in Italia fra medioevo ed età moderna.* Il Mulino, Bologna, 1994.

E. Garino. Insidie familiari. Il retroscena della successione testamentaria a Venezia alla fine del XVIII secolo. In G. Cozzi, editor, *Stato società e giustizia nella Repubblica veneta (sec. XV - XVIII), Vol. II*, chapter 7, pages 300–378. Roma, 1985.

A. Gelman and G. Imbens. Why High-Order Polynomials Should Not Be Used in Regression Discontinuity Designs. *Journal of Business & Economic Statistics*, 37(3):447–456, 2019.

V. Grembi, T. Nannicini, and U. Troiano. Do fiscal rules matter? *American Economic Journal: Applied Economics*, pages 1–30, 2016.

E. Guerini Fasaro. Centro e periferia, accentramento e particolarismi: dicotomia o sostanza degli stati in età moderna? In P. S. Giorgio Chittolini, Anthony Molho, editor, *Origini dello stato : processi di formazione statale in Italia fra medioevo ed età moderna*. Il Mulino, Bologna, 1994.

L. Guiso, P. Sapienza, and L. Zingales. Long-term persistence. *Journal of the European Economic Association*, 14(6):1401–1436, 2016.

A. Hager and H. Hilbig. Do inheritance customs affect political and social inequality? *American Journal of Political Science*, 63:758–773, 2019.

T. R. Huning and F. Wahl. The fetters of inheritance? equal partition and regional economic development. *European Economic Review*, 136:103776, 2021. ISSN 0014-2921. doi: https://doi.org/10.1016/j.euroecorev.2021.103776. URL https://www.sciencedirect.com/science/article/pii/S001429212100129X.

ISPRA. Istituto superiore per la protezione e la ricerca ambientale. Reticolo Idrografico. 2020.

ISTAT. Istituto Nazionale di Statistica. Descrizione dei dati geografici e delle variabili censuarie per sezione di censimento Anni 1991, 2001, 2011 . 2015.

ISTAT. 8milaCensus. Istituto Nazionale di Statistica. 2020. URL http://ottomilacensus.istat.it/download-dati/.

L. Keele and R. Titiunik. Geographic boundaries as regression discontinuities. *Political Analysis*, 23(1):127–155, 2015.

L. Keele, R. Titiunik, and J. R. Zubizarreta. Enhancing a geographic regression discontinuity design through matching to estimate the effect of ballot initiatives on voter turnout. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 178(1):223–239, 2015.

J. Keishin Armstrong. Why the handmaid's tale is so relevant today. *BBC Culture*, 04 2018. URL https://www.bbc.com/culture/article/20180425-why-the-handmaids-tale-is-so-relevant-today. Accessed on: February 25, 2023.

M. Kelly. The standard errors of persistence. *Working Paper*, 2019.

J. Le Goff. *Money and the Middle Ages*. John Wiley & Sons, 2012.

Q. Lippmann, A. Georgieff, and C. Senik. Undoing gender with institutions: Lessons from the German division and reunification. *The Economic Journal*, 130(629):1445–1470, 2020.

J. F. Loughlin. Pope Paul V. In *Catholic Encyclopedia, Vol. 11*. Roma, 1913.

MAIC. Censimento della popolazione del Regno d'Italia al 31 dicembre 1871. Ministero di agricoltura, industria e commercio, Direzione generale della statistica. 1874.

MAIC. Censimento della popolazione del Regno d'Italia al 31 dicembre 1881. Ministero di agricoltura, industria e commercio, Direzione generale della statistica. 1883.

MAIC. Popolazione: Movimento dello Stato Civile, 1898. Ministero di agricoltura, industria e commercio, Direzione generale della statistica. 1900.

A. Malik and R. A. Mirza. Pre-colonial Religious Institutions and Development: Evidence through a Military Coup. *Journal of the European Economic Association.*, 2019.

K. Mason. Gender and family systems in the fertility transition. *Population and Development Review*, 27:160–176, 2001.

A. Mazzacane. Diritto e giuristi nella formazione dello stato moderno in Italia. In P. S. Giorgio Chittolini, Anthony Molho, editor, *Origini dello stato : processi di formazione statale in Italia fra medioevo ed età moderna*. Il Mulino, Bologna, 1994.

T. Menzani. Le imprese cooperative nelle regioni italiane. *L'Italia e le sue regioni. Enciclopedia Italiana Treccani*, 2015.

Ministero dell'Interno. Dipartimento per gli Affari Interni e Territoriali. Archivio Storico delle elezioni. Risultati elezioni politiche dal 1948 al 1992. 2020a.

Ministero dell'Interno. Dipartimento per gli Affari Interni e Territoriali. Archivio Storico delle elezioni. Risultati Referendum 17/05/1981. 2020b.

Ministero dell'Interno. Dipartimento per gli Affari Interni e Territoriali. Archivio Storico delle elezioni. Risultati Referendum 12/05/1974. 2020c.

G. Molini. *Manuale per le scritte coloniche a mezzeria.* 1858.

F. Moro. *Ercole e il Leone, 1482 Ferrara e Venezia duello sul Po*. Studio Lt2 editore, Venezia, 2008.

G. Murdock. Ethnographic atlas: a summary. *Ethnology*, 6(2):109–236, 1967.

E. Orlando. Governo delle acque e navigazione interna : il Veneto nel basso medioevo. *Reti Medievali*, 12(2):251–293, 2011.

G. Papadogeorgou, C. Choirat, and C. M. Zigler. Adjusting for unmeasured spatial confounding with distance adjusted propensity score matching. *Biostatistics*, 20(2):256–272, 2019.

D. Parent. Iran: fears grow of security crackdown in zahedan as anti-regime protests persist. *The Guardian*, 01 2023. URL https://www.theguardian.com/global-development/2023/jan/20/iran-fears-grow-of-security-crackdown-in-zahedan-as-anti-regime-protests-persist. Accessed on: February 25, 2023.

D. Parent and G. Habibiazad. "they used our hijabs to gag us": Iran protesters tell of rapes, beatings and torture by police. *The Guardian*, 02 2023. URL https://www.theguardian.com/global-development/2023/feb/06/iran-protesters-police-rapes-beatings-and-torture. Accessed on: February 25, 2023.

Z. Pei, D. Card, D. S. Lee, and A. Weber. Local Polynomial Order in Regression Discontinuity Designs . *University of Princeton, Working Papers, Industrial Relations Section*, (622), 2018.

A. Pertile. *Storia del diritto penale, influenza del Cristianesimo, in Storia del diritto italiano, dalla caduta dell'Impero Romano alla codificazione.* Torino, Unione tipografico-editrice, 1892.

S. Piasentini. Indagine sulla bestemmia a Venezia nel Quattrocento. *Studi Storici*, Anno 40 (2):513–549, 1999.

C. Povolo. Aspetti e problemi dell'amministrazione della giustizia penale nella Repubblica di Venezia. Secolo XVI-XVII. In G. Cozzi, editor, *Stato, società e giustizia nella Repubblica veneta (sec. XV-XVIII)*, pages 153–258. Jouvence, Roma, 1980.

C. Povolo. centro e periferia nella Repubblica di Venezia. In P. S. Giorgio Chittolini, Anthony Molho, editor, *Origini dello stato : processi di formazione statale in Italia fra medioevo ed età moderna.* Il Mulino, Bologna, 1994.

P. Prodi. *Il sovrano pontefice. Un corpo e due anime: la monarchia papale nella prima età moderna.* Il Mulino, 1982.

S. P. Rambaldi. Podestà e Inquisitori nella montagna modenese. Riorganizzazione inquisitoriale e resistenze locali (1570 - 1590). *Società e Storia*, 1991.

Regno Lombardo-Veneto. *Codice penale dei crimini, dei delitti e delle contravvenzioni colle ordinanze sulla competenza dei giudizi penali, e col regolamento sulla stampa del 27 maggio 1852 per l'impero d'Austria.* Manz, Wien 1869, 1852.

F. Romanoni. Guerra e navi sui fiumi dell'Italia settentrionale (secoli XII-XIV). *Archivio storico lombardo*, 134:11–45, 2008.

J. Rubin and L. Woessmann. Religion in Economic History: A Survey. *The Handbook of Historical Economics*, page 585–639, 2021.

Savigni, Raffaele. Papato. Enciclopedia Treccani, , . Accessed on: 27 02 2023.

J. F. Schulz, D. Bahrami-Rad, J. P. Beauchamp, and J. Henrich. The Church, Intensive Kinship, and Global Psychological Variation. *Science*, 366(6466):eaau5141, 2019.

J. Seitz. *Witchcraft and Inquisition in Early Modern Venice*. New York: Cambridge University Press, 2011.

Silvia Moretti. Stato della Chiesa. Enciclopedia Treccani, , 2005. Accessed on: 27 02 2023.

L. D. . B. M. L. . P. G. Sonnino, E. Panta. *La popolazione italiana dal Medioevo a oggi.* Laterza, 1996.

M. P. Squicciarini. Devotion and development: religiosity, education, and economic progress in nineteenth-century France. *American Economic Review*, 110(11):3454–3491, 2020.

M. Szołtysek and R. Poniat. Historical family systems and contemporary developmental outcomes: what is to be gained from the historical census microdata revolution? *The History of the Family*, 23(3):466–492, 2018.

M. Tavuzzi. *Renaissance inquisitors: Dominican inquisitors and inquisitorial districts in Northern Italy, 1474-1527*. Brill, Boston, 2007.

E. Teso. The long-term effect of demographic shocks on the evolution of gender roles: Evidence from the transatlantic slave trade. *Journal of the European Economic Association*, 17(2): 497–534, 2019.

G. Tocci, editor. *Persistenze feudali e autonomie comunitative in stati padani fra Cinque e Settecento*. CLUEB, 1988.

E. Todd. *The Explanation of Ideology: Family Structures and Social Systems*. Basil Blackwell, Oxford, 1985.

E. Todd. *L'invention de l'Europe*. Editions du Seuil, Paris, 1990.

J. Tulard, J.-F. Fayard, and A. Fierro. *Histoire et dictionnaire de la Révolution française.* Robert Laffont, coll. "Bouquins", Paris, 1998.

UAAR. datiBeneComune e Uaar: i dati ministeriali sull'insegnamento della religione cattolica. 2022. URL https://github.com/ondata/religione-cattolica-scuola.

S. P. Uggeri. *Carta archeologica medievale del territorio ferrarese. II. Le vie d'acqua in rapporto al nodo idroviario di Ferrara (Vol. 5).* All'Insegna del Giglio.Robert Laffont, coll. "Bouquins", 2004.

E. Vellati. Il nuovo diritto di famiglia e il ruolo della donna. *Novecento*, (8), 2017. doi: 10.12977/nov177.

J. Vidal-Robert. Long-run effects of the spanish inquisition. *Working Paper Series*, 192: 01–59, 2014.

N. Voigtländer and H. J. Voth. Highway to Hitler. *National Bureau of Economic Research working paper* , ((No. w20150)), 2014.

H. J. Voth. Persistence – myth and mystery. *In The handbook of historical economics*, pages pp. 243–267, 2021.

A. L. Whitehead and S. L. Perry. *Taking America Back for God: Christian Nationalism in the United States*. Oxford University Press, 2020.

C. Zaghi. *L'Italia di Napoleone dalla Cisalpina al Regno*. UTET, Torino, 1991.

P. . T. M. Zanchettin, D. Traverso. Po river discharges: a preliminary analysis of a 200-year time series. *Climatic Change*, 89(3):677–716, 2008.

APPENDIX

A Historical appendix

The historical appendix is composed of two parts: the first provides additional information on the history of pre-unitary Italian states in the area. The second describes in detail the variable used to classify inheritance norms, its relationship with gender norms and patriarchal authority, and how they might affect religiosity and pro-Catholic votes according to the existing literature.

A.1 Pre-unitary states

The territorial division depicted in Figure A.1 (and in Section 3.1 of the paper) has been in place since 1598 and remained unaltered until the Italian Unification, in 1861, with the sole exception of the Napoleonic experience (1797-1815).

The Congress of Vienna in 1815 sanctioned that all former territories of the Republic of Venice (the entire north riverside) would be part of the Kingdom of Lombardy–Venetia, under the control of the Habsburg Empire, and that the Papal States would retain the same borders they had in 1797. The portion of land that is not depicted, between the Republic of Venice and the Duchy of Modena and Reggio Emilia, belonged to the Duchy of Mantua. While it is excluded from the main analysis, it will be discussed and included as a robustness check in Section 8. Italian unification, in 1861, only concerned territories south of the Po, whereas the Kingdom of Lombardy-Venetia north of the Po remained under Austrian rule until the third War of Independence in 1866.

In this section, I provide some corollary information on the historical processes that led to and characterized these borders. I first summarize the key phases. Then, I turn to a more detailed history of the Papal States and the Republic of Venice.

During the Communal period that preceded this territorial division, all Italy was characterized by a large number of independent city-states that controlled small territories in their proximity, leading to a much more fragmented division. These city-states gradually ceded the temporal authorities to powerful and rich families during the course of the XIVth century, often pushed by high levels of indebtment (Le Goff, 2012), giving rise to a phenomenon known as *Signorie*. They had a central economic authority – the powerful family, "I *Signori*" – whereas the emanation of laws and the actual governance maintained a more local nature. Often, local governors still ruled as feudal lords on behalf of the *Signori*, and many cities integrated their own legislation from the Communal period with later provisions from the central authority (Chittolini, 2005b; Guerini Fasaro, 1994; Chittolini, 2005a). This was the case in all my setting (Tocci, 1988): for the Duchy of Modena and Reggio, feudal governance remained the standard well into the XVIIIth century (Rambaldi, 1991).

Figure A.1: Pre-unitary states from 1598 to 1797 and from 1815 to 1861

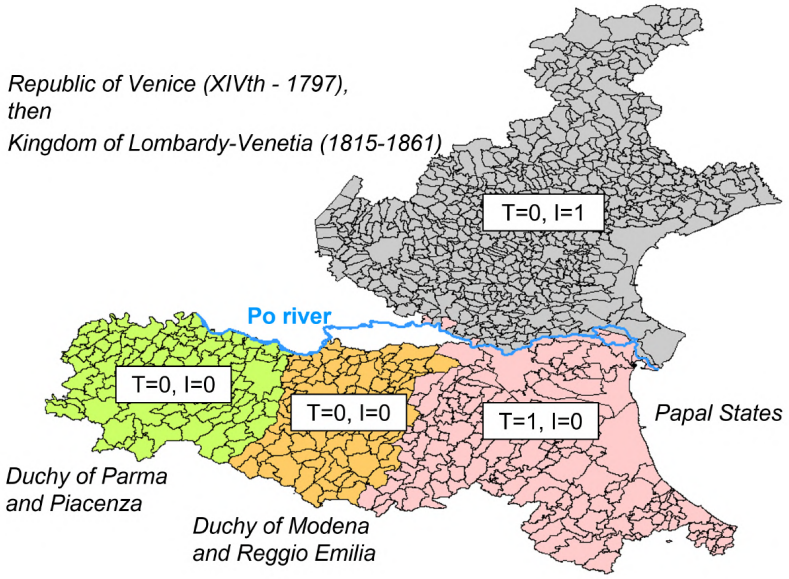


Figure A.2: Notes: the period between 1797 and 1815 is characterized by the first Italian Napoleonic campaign. T is a dummy taking value 1 for theocratic states and 0 for secular states. I is a dummy taking value 1 for indivisible inheritance norms and 0 for partible inheritance norms.

These pre-XVIth century experiences are taken into account in the main analysis by controlling for the urban population in 1300. The year 1300 is the apex of city-states' expansion: their population relative to rural areas is a good proxy for the subsequent centuries and is also a good indicator for the presence of infrastructures and commerce.

For all the states in the area, however, the history that precedes the XVIth century only constitutes the basis for the centralized states that developed in the XVIth century.

The Papal States The Papal States obtained temporal power during the VIIIth century. *De iure*, they were established in 725 with the *Donation of Sutri*, whereby the Langobard king Liutprand ceded to the Pope some territories in central Italy (Enciclopedia Treccani) – previously, the Pope only controlled a small duchy which included the city of Rome and its immediate countryside. The popes that followed then sought to expand their territories with a series of donations and agreements. However, it is only in the XIth century that the Pope affirms his role as the king of the Papal States, substituting Roman patrician families as the *defacto* governor of the territories.

Le Goff (2012) points out that the Papal States were "the most precocious and centralized of states". He identifies the origin of their early centralization tendencies in the collection of taxes: those coming from the Papal States' territories plus those collected in other states for the sustenance of the Church. While the latter financed the clergy and Catholic institutions in their posts (not necessarily within the Papal States), their collection required the establishment of an organized fiscal institution. The Apostolic Chamber had precisely this role and was established in the XIIIth century. It was administered by a single cardinal, known as *camerarius*. In the early XIVth century, pope John XXII established that all benefices, namely all feudal concessions made in the Papal States and returned to the central state upon the feudal lord's death, were to be administered by the central fiscal authority.

Meanwhile, the Pope was both the king of the Papal States and the maximum authority in the Christian world (Silvia Moretti, 2005). The pope influenced kings and lords of all European states making use of the threat of ex-communication. It was used also to collect taxes that all kingdoms owed to the Catholic Church, which were often withheld (Le Goff, 2012).

We also know from Le Goff (2012) that the XIVth century is particularly important in the process of state centralization for two more reasons. First, the Holy See was in need of liquidity to sustain (i) the construction of the new Papal palace in Avignonet, where the Holy See was transferred from 1309 to 1377; (ii) a series of wars to maintain control over its territories in Italy. This had two consequences. First, the collection of new taxes from all over Europe strengthened the Papal States' fiscal capacity, especially within their territories in Italy, and their use of banks to move capital across Europe. Second, the issue of unrest in the Italian territories under the Papal States was solved by the promulgation of the *Constitutiones Sanctæ Matris Ecclesiæ* in 1357, the first constitution of the Papal States which re-organized

all its territories in provinces with their own governor (usually a cardinal) reporting directly to the Pope (Silvia Moretti, 2005).

The north-most province of the Papal States, which is used in this paper, had been established in 1278 (Enciclopedia Treccani). It was characterized by several attempts of rebellion until the nomination of its first resident governor after the reform, in 1360. Nevertheless, patrician families that officially acted as feudal lords maintained a *de facto* independence until the XVIth century. South of the Po, this was the case for the families Bentivoglio in Bologna, Malatesta in Rimini, and Manfredi in Imola, Forlì, and Faenza. In Ferrara, formerly part of the Papal States, the Estensi family sanctioned its juridical independence and established a Duchy. At the beginning of the XVIth century, thanks to an agreement with the Holy Roman Empire, the project of centralization described by Prodi (1982) took off and the entire region south of the Po was centralized under the name of *Legazione di Romagna*, governed now by a Cardinal. The last territory to fall under the direct control of the Papal States was Ferrara, which is located on the southern riverbank of the Po. It was acquired in 1598 when the last Duke D'Este died without heirs (Enciclopedia Treccani).

Some sources argue that the role played by the Spanish Crown in the territorial conquests of the Papal States at the beginning of the XVIth century is behind the increased attention to fight Protestantism (Enciclopedia Treccani). Other sources more specialized on the Italian Inquisition (Tavuzzi, 2007; Black, 2009) argue that the response to the Reformation originated in the Papal States, and led to the establishment of the centralized Roman Inquisition which only partially modelled on the Spanish one. In any case, all sources agree that the fight against heresy in Italy was more intense within the territories of the Papal States. Moreover, as already mentioned in Section 3, the Papal States were the only state where the Inquisition remained active until 1861, whereas in all the other secular states in the area, its tribunals fell in disuse and were closed one century earlier (Tavuzzi, 2007).

The conservativism of Papal States' legislation is evident when comparing criminal law codes from the XIXth century, reported in Section 3. In Ferrara, south of the Po, the presence of Habsburg military forces sanctioned by the Congress of Vienna in 1815, coupled with the request for concessions from other secular states and the establishment of the secular Republic of Rome, led to conservative repressions which culminated in a popular revolt in 1831 (Enciclopedia Treccani). The source of social unrest can be ascribed to the strenuous defence of clerical privileges along the XVIIIth and XIXth century (Savigni, Raffaele). The tendency towards secularization that had originated in French Illuminism now permeated the ideas behind the Italian *Risorgimento*, a series of movements that culminated in the Italian unification in 1861 (Savigni, Raffaele; Enciclopedia Treccani). The original Canon Law from 1140, which equated crimes to sin and prescribed the supremacy of the Church on any other authority, remained formally in place in the Vatican state until 1917 (Catholic Church, 1959; Pertile, 1892). After the Pope was deprived of its temporal power, in 1870 the first Ecumenic Council of the Vatican recognized him as "infallible" on all moral matters. To this date, the

Vatican maintains the illegality of abortion in all cases and the illegality of divorce after a wedding has been consummated.

The Republic of Venice The Republic of Venice was also established in the VIIIth century, and its initial development depended on its commercial exchanges with the East Mediterranean.

It competed with the city of Genoa for the control of Mediterranean commerce until the XIVth century, when it affirmed its supremacy in the War of Chioggia (1378-81) and the subsequent Peace of Turin. At this point the Republic was an empire, and it began expanding in northeast Italy, located north of river Po. The empire was divided into the *Dogado*, which comprised the metropolitan area of Venice, the *Stato da Mar*, comprising all the maritime conquests made outside of Italy, and the *Domini di Terraferma*, namely all Italian territories in the current provinces of Veneto, Friuli and Trentino located north of river Po (Enciclopedia Treccani). Many independent cities spontaneously put themselves under the control of the Republic. A comprehensive list of these capitulations with dates, known as *dedizioni*, can be found in this Wikipedia article.

The territories closer to the Po (*Polesine*), which at the time remained largely uninhabited, were formally annexed in 1438 following the Peace of Bagnolo. [21]

In the XVth century, all cities in the region of Veneto north of the Po were under the Republic of Venice. The fear of excessive expansion led the Pope (Julius II) to create a coalition with the King of France and the Holy Roman Emperor (the League of Cambrai). At this point, the domination of the Republic of Venice north of the Po was not modified until the first Napoleonic campaign in Italy in 1796 (Enciclopedia Treccani).

Venetian institutions Venetian institutions, since the IXth century, were always secular and followed Roman traditions. They grew in complexity and from the XIVth century can be characterized as a series of elected bodies and positions within an oligarchy of patricians and merchants. A concise history of their evolution is reported by Enciclopedia Treccani.

In terms of attitudes towards blasphemy, the Republic has always been especially lenient. While in the Papal States blasphemous commoners were subject to severe corporal punishments (Cantini, 1800),[22] until 1442 the only sanctioned blasphemies in the Republic were

[21] With the exception of 6 municipalities: Ariano, Corbola, Adria, Melara, Castelnuovo and Ficarolo. Adria spontaneously surrendered to the Republic of Venice at the beginning of the XVIth century and passed under its control. Two municipalities (Ariano and Corbola) are located on an island between two arms of river Po and are thus separated from the north bank. The other three municipalities are on the west side of the map and do not border the Papal States. In any case, these municipalities, along with the rest of the Po Valley on the north bank (*Polesine di Rovigo*) were very sparsely populated to due frequent floods, large malaric swamps and a scarcity of roads which rendered contact with are areas arduous and led to long periods of isolation (Di Brenna and Cantù, 1861). These municipalities are excluded from the main analysis: however, their inclusion does not change the magnitude of any of my estimates.

[22] In the Middle Ages, penalties changed depending on the social status.

those against Venice's protector, Mark the Evangelist. The penalties consisted of a fine, and there are no records of any trial for blasphemy until 1450. There are numerous historical recounts of jurisdictional conflicts between the Republic and church tribunals already during the Medieval period (Derosas, 1980; Piasentini, 1999). One famous example is the one from Valcamonica (1485), when Venetian authorities intervened to stop the use of torture and executions against women accused of witchcraft (Tavuzzi, 2007). During the Medieval period, inquisition tribunals in the Republic of Venice were organized in districts that were separate from those south of the Po. One important difference is that in the Republic of Venice, inquisitors came from the Franciscan order rather than the more traditional Dominican order. Franciscans were less trained and tended to be more lenient (Tavuzzi, 2007).

The Valcamonica case at the end of the XVth century happened in a period when all European states underwent a phase of moralization and increased attention towards orthodoxy. The increased frequency of recent epidemics and, in the case of Venice, the recent defeats against the Muslim Ottoman Empire were interpreted as direct consequences of the widespread disrespect of Catholic morals (Piasentini, 1999). This period was then followed by the repression of Protestant ideas at the beginning of the XVIth century which culminated with the establishment of the Roman Inquisition in 1542 (Black, 2009). Nevertheless, as already mentioned in Section 3 of the paper, the Republic of Venice maintained a more lenient approach and fought the Papal claim for jurisdiction. First, it reserved itself the right to assign cases to either Inquisitorial or secular tribunals. Second, it imposed the presence of secular jury members in all Inquisition tribunals. I have already mentioned in Section 3 that because of these reasons, the Inquisition in Venice was not able to follow anonymous accusations and almost never resorted to torture. Other telling examples reported by Black (2009) concern the approach to Judaism and book censorship:

- The Holy See in Rome encouraged denunciations of Judaism, and antisemitism was growing strong in Rome, where Jewish babies were removed from their families and placed with Catholic adoptive parents. Venice inquisitors were notably more lenient towards Jews because they were instrumental to commerce with the Ottoman Empire. The Republic of Venice depended entirely on its commerce, and during the Middle Ages the Jews were a key source of credit for merchants because the Bible did not allow credit between Christians: Jews could instead lend to Christians (Le Goff, 2012). Le Goff also reports that this, coupled with the negative view of transactions like credit which was interpreted as the sin seen of usury, was an important driver for the emergence of antisemitism. Venice was the first city to have a ghetto, an area that allowed Jews to celebrate their faith safely. Venice later allowed Jews that had been forced to convert to Catholicism (e.g. in Spain or Rome) to live as Jews in the Venetian ghetto, complicating the operations of Inquisitors who could no longer trace contacts to conduct trials.
- Book censorship was one of the main strategies adopted by the Holy See (through the Roman Inquisition) to fight the spread of Protestantism. I have already mentioned in

Section 3 that Venice had a flourishing printing industry and for this reason, it became a hub of Protestant ideas in Italy. An index of prohibited books written by Cardinal Carafa in 1559 after his visit to Venice (1527-1532) tells us that Protestantism was not the only heresy in the city. The Cardinal compiled the new index because he was "shocked by what people were reading", and indeed the content of this index also shocked many cardinals back in Rome. For instance, specialized legal texts from France printed in Venice were indexed because they advocated the supremacy of secular over ecclesiastical power, and had too favourable views of usury and other unacceptable commercial practices related to usury.

A.2 Inheritance norms

A.2.1 Classification: family systems, patriarchal intensity and gender norms

The classification of inheritance norms around the Po river is just one element within a wider concept that encompasses a wider range of norms: this concept, or classification, is known as family systems. Mason (2001) concisely defines family systems as "a set of beliefs and norms, common practices, and associated sanctions through which kinship and obligations of particular kinship relationships are defined. Family systems typically define what it means to be related by blood, or descent, and by marriage; who should live with whom and at what stages of the life course; the social, sexual, and economic rights and obligations of individuals occupying different kin positions in relation to each other; and the division of labour among kin-related individuals". They were classified in Europe at the NUTS-3 level by Todd (1990),[23] who pinpoints the origin of these norms around A.D. 1000, in the heart of the Middle Ages.[24]

In my setting around the Po river, there are two family systems (Figure 1) characterized by different inheritance norms and a different intensity of patriarchal authority:

- The *Communitarian family system*, which I will refer to as **"Partible"** ($I = 0$) for simplicity, was located south of the Po river, in the Italian region of Emilia-Romagna (which includes the theocratic Papal States and the secular Duchies of Modena and Reggio, and of Parma and Piacenza).
  In this system, all male children could get married and their wives entered the groom's extended household under the authority of the groom's father, the patriarch. Upon his death, each male child inherited an equal share of the family's wealth, and became the patriarch of his own household. Therefore, except for a brief moment of cohabitation of

[23] Todd built on pre-existing work by the French sociologist Le Play, (1806 - 1882) (Todd, 1985).

[24] In line with other popular cultural classifications, like the ethnic classification by Murdock (1967) adopted by Alesina et al. (2013), family systems are strongly associated to traditional agrarian practices, which shaped norms within families in periods when households also constituted agricultural enterprises.

married children forming an extended family, this family system leads to the existence of separate nuclear families for most of its life cycle.

– The *STEM family system*, which I will refer to as **"Indivisible"** ($I = 1$), was located north of the Po river, in the Italian region of Veneto (the secular Republic of Venice, later a province of the Habsburg Empire).
  In this system, only one male child was allowed to get married: only his wife entered the household, and they lived under the patriarch's authority. Upon the patriarch's death, the chosen son inherited the role of patriarch and the entire household wealth. When other male sons were allowed to marry, they were not entitled to any bequests and could only remain under their brother's authority. More often, they left the household. Typically, they remained unmarried to avoid future inheritance claims or joined the clergy. During the entire life-cycle of a *STEM* family, one would have observed a large extended family where multiple generations live together under the authority of one patriarch.

Todd's classification is based on the cohabitation of married siblings observed in historical census data and parish registries, which can be attributed to a specific moment in the life cycle of a *Communitarian* ($I = 0$) family system.[25] The rules that characterized family systems were strict and enforced. Garino (1985) reports that between the 13th and the 18th century, both noble and peasant families north of the Po (indivisible, $I = 1$) made frequent use of the *fedeicommissum* institution. This allowed the patriarch to command that the entire wealth remained in the hands of a single heir: all bequests in the hands of non-designated children were bound to return to the designated heir upon their death.

For agricultural families, which constituted the vast majority of the population until the XXth century, the enforcement of these norms had direct consequences for the family's sustenance. Most families entered a sharecropping contract with the landowner. As mentioned in Section 7.1 in the paper, due to the direct link between the family's workforce and agricultural output, these contracts stated that marriages and fertility choices had to be approved by the landlord until the 19th century(Molini, 1858). Within the family, the patriarch was directly responsible for abiding by these clauses. A hypothetical young couple that violated these norms and left the household would turn to salaried work, with much lower living standards, as they would not have the necessary workforce to enter a separate sharecropping contract (Barbagli, 2000).[26]

Moreover, since the Middle Ages, Canon Law (for many centuries the only family law) sanctioned that the patriarch had authority upon children's marriages, based on social and eco-

[25] Parish registries were mandated by the Catholic Church in 1614, also outside the Papal States' borders. The Republic of Venice north of the Po river had begun collecting census data already in the 15th century (Sonnino, 1996).

[26] Sharecropping remained the prevalent form of agricultural production on both riversides until the 19th century, when the southern riverbank ($I = 0$) saw a sudden shift towards salaried agricultural work. Sharecropping became again prevalent following targeted fascist policies.

nomic convenience, and that challenging it was a prosecutable crime (**??**). In Italy, sharecropping was abolished in 1964, and the legal figure of the household head in 1975.[27]

Historical census data provides descriptive evidence that family systems, and the gender norms associated with them, remained in place until recently.

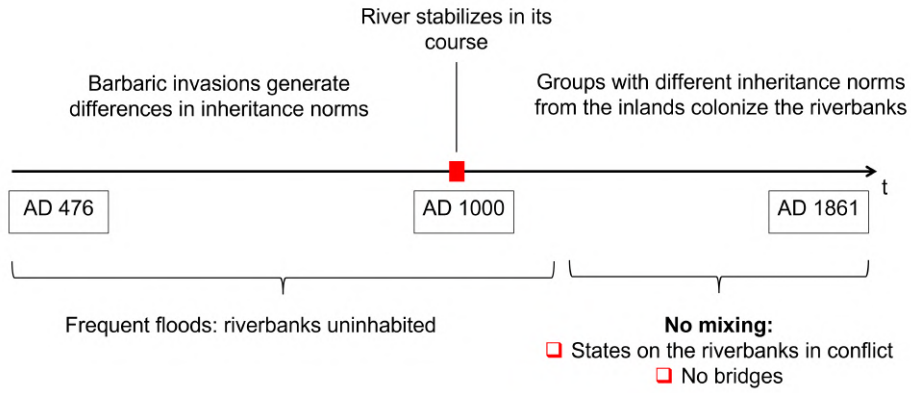
In the 19th century, the share of children born outside wedlock had its national minimum on the north bank of the Po (indivisible, $I = 1$), and its maximum in the provinces on the south bank (partible, $I = 0$) (MAIC, 1874, 1883, 1900). In most cases, these children were then recognized in their first years of life after the parents got married, suggesting that this metric is indicative of sexual freedom, and of different levels of patriarchal authority over fertility and marriages choices (Bertocchi and Bozzano, 2015, 2016). Moreover, the different norms predict a larger family size in the indivisible inheritance region ($I = 1$): maps in Section F in this Appendix show that this prediction is verified until the 1970s, and that average family size is spatially correlated with pro-Catholic votes.

A.3 Appearance of inheritance norms and states relative to river Po's history

Figure A.3 plots how the emergence of inheritance norms and the states object of my analysis interact with the history of river Po. Todd (1990) places the emergence of different family systems (hence different inheritance norms) around AD 1000. He attributes the indivisible inheritance norms to barbaric invasions from Germanic populations which did not spread south of the Po. This happens contemporaneously to the *Rotta di Ficarolo* (1152 ca.), a flood that changed the course of river Po into its current course (Uggeri, 2004). Because of frequent floods, the territories on the riverbanks were not colonized until the XVth century, in some cases (close to the river mouth) as late as the XVIIIth century (Zanchettin, 2008; Di Brenna and Cantù, 1861). This, along with the absence of bridges and the conflicts fought on the river, also prevents groups with different norms is prevented from mixing. Meanwhile, the centralized states that constitute the treatment variable in my analysis did not appear until the XVIth century, as discussed in Section 3 in the paper.

[27] In both cases, the formal and actual abolition coincide. Italian agricultural workers already demanded the abolition of sharecropping in 1919 (Cova, 2011). However, its importance was even increased by the fascist regime, which used it to colonize formerly uninhabited lands with people from distant regions (especially Veneto and Emilia-Romagna, on the Po riversides). These colonization experiences were sometimes prolonged long after the end of fascism, until the 1970s (for instance, in the case of the Pontine Marshes (Folchi, 2000; Alfieri, 2018)). The 1970s were also years of protests and female emancipation movements, which firmly campaigned to keep divorce and abortion legal before the respective referenda, and for women's parity in family law – including the abolition of the household head figure (Vellati, 2017).

Figure A.3: A timeline of inheritance norms, river Po formation and states emergence



B Additional results: the 1919-1924 elections

Despite the existence of a Catholic party running for elections between 1919-1924, I have not included those years in the main analysis because of the influence of fascist violence on election results. In this section, I detail the history of pre-WWII Catholic politics in Italy and present results for the 1919, 1921 and 1924 elections.

The first general elections in Italy were held in 1861. From 1874 to 1913, Catholics were prohibited to participate in elections or be elected by the *Non expedit* Papal bull. In 1913, the Holy See signed the so-called *Patto Gentiloni*, which led to the election of approximately 200 Catholic candidates in the coalition sustaining the prime minister Giovanni Giolitti (Corbetta and Piretti, 2009). Nevertheless, the Holy See began participating to Italy's political life in 1901, when Pope Leone XIII formally recognized the "almost servile" conditions of proletarians,[28] and opened to the creation of Catholic associations of both workers and owners, the so-called *white leagues* (Cova, 2011). Until then, Catholic workers were not represented by the already existing *red leagues* (socialist), because these had strong anticlerical positions. the leagues, which until then were industry-specific, eventually merged and formed modern Italian labour unions in the aftermath of WWI. Regardless of their political affiliation, unions responded to the deep, war-initiated economic crisis with violent protests, strikes, land and factory occupations known as the *red biennium* (1919-1921). The agitations of agricultural workers in the Po valley were particularly intense, leading to a huge growth of the white union that, contrary to Leone XIII positions, preached revolution against the owners. Nevertheless, red and white unions also had violent clashes on the accounts of their different ideologies (Cova, 2011; Encyclopaedia Britannica, 2021b). 1919 was a year of crucial transformations:

– Following the end of WWI, the widespread discontent of war survivors over the un-

[28] In his *Rerum novarum* encyclical.

favourable conditions of peace, and the surging economic crisis, 1919 elections were the first held under universal male suffrage (Corbetta and Piretti, 2009);

- The newly-founded Catholic Party, *Partito Popolare Italiano* (PPI) ran for the 1919 elections with the endorsement of the Catholic Church. It immediately became the main opponent of PSI, the biggest party, and ran until 1924 elections. It was then banned during the fascist regime (Corbetta and Piretti, 2009; Encyclopaedia Britannica, 2021b);
- Mussolini founded the *Fasci di combattimento*. These were armed militias that used violence as a means of repressing protests of both white and red unions, leagues and associations, with the aim of attracting middle-class votes for the newly-created fascist party, and dissuading votes towards the Catholic and Socialist parties, PPI and PSI. They were particularly active in the Po valley, especially in the two provinces neighboring the river, Ferrara and Rovigo. Intimidatory and punitive expeditions began in 1919, increased in frequency in the so-called *black biennium* (1921-1922), and continued until the establishment of fascist dictatorship (Encyclopaedia Britannica, 2021a). By the 1924 elections, socialist and Catholic opposition to fascism from lower classes had already been defeated, and Mussolini had already passed a new majoritarian electoral law which then granted him control of the Parliament.[29]

I use data collected by Corbetta and Piretti (2009), which report the votes obtained by PPI in a large number of municipalities ($N = 913$), for election in the Chamber of Deputies. Despite the missingness of some municipalities, which can be inspected visually in Figure B.4, I treat the data as complete.

Estimation by DAPSm yields the following results:

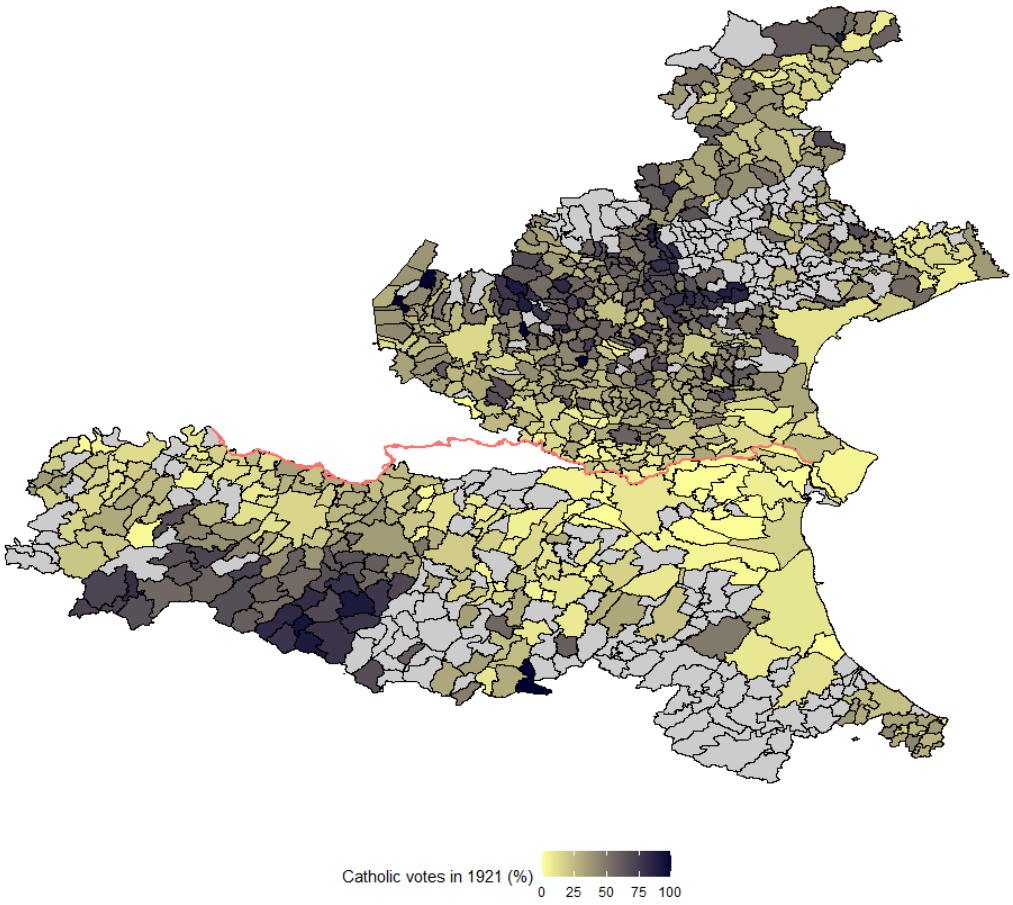
Table B.1: DAPSm results: 1919-1924 elections

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the Catholic party in year:											
1919	11.05***	(1.902)	386	19.726**	(6.364)	40	11.361***	(2.033)	294	8.365*	(3.277)
1921	9.037***	(2.572)	386	8.889	(7.399)	40	15.347***	(2.56)	294	-6.458	(3.975)
1924	9.276***	(1.216)	386	10.06**	(3.076)	40	11.319***	(1.527)	294	-1.259	(1.866)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The overall GRD compares the entire south riverside with the north riverside and is included to provide a benchmark for the west and east comparisons. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

[29] The rise of fascism in response to the events of the *red biennium* are studied quantitatively by Acemoglu et al. (2020).

Figure B.4: Catholic votes (%) in 1921



The year-specific spatial distribution of fascist punitive expeditions is likely to influence the difference in magnitude between $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ and consequently, the DIG point estimate, as in 1919. DIG estimates, after accounting for the presence of multiple hypotheses, remain equal to zero. Even ignoring the Bonferroni correction, the estimates are largely unstable over time and change sign. All robustness checks on the main analysis have been performed for these elections: they were omitted for the sake of brevity and clarity, but they are available upon request.

C Summary statistics

The following tables summarize baseline covariates used for matching, contemporary characteristics and outcome variables in the treatment groups used to estimate GRDs. The overall GRD contrasts groups **North of Po - South of Po, overall**. $\tau_W(\boldsymbol{b})$ contrasts **North of Po - South-West of Po**, and $\tau_E(\boldsymbol{b})$ contrasts **North of Po - South-East of Po**.

Table C.2: Summary statistics by treatment groups: baseline covariates

		Baseline covariates				
		Distance to Po (km)	**Extension (km^2)**	**Minimum altitude(m)**	**Maximum altitude(m)**	**Inhabitants in year 1300**
North of Po $(C = 1, I = 0)$	Mean	64.058	31.591	121.768	578.068	17692.97
	St.dev.	39.79	32.969	216.26	866.265	28433.291
	Min	0.104	2.971	-3	2	0
	Max	175.829	415.899	1075	3300	173000
South of Po, overall $(C = 0, I = 0)$	Mean	47.165	65.56	110.858	509.568	17035.266
	St.dev.	32.243	61.147	136.497	570.447	22749.085
	Min	0.484	3.171	-3	3	0
	Max	125.304	653.822	792	2165	80000
South-West of Po $(C = 0, I = 0)$	Mean	31.869	58.884	145.064	610.736	9452.202
	St.dev.	21.281	39.945	154.006	637.19	14399.097
	Min	0.484	3.171	1	19	0
	Max	81.209	260.602	792	2165	40000
South-East of Po $(C = 0, I = 1)$	Mean	66.358	73.937	67.938	382.632	26549.865
	St.dev.	33.386	79.421	94.645	442.375	27287.831
	Min	0.686	5.44	-3	3	0
	Max	125.304	653.822	393	1945	80000

Table C.3: Summary statistics by treatment groups: contemporary characteristics

		Contemporary characteristics		
		Turnout (1979)	**Adult pop. (1979)**	**Mean family size in 1953**
North of Po $(C = 1, I = 0)$	Mean	0.916	5540.179	4.834
	St.dev.	0.073	16948.838	0.981
	Min	0.368	212	2.352
	Max	1.049	273621	8.628
South of Po, overall $(C = 0, I = 0)$	Mean	0.944	9221.811	4.312
	St.dev.	0.058	27072.041	0.41
	Min	0.572	225	3.277
	Max	1.006	383956	5.674
South-West of Po $(C = 0, I = 0)$	Mean	0.929	7143.649	4.269
	St.dev.	0.073	17500.333	0.409
	Min	0.572	225	3.435
	Max	1.001	142071	5.674
South-East of Po $(C = 0, I = 1)$	Mean	0.963	11829.315	4.366
	St.dev.	0.016	35455.625	0.406
	Min	0.915	680	3.277
	Max	1.006	383956	5.206

Table C.4: Summary statistics by treatment groups: electoral outcomes

		Outcomes		
		Votes to DC in 1979 (%)	**Votes against divorce (%)**	**Votes against abortion (%)**
North of Po $(C = 1, I = 0)$	Mean	56.508	59.215	49.075
	St.dev.	13.803	14.017	11.902
	Min	21.839	25.743	21.9
	Max	92.974	91.751	85.6
South of Po, overall $(C = 0, I = 0)$	Mean	32.827	35.593	27.532
	St.dev.	11.028	10.963	9.238
	Min	11.834	12.357	10.3
	Max	72.452	71.202	64.5
South-West of Po $(C = 0, I = 0)$	Mean	36.725	38.534	29.732
	St.dev.	11.558	11.107	9.065
	Min	14.461	16.465	12.9
	Max	72.452	71.202	64.5
South-East of Po $(C = 0, I = 1)$	Mean	27.936	31.903	24.771
	St.dev.	7.983	9.584	8.7
	Min	11.834	12.357	10.3
	Max	49.332	55.393	55.8

Table C.5: Summary statistics by treatment groups: religion class in schools

		Outcome: attendees Catholic religion class		
		Elementary school (%)	**Middle school (%)**	**High school (%)**
North of Po $(C = 1, I = 0)$	Mean	88.241	86.659	79.287
	St.dev.	12.162	11.943	19.011
	Min	1.500	0.775	0.693
	Max	100	100	100
South of Po, overall $(C = 0, I = 0)$	Mean	83.733	82.085	69.916
	St.dev.	13.824	12.538	21.964
	Min	1.554	3.571	1.630
	Max	100	100	100
South-West of Po $(C = 0, I = 0)$	Mean	83.246	82.905	69.916
	St.dev.	13.368	10.125	20.432
	Min	2.970	50.365	4.545
	Max	100	100	100
South-East of Po $(C = 0, I = 1)$	Mean	84.141	81.312	68.470
	St.dev.	14.193	14.429	23.258
	Min	1.554	3.571	1.630
	Max	100	100	100

D Robustness checks on the identification

D.1 Other cultural dimensions as potential confounders: the Piave river

In order to attribute the entire difference in pro-Catholic votes between the two riversides to indivisible inheritance, it is necessary to exclude the effect of possible confounders. I estimate a GRD at river Piave, that runs entirely within the indivisible inheritance region ($I = 1$) but separates other cultural dimensions – a map is provided in Figure F.10. For instance, the two riversides have different dialects, festivities and culinary traditions. If these dimensions had any role in explaining modern voting patterns, a GRD estimated along the Piave would return significant estimates. Historically, the Piave was equally large and difficult to cross. For instance, this is what made the Piave decisive during WWI. The river hard border was the first point where the Italian army was able to stop the advance of the Austro-Hungarians after the 1917 defeat of Caporetto (150 km away, to the north). Subsequently, in 1918, its strong currents prevented the construction of Italian pontoon bridges and destroyed others that had been already built, delaying the Second Battle of Piave by two days (Enciclopedia Treccani, 2011). As shown in Table D.6, estimates are not discernible from zero on any voting occasion.

Table D.6: Robustness check: DAPSm GRD at river Piave

	(1)			(2) - Preferred specification			(3)		
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N height
(%) votes for the catholic party in year:									
1948	3.836	(3.778)	477	3.948	(3.769)	477	4.124	(3.745)	476
1953	2.19	(3.652)	481	2.331	(3.636)	481	2.553	(3.599)	481
1958	4.258	(3.612)	482	4.256	(3.586)	482	4.328	(3.531)	482
1963	5.291	(3.614)	483	5.29	(3.582)	483	5.333	(3.505)	483
1968	6.419	(3.628)	483	6.418	(3.606)	483	6.38	(3.543)	483
1972	5.033	(3.683)	483	5.032	(3.662)	483	4.944	(3.598)	483
1976	6.638	(3.57)	483	6.637	(3.527)	483	6.606	(3.474)	483
1979	6.043	(3.513)	483	6.041	(3.47)	483	6.069	(3.404)	483
1983	6.579	(3.433)	483	6.578	(3.398)	483	6.594	(3.325)	483
1987	6.945	(3.271)	483	6.944	(3.235)	483	6.892	(3.171)	483
1992	3.94	(2.688)	483	3.94	(2.67)	483	3.875	(2.613)	483
(%) votes against legalization of:									
Divorce (1972 referendum)	5.343	(3.256)	483	5.342	(3.226)	483	5.617	(3.14)	483
Abortion (1981 referendum)	4.705	(3.671)	483	4.704	(3.628)	483	4.877	(3.517)	483
Covariates:									
Longitude along river Po, Altitude	Yes	Yes	Yes	No	No	No	No	No	No
Urban Density in year 1300	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Turnout and electorate size	No	No	No	No	No	No	Yes	Yes	Yes

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. The GRD at the Piave identifies the ATT of potentially confounding cultural dimensions other than inheritance norms. The Catholic party is *Democrazia Cristiana*.

D.2 Napoleonic occupation as a potential confounder: the Adige river

Whereas all the southern Po riverside except the Duchy of Parma and Piacenza, and 50 municipalities north of the Po in the southern side of the province of Verona were under direct Napoleonic control from 1797 to 1815 (as part of the Cisalpine Republic). The rest of the municipalities north of the Po were only marginally affected by Napoleonic legislation, since Napoleonic occupation in 1797 lasted just a few months, after which they were ceded to the Austrian Habsburg Empire (Zaghi, 1991).[30] The Napoleonic Code, which was extended to all conquered territories, mandated the equal partition of inheritance among all living sons and daughters: it temporarily outlawed the primogeniture norms in place north of the Po (characterized by indivisible inheritance norms), and abolished the institution of *fideicommissum*. Moreover, while formalizing the supremacy of the husband over the wife that was customary in of all Europe, and while imposing some limitations that made divorcing easier for the husband, the Code kept divorce legal based on the French Revolutionary Laws (1792), both on the grounds of adultery and of "incompatible moods" (Tulard et al., 1998). The institution of divorce came as a complete novelty for the inhabitants of former Italian states (Barbagli and Kertzer, 1990).

To account for the different lengths of Napoleonic occupation in my setting, I perform two robustness checks.

First, I replicate the results in the main analysis after excluding (i) the territories of the Duchy of Parma and Piacenza, which were not conquered by Napoleon and (ii) the territories north of the Po that were part of the Napoleonic Cisalpine Republic from 1797 to 1815. Given the reduction in sample size, I use Dell (2010) GRD estimator. If the length of the Napoleonic occupation had an effect, excluding these municipalities should return GRD estimates with a higher magnitude. As shown below in Table D.7, comparing these estimates to the ones in the main analysis obtained with Dell (2010)'s GRD (Section E.3) reveals that all magnitudes are quantitatively comparable. Indeed, for some elections, the magnitudes are often lower.

[30] In his first military campaign in Italy in 1797, Napoleon forced the Republic of Venice to surrender and dissolve. However, already in January 1798, he ceded a large part of the Republic of Venice to the Austrian Habsburg Empire. These territories passed again under Napoleonic control from 1805 to 1815, as part of the Kingdom of Italy, after the second Italian campaign.

Table D.7: Napoleon: first check

	(1)			(2) - Preferred specification			(3)		
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N height
(%) votes for the catholic party in year:									
1948	29.017***	(3.208)	562	27.204***	(4.324)	486	25.491***	(4.093)	479
1.712	2.452								
1953	32.98***	(2.588)	605	25.776***	(4.135)	491	30.053***	(3.077)	522
-4.277	2.496								
1958	35.191***	(2.605)	607	27.218***	(4.195)	492	32.167***	(3.074)	523
-4.949	2.552								
1963	35.906***	(2.459)	613	27.737***	(4.186)	493	33.296***	(2.882)	529
-5.559	2.703								
1968	35.493***	(2.421)	614	28.857***	(4.123)	493	32.296***	(2.834)	530
-3.438	2.580								
1972	33.605***	(2.414)	614	27.657***	(4.172)	493	30.185***	(2.82)	530
-2.528	2.585								
1976	31.149***	(2.392)	614	26.201***	(4.139)	493	27.337***	(2.78)	530
-1.136	2.448								
1979	30.577***	(2.369)	614	25.785***	(4.104)	493	26.63***	(2.756)	530
-0.845	2.357								
1983	28.243***	(2.231)	618	25.284***	(3.987)	493	24.705***	(2.58)	534
0.579	2.358								
1987	28.381***	(2.162)	614	25.839***	(3.839)	493	24.915***	(2.507)	530
0.925	2.202								
1992	23.635***	(1.741)	614	23.543***	(3.127)	493	21.241***	(1.972)	530
2.302	1.785								
con_abo	34.184***	(1.961)	618	34.665***	(3.506)	493	31.3***	(2.264)	534
3.365	2.093								
con_div	37.537***	(2.355)	618	35.913***	(4.205)	493	33.417***	(2.714)	534
2.496	2.575								
(%) votes against legalization of:									
Divorce (1972 referendum)	37.537***	(2.355)	618	35.913***	(4.205)	493	33.417***	(2.714)	534
2.496	2.575								
Abortion (1981 referendum)	34.184***	(1.961)	618	34.665***	(3.506)	493	31.3***	(2.264)	534
3.365	2.093								
Covariates:									
Longitude along river Po, Altitude	Yes	Yes	Yes	No	No	No	No	No	No
Urban Density in year 1300	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Turnout and electorate size	No	No	No	No	No	No	Yes	Yes	Yes

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The overall GRD compares the entire south riverside with the north riverside and is included to provide a benchmark for the west and east comparisons. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

The second check focuses on the northern riverside. Within the northern Po riverside, a large part of the border between the Cisalpine Republic and other municipalities was set at river Adige, another large river characterized by rip currents and guarded by soldiers during the Cisalpine Republic years.

I exploit the tract of river Adige that served as a border as a geographic discontinuity and estimate a GRD by Dell (2010). in this case, I do not carry out the estimation by DAPSm due to the low number of municipalities that were part of the Cisalpine Republic (79). Namely, for all outcomes I estimate: bbold

$$Y_m = \alpha + \gamma_{GRD}\mathbb{I}\{North\}_m + f(lat_m, long_m) + \phi_m + \boldsymbol{X'_m}\boldsymbol{\beta} + \varepsilon_m$$

Where $f(lat_m, long_m)$ is a squared polynomial of longitude and latitude, ϕ_m are border fixed effects, and $\boldsymbol{X}$ includes a number of municipalities' characteristics, summarized along the results in Table D.8. Since the entire area was characterized by indivisible inheritance norms ($I = 1$) and was previously under the secular institutions of the Republic of Venice ($T = 0$), the GRD identifies the effect of the shorter length of Napoleonic occupation from those of culture and pre-existing formal institutions. Formally, the effect is estimated conditional on $I = 1$ and $T = 0$. All estimates are statistically equal to zero.[31]

Figure D.5 summarizes the characteristics of municipalities considered in this estimation:

Figure D.5: Napoleonic occupation north of the Po river

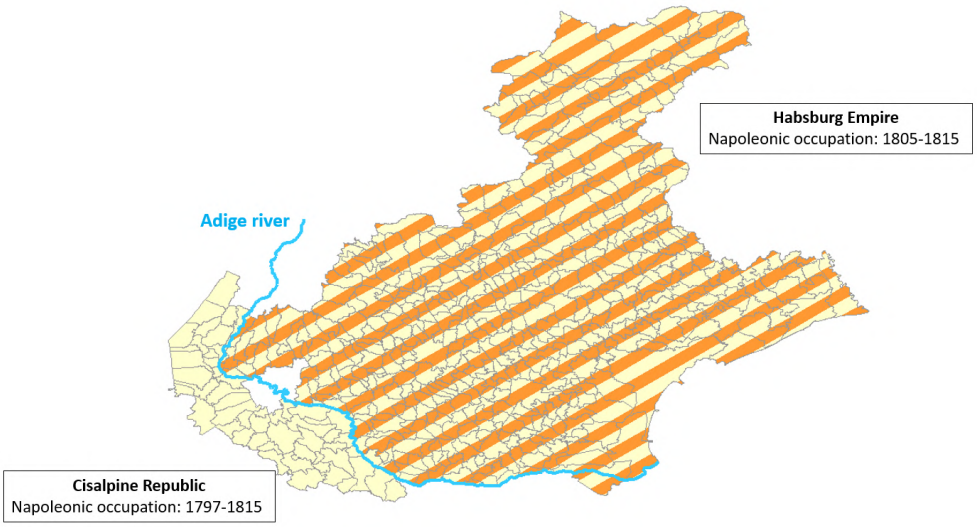


Figure D.6: Notes: the map shows the municipalities used in the robustness check on the intensity of Napoleonic occupation. Below the border of the Adige river, Napoleonic occupation through the Cisalpine Republic lasted from 1797 to 1815, whereas north of the Adige from 1805 to 1815.

[31] Albeit not very precisely, due to low number of municipalities under the Cisalpine Republic.

Table D.8: The effect of Napoleonic occupation intensity: GRD at river Adige

	(1)			(2)			(3)		
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N height
(%) votes for the catholic party in year:									
1948	3.836	(3.778)	477	3.948	(3.769)	477	4.124	(3.745)	476
1953	2.19	(3.652)	481	2.331	(3.636)	481	2.553	(3.599)	481
1958	4.258	(3.612)	482	4.256	(3.586)	482	4.328	(3.531)	482
1963	5.291	(3.614)	483	5.29	(3.582)	483	5.333	(3.505)	483
1968	6.419	(3.628)	483	6.418	(3.606)	483	6.38	(3.543)	483
1972	5.033	(3.683)	483	5.032	(3.662)	483	4.944	(3.598)	483
1976	6.638	(3.57)	483	6.637	(3.527)	483	6.606	(3.474)	483
1979	6.043	(3.513)	483	6.041	(3.47)	483	6.069	(3.404)	483
1983	6.579	(3.433)	483	6.578	(3.398)	483	6.594	(3.325)	483
1987	6.945	(3.271)	483	6.944	(3.235)	483	6.892	(3.171)	483
1992	3.94	(2.688)	483	3.94	(2.67)	483	3.875	(2.613)	483
(%) votes against legalization of:									
Divorce (1972 referendum)	4.705	(3.671)	483	4.704	(3.628)	483	4.877	(3.517)	483
Abortion (1981 referendum)	5.343	(3.256)	483	5.342	(3.226)	483	5.617	(3.14)	483
Covariates:									
Longitude along river Po, Altitude	Yes	Yes	Yes	No	No	No	No	No	No
Urban Density in year 1300	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Turnout and electorate size	No	No	No	No	No	No	Yes	Yes	Yes
Lat-long polynomial and border FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. The GRD at Adige river identifies the ATT of a shorter Napoleonic occupation on pro-Catholic votes, and on votes against divorce and abortion. The Catholic party is *Democrazia Cristiana*. Due to the low number of municipalities that experienced a longer Napoleonic occupation (79), the GRD is estimated by Dell (2010). The city of Verona, which is crossed by river Adige, is excluded from the analysis.

D.3 The Po as a hard border: evidence from Mantua

This robustness check compares summary statistics in the area of study to the province of Mantua, which is not in the setting of the main analysis. Despite being small, Mantua provides suggestive evidence of what would have happened if the Po river had not been a hard border between the two riversides in the main analysis setting.

The province includes 70 municipalities, and it is located between the west-most provinces of the north riverside (indivisible inheritance, $I = 1$) and the south riverside (partible inheritance, $I = 0$). It was part of a separate state with respect to both since 1115, except during the Napoleonic domination (1797-1815) when it became part of the Cisalpine Republic along the entire region of Emilia. Mantua has been classified by Todd (1990) as a STEM province (indivisible inheritance, $I = 1$).[32] It has the particular feature of being crossed by the Po river, as shown in Figure D.7. Uggeri (2004) reports the presence of a bridge within the province since the Middle Ages, and that Mantua had several military conflicts with states located on both riversides over the passage of merchant ships in its tract of the Po river. Due to military conflicts, the movement of people across its borders is not a concern during the Medieval centuries that saw the formation of family systems and thus inheritance norms. Within the province of Mantua then, one would expect to find little or no difference in voting patterns between the two sides of the Po river. For what concerns the main analysis, the closeness of Mantuan municipalities (where $I = 1$) to the south-west riverside in the main setting (where $I = 0$) would imply, if anything, that the estimates of the west comparison $\widehat{\tau}_W$ are negatively biased. The fact that those estimates are quantitatively equivalent to those from the east sample is evidence that the bias is unlikely to be in place. Indeed, the map in Figure D.7 shows that the municipalities that display more Catholic preferences are those closer to the northern riverside in the setting (where $I = 1$), and those with less pro-Catholic preferences are bordering the south riverside ($I = 0$).

The closeness of municipalities in the setting south of the Po ($I = 0$) also implies that once border controls were lifted, as during the Napoleonic period unification, and then again starting in 1861, the mixture of cultural norms would happen more quickly.

Table D.12 shows summary statistics of contemporary characteristics, baseline covariates and outcome variables for the two sides of the river, within the Mantua province. Table D.9 instead summarizes outcome variables (pro-Catholic votes) within the province of Mantua, in comparison with the setting's north riverside ($I = 1$) and south riverside ($I = 0$). Indeed, the differences in pro-Catholic votes between the two riversides in Mantua are far smaller than those between the two riversides, though still present. Taken as a whole, the province of Mantua displays modern political preferences that lie in between. However, by looking at

[32] Todd (1990) does not specify, in this case, whether the parish registries used for the classifications are located south or north of the Po river, and whether he used a single archive or multiple ones.

them by riverside, it becomes clear that Mantuan municipalities south of the Po display very similar numbers to those from the setting's south riverside. Despite the presence of a bridge, these municipalities were closer to them than to the rest of Mantua, and the STEM family system ($I = 1$) did not have the same persistence it had in the setting's north riverside, as expected, except for the municipalities further away from the river, as shown in the map in Figure D.7.

Figure D.7: DC votes (%) in 1979 in Mantua province

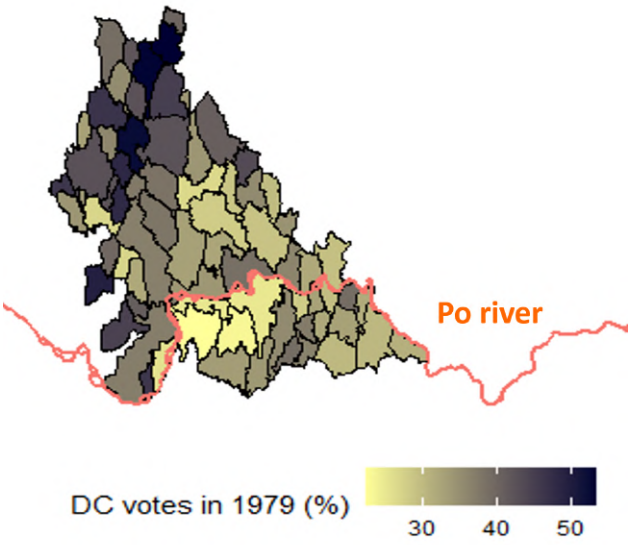


Table D.9: Outcome variables' summary statistics in Mantua relative to the riversides in the setting

		Mean	St.dev	Min	Max	N
Votes to Democrazia Cristiana (%) in 1979	N riverside	56.51	(13.798)	21.839	92.974	582
	S riverside	32.765	(11.078)	11.834	72.452	341
	Mantua	36.033	(7.408)	22.166	53.322	70
Votes against abortion (%) (1981)	N riverside	40.089	(11.906)	21.9	85.6	582
	S riverside	27.54	(9.263)	10.3	64.5	341
	Mantua	32.256	(7.210)	18.9	51.3	70
Votes against divorce (%) (1974)	N riverside	59.216	(14.014)	25.743	91.751	582
	S riverside	35.515	(10.994)	12.357	71.202	341
	Mantua	39.952	(8.353)	23.418	61.097	70

Notes: All outcome variables are measured in percentage points (0-100). Mantua displays mixed voting patterns with respect to the setting's north riverside (indivisible inheritance, $I = 1$) and south riverside (partible inheritance, $I = 0$). Despite being classified as province with indivisible inheritance ($I = 1$), within the province the Po was easier to cross. This suggests that instead, in the main area of study, the Po river was indeed a hard border.

Table D.10: Summary statistics by riverside within Mantua: baseline covariates

		Baseline covariates				
		Distance to Po (km)	**Extension (km^2)**	**Minimum altitude(m)**	**Maximum altitude(m)**	**Inhabitants in year 1300**
Mantua North of Po	Mean	16.192	33.858	27.231	53	14615.385
	St.dev.	11.506	21.417	15.595	49.739	19298.662
	Min	0.31	8.913	11	17	0
	Max	30.020	103.843	88	214	40000
Mantua South of Po	Mean	4.918	32.269	12.778	19.444	8888.889
	St.dev.	3.649	18.446	2.521	3.927	16722.752
	Min	0.356	12.733	9	12	0
	Max	12.986	69.942	17	27	40000

Table D.11: Summary statistics by riverside within Mantua: contemporary characteristics

		Contemporary characteristics		
		Turnout (1979)	**Adult pop. (1979)**	**Mean family size (1953)**
Mantua North of Po	Mean	0.961	4315.615	4.02
	St.dev.	0.012	6832.674	0.419
	Min	0.929	488	2.971
	Max	0.996	49836	4.773
Mantua South of Po	Mean	0.961	3729.5	3.921
	St.dev.	0.011	3301.909	0.361
	Min	0.939	746	3.368
	Max	0.977	14660	4.816

Table D.12: Summary statistics by riverside within Mantua: outcomes

		Outcomes		
		Pro-Catholic votes in 1979 (%)	**Votes against divorce (%)**	**Votes against abortion (%)**
Mantua North of Po	Mean	37.789	41.654	33.81
	St.dev.	7.318	8.236	7.132
	Min	25.357	25.268	21
	Max	53.322	61.097	51.3
Mantua South of Po	Mean	30.962	35.032	27.767
	St.dev.	4.674	6.336	5.101
	Min	22.166	23.418	18.9
	Max	38.84	47.961	38.7

E Robustness checks on the estimation

E.1 Additional specifications of propensity scores

Table E.13 adds two alternative specifications for the propensity score component of the DAPS. For the sake of brevity, I restrict this check to the specification of the overall GRD, although results are equivalent also for $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$. First, I remove urban population in 1300, as it could be considered a post-treatment control with respect to family systems (C). I then add turnout and electorate size at the election: even comparing municipalities with similar contemporary population and political participation, estimates remain quantitatively stable.[33]

[33]These are definitely post-treatment controls and could act as mediators, thus biasing the estimates. For this reason they are excluded from the main analysis.

Table E.13: Overall GRD with different PS specifications

	(1)			(2) - Preferred specification			(3)		
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N
(%) votes for the catholic party in year:									
1948	25.061***	(1.926)	208	26.712***	(2.028)	212	29.27***	(2.122)	216
1953	23.719***	(1.33)	388	23.422***	(1.317)	386	23.247***	(1.38)	384
1958	24.999***	(1.347)	392	24.85***	(1.344)	390	25.378***	(1.395)	390
1963	26.584***	(1.274)	404	26.663***	(1.276)	402	27.08***	(1.312)	408
1968	26.541***	(1.216)	408	26.504***	(1.226)	406	27.303***	(1.287)	400
1972	25.999***	(1.205)	408	25.927***	(1.219)	406	26.523***	(1.276)	404
1976	24.171***	(1.135)	408	23.913***	(1.147)	406	24.896***	(1.177)	404
1979	24.303***	(1.106)	408	24.004***	(1.119)	406	25.444***	(1.172)	404
1983	21.524***	(1.04)	420	21.012***	(1.048)	416	22.618***	(1.157)	394
1987	21.389***	(1.031)	408	21.006***	(1.043)	406	21.821***	(1.095)	400
1992	13.59***	(0.857)	408	13.042***	(0.861)	406	13.414***	(0.885)	406
(%) votes against legalization of:									
Divorce (1972 referendum)	25.761***	(1.142)	420	25.099***	(1.148)	416	25.959***	(1.213)	396
Abortion (1981 referendum)	23.475***	(0.966)	420	22.862***	(0.975)	416	23.25***	(1.003)	398
Covariates:									
Longitude along river Po, Altitude	Yes	Yes	Yes	No	No	No	No	No	No
Urban Density in year 1300	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Turnout and electorate size	No	No	No	No	No	No	Yes	Yes	Yes

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It identifies the compound effect of C and I. The Catholic party is *Democrazia Cristiana*.

E.2 Robustness: changing w in DAPSm

E.2.1 Alternative values of w

This section replicates all results by varying w, the weight given to the propensity score by the DAPS matching algorithm. In the main analysis, I attributed the same weight to propensity scores and geographic distance ($w = 0.5$): I now replicate results with $w = (0, 0.25, 0.75, 1)$. As shown in the balance tables in Section E.4, the matching algorithm reduces the average distance from the river of treated units[34] at the expense of a slightly worse balance on some other baseline covariates. The algorithm also attributes high importance to longitude in the

[34]The 1-to-1 greedy matching algorithm departs from treated units and finds a suitable match for each one. In the end, it keeps treated units that are closer to the river, and selects matches that are further away. As a result, the overall Average Standardized Difference in distance means increases overall.

propensity score matching component of DAPS, as shown by balance tables. Comparing estimates for different values of w allows to assess how this impacts results: intuitively, lower values of w (higher importance given to distance) should yield estimates that are more affected by this trade-off. To illustrate this fact, in Table E.27 I report balance of baseline and outcome variables when w takes the extreme values of 0 and 1. Table E.14 summarizes DIG estimates obtained with these weights:

Table E.14: DIG estimates with different values of w

	DIG estimates				
	$w = 0$	$w = 0.25$	$w = 0.5$	$w = 0.75$	$w = 1$
Dependent variable					
(%) votes for the catholic party in year:					
1948	0.684	2.069	2.493	5.053	-0.233
1953	-6.129	-4.658	-1.497	-1.973	-2.135
1958	-5.247	-3.781	-0.641	-0.798	1.71
1963	-6.385	-4.959	-2.419	-1.742	-1.606
1968	-4.937	-3.383	-0.967	-0.908	-2.367
1972	-3.818	-2.067	-0.04	-0.055	-1.323
1976	-3.762	-1.985	-0.166	-0.44	-1.107
1979	-3.483	-1.83	0.017	-0.613	-0.53
1983	-2.968	-1.315	0.655	0.296	1.116
1987	-4.612	-3.215	-1.183	-1.282	0.027
1992	-1.257	-0.843	0.268	0.908	3.074
(%) votes against legalization of:					
Divorce (1972 referendum)	-2.942	-0.737	0.967	1.012	2.09
Abortion (1981 referendum)	-1.136	1.422	2.879	2.344	5.083

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

DIG estimates remain stable at zero, while GRD estimates have higher magnitude for higher values of w. In other words, as the matching process attributes more importance to baseline covariates and less to distance between pairs of municipalities, the discontinuities in voting patterns at the Po river increase in magnitude. Nevertheless, even when geographic proximity is the only matching criterion ($w = 0$), estimates remain in the neighbourhood of 20 percentage points.

Table E.15: GRD and DIG estimates with $w = 0$

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	26.712***	(2.028)	212	24.012***	(3.69)	40	23.328***	(1.985)	160	0.684	(2.960)
1953	23.422***	(1.317)	386	18.328***	(2.802)	40	24.458***	(1.447)	294	-6.129	(2.560)
1958	24.85***	(1.344)	390	21.025***	(2.786)	40	26.271***	(1.484)	296	-5.247	(2.612)
1963	26.663***	(1.276)	402	21.8***	(2.496)	40	28.185***	(1.392)	306	-6.385	(2.734)
1968	26.504***	(1.226)	406	23.047***	(2.534)	40	27.984***	(1.351)	308	-4.937	(2.472)
1972	25.927***	(1.219)	406	23.538***	(2.486)	40	27.356***	(1.341)	308	-3.818	(2.534)
1976	23.913***	(1.147)	406	21.878***	(2.374)	40	25.64***	(1.233)	308	-3.762	(2.259)
1979	24.004***	(1.119)	406	22.323***	(2.236)	40	25.806***	(1.23)	308	-3.483	(2.243)
1983	21.012***	(1.048)	416	20.443***	(2.031)	40	23.411***	(1.149)	316	-2.968	(1.992)
1987	21.006***	(1.043)	406	18.985***	(2.224)	40	23.597***	(1.129)	308	-4.612	(2.064)
1992	13.042***	(0.861)	406	14.341***	(1.571)	40	15.598***	(0.887)	308	-1.257	(1.574)
(%) votes against legalization of:											
Divorce (1972 referendum)	25.099***	(1.148)	416	24.458***	(2.856)	40	27.399***	(1.259)	316	-2.942	(2.227)
Abortion (1981 referendum)	22.862***	(0.975)	416	23.585***	(2.353)	40	24.721***	(1.081)	316	-1.136	(1.975)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.16: GRD and DIG estimates with $w = 0.25$

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	26.712***	(2.028)	212	25.446***	(3.661)	40	23.377***	(1.986)	160	2.069	(2.817)
1953	23.422***	(1.317)	386	19.984***	(3.001)	40	24.642***	(1.457)	294	-4.658	(2.502)
1958	24.85***	(1.344)	390	22.839***	(2.997)	40	26.619***	(1.502)	296	-3.781	(2.454)
1963	26.663***	(1.276)	402	23.558***	(2.705)	40	28.516***	(1.417)	306	-4.959	(2.524)
1968	26.504***	(1.226)	406	24.674***	(2.727)	40	28.057***	(1.352)	308	-3.383	(2.321)
1972	25.927***	(1.219)	406	25.344***	(2.655)	40	27.412***	(1.341)	308	-2.067	(2.404)
1976	23.913***	(1.147)	406	23.674***	(2.536)	40	25.66***	(1.236)	308	-1.985	(2.105)
1979	24.004***	(1.119)	406	24.025***	(2.457)	40	25.855***	(1.239)	308	-1.83	(2.108)
1983	21.012***	(1.048)	416	22.084***	(2.227)	40	23.399***	(1.171)	316	-1.315	(1.971)
1987	21.006***	(1.043)	406	20.441***	(2.326)	40	23.656***	(1.135)	308	-3.215	(1.981)
1992	13.042***	(0.861)	406	14.886***	(1.605)	40	15.729***	(0.896)	308	-0.843	(1.520)
(%) votes against legalization of:											
Divorce (1972 referendum)	25.099***	(1.148)	416	26.544***	(3.059)	40	27.282***	(1.273)	316	-0.737	(2.215)
Abortion (1981 referendum)	22.862***	(0.975)	416	25.98***	(2.627)	40	24.558***	(1.094)	316	1.422	(1.959)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.17: GRD and DIG estimates with $w = 0.75$

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	26.712***	(2.028)	212	29.762***	(4.571)	40	24.71***	(2.1)	160	5.053	(3.102)
1953	23.422***	(1.317)	386	24.025***	(3.871)	40	25.997***	(1.497)	294	-1.973	(2.795)
1958	24.85***	(1.344)	390	26.781***	(3.769)	40	27.58***	(1.526)	296	-0.798	(2.652)
1963	26.663***	(1.276)	402	27.509***	(3.515)	40	29.251***	(1.443)	306	-1.742	(2.507)
1968	26.504***	(1.226)	406	27.97***	(3.27)	40	28.878***	(1.373)	308	-0.908	(2.582)
1972	25.927***	(1.219)	406	28.27***	(3.16)	40	28.325***	(1.369)	308	-0.055	(2.485)
1976	23.913***	(1.147)	406	26.083***	(2.997)	40	26.523***	(1.264)	308	-0.44	(2.222)
1979	24.004***	(1.119)	406	26.024***	(2.963)	40	26.637***	(1.258)	308	-0.613	(2.181)
1983	21.012***	(1.048)	416	24.242***	(2.786)	40	23.946***	(1.177)	316	0.296	(2.052)
1987	21.006***	(1.043)	406	22.721***	(3.002)	40	24.003***	(1.141)	308	-1.282	(2.124)
1992	13.042***	(0.861)	406	16.601***	(1.974)	40	15.693***	(0.91)	308	0.908	(1.725)
(%) votes against legalization of:											
Divorce (1972 referendum)	25.099***	(1.148)	416	28.654***	(3.392)	40	27.641***	(1.293)	316	1.012	(2.528)
Abortion (1981 referendum)	22.862***	(0.975)	416	26.935***	(2.866)	40	24.591***	(1.108)	316	2.344	(2.186)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.18: GRD and DIG estimates with $w = 1$

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	26.712***	(2.028)	212	42.522***	(4.553)	40	42.756***	(1.973)	160	-0.233	(3.174)
1953	23.422***	(1.317)	386	29.958***	(4.088)	40	32.092***	(1.403)	294	-2.135	(3.13)
1958	24.85***	(1.344)	390	31.793***	(3.998)	40	33.502***	(1.407)	296	-1.71	(3.017)
1963	26.663***	(1.276)	402	32.926***	(3.884)	40	34.531***	(1.35)	306	-1.606	(2.844)
1968	26.504***	(1.226)	406	31.969***	(3.538)	40	34.336***	(1.355)	308	-2.367	(2.743)
1972	25.927***	(1.219)	406	32.417***	(3.502)	40	33.74***	(1.353)	308	-1.323	(2.773)
1976	23.913***	(1.147)	406	29.856***	(3.207)	40	30.963***	(1.311)	308	-1.107	(2.476)
1979	24.004***	(1.119)	406	30.258***	(3.379)	40	30.788***	(1.279)	308	-0.53	(2.527)
1983	21.012***	(1.048)	416	28.126***	(3.119)	40	27.01***	(1.158)	316	1.116	(2.389)
1987	21.006***	(1.043)	406	26.743***	(3.318)	40	26.715***	(1.142)	308	0.027	(2.371)
1992	13.042***	(0.861)	406	19.111***	(2.463)	40	16.037***	(0.889)	308	3.074	(2.122)
(%) votes against legalization of:											
Divorce (1972 referendum)	25.099***	(1.148)	416	31.398***	(3.489)	40	29.307***	(1.294)	316	2.09	(2.604)
Abortion (1981 referendum)	22.862***	(0.975)	416	30.615***	(3.091)	40	25.532***	(1.126)	316	5.083	(2.187)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values for 4 hypotheses. The west and east comparisons $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are estimated by DAPSm. $\widehat{\tau}_W(\boldsymbol{b})$ identifies the ATT of indivisible inheritance and any other confounder changing discontinuously at the river, $\widehat{\tau}_E(\boldsymbol{b})$ is again a compound effect of these confounders and theocracy, and their difference $\widehat{\tau}_{DIG}$ identifies the ATT of theocracy. DIG standard errors are obtained by non-parametric bootstrapping.

E.3 Using Dell as underlying GRD estimator

I replicate results using Dell (2010)'s estimator instead of DAPSm. Since it requires specifying a bandwidth, I replicate the results twice, with bandwidths of 100km and 50km. Within the bandwidth, Dell estimates by OLS the following model:

$$Y_m = \alpha + \gamma_{GRD} T_m + f(lat_m, long_m) + \phi_m + \boldsymbol{X_m'}\boldsymbol{\beta} + \varepsilon_m$$

Where m indexes municipalities, ϕ_m is a factor variable indicating the closest segment of the river and $f(lat_m, long_m)$ is a local polynomial. To avoid inconsistency driven by high-order polynomials, I use a quadratic specification for $f(lat_m, long_m)$ (Gelman and Imbens, 2019; Pei et al., 2018):

$$f(lat_m, long_m) = lat_m + long_m + (lat \times long)_m + lat_m^2 + long_m^2 + (lat^2 \times long)_m + (long^2 \times lat)_m$$

Dell's estimator is not ideal in this setting, where the border is a line, because it suffers from

collinearity between longitude terms in the local polynomial and the inclusion of border fixed effects, especially with smaller bandwidths (as shown below). The intuition is that smaller bandwidths reduce the variance of latitude, which loses predictive power and correlates more strongly with ϕ_m. However, Dell's GRD has the advantage of using all observations within the bandwidth to estimate results. This is particularly useful for two reasons. First, DAPSm does not select municipalities in the west-most province south of the Po: these were not part of the Papal States and belonged to the Duchy of Parma and Piacenza (i.e. $T = 0$). The DIG estimator assumes the absence of spillovers between south-Po municipalities in the west and east samples: should there be any spillovers, the zero DIG estimates could simply indicate that Papal States also affected areas outside of their domain, rather than a zero effect. Historical evidence is already reassuring in this regard. During the Middle Ages, communications and movements between these provinces were not common: in particular, the main communication artery, the Roman-built via Emilia, was abandoned after the fall of the Empire (Vth century). Numerous interruptions occurred at the site of bridges: the main one crossed river Secchia, which separated the provinces of Parma and Piacenza from the rest of Emilia. Moreover, from the moment in which they reached their maximum expansion in the XVth century, the Papal States strengthened control of their border (Prodi, 1982) and there is evidence that the border between the Papal States and the Duchy of Modena and Reggio was militarized and controlled (Rambaldi, 1991).

The Dell estimator allows me to add some quantitative evidence of the absence of spillovers. If present, they should impact the provinces closer to the Papal States more intensely, and, in turn, DAPSm estimates. The stability of DIG estimates at zero when using Dell's estimator suggests that such spillovers are not a concern. The use of the entire sample with Dell's estimator is also reassuring with respect to the size of the west sub-sample selected by DAPSm to compute the west comparison $\tau_W(\boldsymbol{b})$ ($N = 40$). With such a small sample size, DAPSm estimates are necessarily more sensitive to outliers. In this sense, note that the 100km Dell bandwidth estimates resemble more closely DAPSm estimates, where the 75th percentile of distance from the Po is 75km and the maximal distance is greater than 100km.

Table E.19: GRD and DIG using Dell's GRD estimator (bw=100km)

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	29.983***	(2.725)	688	26.305***	(3.816)	612	24.747***	(3.797)	526	1.558	(2.429)
1953	30.569***	(2.316)	733	23.468***	(3.6)	619	29.409***	(3.02)	570	-5.941*	(2.516)
1958	32.545***	(2.328)	736	24.944***	(3.663)	621	31.489***	(3.008)	572	-6.545**	(2.501)
1963	33.508***	(2.212)	742	25.695***	(3.628)	622	32.66***	(2.828)	578	-6.965**	(2.381)
1968	33.316***	(2.185)	743	26.886***	(3.605)	622	31.635***	(2.793)	579	-4.749	(2.351)
1972	31.525***	(2.197)	743	26.167***	(3.664)	622	29.504***	(2.798)	579	-3.337	(2.486)
1976	29.231***	(2.148)	743	24.541***	(3.577)	622	26.666***	(2.736)	579	-2.125	(2.405)
1979	28.837***	(2.131)	743	24.506***	(3.538)	622	25.965***	(2.717)	579	-1.459	(2.268)
1983	26.367***	(2.02)	747	23.262***	(3.412)	622	23.972***	(2.548)	583	-0.71	(2.234)
1987	26.411***	(1.959)	743	23.61***	(3.29)	622	24.126***	(2.484)	579	-0.516	(2.196)
1992	22.365***	(1.57)	743	20.981***	(2.61)	622	21.008***	(1.94)	579	-0.027	(1.685)
(%) votes against legalization of:											
Divorce (1972 referendum)	36.103***	(2.137)	747	33.835***	(3.604)	622	32.98***	(2.684)	583	0.855	(2.594)
Abortion (1981 referendum)	32.932***	(1.794)	747	31.906***	(2.98)	622	31.035***	(2.252)	583	0.871	(2.17)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It is provided as a benchmark. $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are the west and east comparisons, and their difference $\widehat{\tau}_D IG$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates include as covariates altitude, urban population in 1300, and longitude along the river. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.20: GRD and DIG using Dell's GRD estimator (bw=50km)

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$			$\widehat{\tau}_{DIG} = \widehat{\tau}_W(\boldsymbol{b}) - \widehat{\tau}_E(\boldsymbol{b})$	
Dependent variable	ATT	s.e.	N	ATT	s.e.	N	ATT	s.e.	N	**DIG**	s.e.
(%) votes for the catholic party in year:											
1948	15.863***	(3.327)	355	12.251	(5.211)	314	12.467	(5.4)	234	-0.215	(2.723)
1953	15.92***	(2.998)	362	12.942	(4.758)	320	14.591**	(4.381)	240	-1.648	(2.512)
1958	17.288***	(3.044)	363	11.518	(4.853)	321	16.58***	(4.365)	241	-5.062	(2.553)
1963	18.544***	(2.872)	368	12.895	(4.768)	321	18.311***	(3.806)	246	-5.416	(2.329)
1968	18.1***	(2.869)	369	15.178**	(4.799)	321	17.176***	(3.755)	247	-1.998	(2.369)
1972	18.018***	(2.839)	369	15.889**	(4.752)	321	16.591***	(3.756)	247	-0.702	(2.339)
1976	15.225***	(2.704)	369	12.726*	(4.495)	321	13.145***	(3.545)	247	-0.418	(2.238)
1979	15.235***	(2.635)	369	14.012**	(4.375)	321	12.447***	(3.453)	247	1.565	(2.129)
1983	14.882***	(2.512)	371	13.47**	(4.252)	321	12.339***	(3.265)	249	1.131	(2.068)
1987	15.227***	(2.457)	369	12.09*	(4.091)	321	13.341***	(3.262)	247	-1.251	(2.007)
1992	13.073***	(1.997)	369	8.87	(3.31)	321	11.805***	(2.687)	247	-2.935	(1.609)
(%) votes against legalization of:											
Divorce (1972 referendum)	21.448***	(2.905)	371	20.009***	(4.908)	321	18.641***	(3.72)	249	1.369	(2.64)
Abortion (1981 referendum)	23.566***	(2.343)	371	23.623***	(3.958)	321	21.494***	(2.98)	249	2.129	(2.069)

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It is provided as a benchmark. $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are the west and east comparisons, and their difference $\widehat{\tau}_DIG$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates include as covariates altitude, urban population in 1300, and longitude along the river. DIG standard errors are obtained by non-parametric bootstrapping.

Finally, I show that estimates using Dell (2010)'s GRD estimator are robust to Conley (1999)'s correction of standard errors, to account for spatial autocorrelation in residuals.[35] Conley (1999)'s variance-covariance matrix requires specifying a cutoff after which spatial dependence decays. In Table E.23, Table E.22, Table E.21, I set this cutoff at 100, 50 and 25km respectively, and show that inference is robust to all these assumptions. Note that 100km is the maximal distance used by Dell (2010)'s GRD estimator: setting the cutoff at 100km amounts to assuming that spatial dependence never decays in my setting, arguably a very conservative assumption.

[35]The correction cannot be applied to matching estimators and is therefore only shown for estimates using Dell (2010)'a GRDs, which are estimated by OLS.

Table E.21: Dell estimates with Conley standard errors (cutoff=25km)

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$		
Dependent variable	ATT	s.e.	T stat	ATT	s.e.	T stat	ATT	s.e.	T stat
(%) votes for the catholic party in year:									
1948	28.61***	(7.902)	3.621	25.275*	(10.465)	2.415	23.03**	(8.531)	2.700
1953	29.097***	(5.707)	5.098	22.837**	(8.593)	2.658	26.794***	(5.807)	4.614
1958	31.086***	(5.984)	5.195	24.207**	(9.261)	2.614	28.907***	(5.77)	5.010
1963	32.212***	(5.745)	5.607	25.068**	(8.908)	2.814	30.363***	(5.484)	5.537
1968	31.942***	(5.798)	5.509	26.262**	(8.922)	2.944	29.239***	(5.481)	5.334
1972	30.275***	(5.555)	5.450	25.524**	(8.656)	2.949	27.322***	(5.152)	5.304
1976	27.959***	(5.853)	4.777	24.148**	(8.89)	2.716	24.404***	(5.399)	4.520
1979	27.602***	(5.876)	4.697	24.108**	(8.526)	2.828	23.76***	(5.448)	4.361
1983	25.2***	(4.947)	5.094	22.686**	(7.698)	2.947	22.074***	(4.412)	5.003
1987	25.155***	(4.831)	5.207	22.899**	(7.5)	3.053	22.071***	(4.37)	5.051
1992	21.573***	(3.337)	6.465	20.581***	(4.931)	4.173	19.599***	(2.894)	6.772
(%) votes against legalization of:									
Divorce (1972 referendum)	34.354***	(5.811)	5.912	32.482***	(9.021)	3.601	30.407***	(5.026)	6.051
Abortion (1981 referendum)	30.998***	(4.277)	7.248	30.292***	(6.579)	4.604	28.364***	(3.906)	7.263

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It is provided as a benchmark. $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are the west and east comparisons, and their difference $\widehat{\tau}_D IG$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates include as covariates altitude, urban population in 1300, and longitude along the river. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.22: Dell estimates with Conley standard errors (cutoff=50km)

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$		
Dependent variable	ATT	s.e.	T stat	ATT	s.e.	T stat	ATT	s.e.	T stat
(%) votes for the catholic party in year:									
1948	28.61***	(7.283)	3.928	25.275**	(8.748)	2.889	23.03***	(2.288)	10.065
1953	29.097***	(5.393)	5.395	22.837**	(7.521)	3.036	26.794***	(2.288)	11.709
1958	31.086***	(5.801)	5.359	24.207**	(8.796)	2.752	28.907***	(2.288)	12.633
1963	32.212***	(5.784)	5.569	25.068**	(8.483)	2.955	30.363***	(5.797)	5.237
1968	31.942***	(6.229)	5.128	26.262**	(9.262)	2.835	29.239***	(2.288)	12.778
1972	30.275***	(6.095)	4.967	25.524**	(9.285)	2.749	27.322***	(2.288)	11.940
1976	27.959***	(2.288)	12.219	24.148*	(9.869)	2.447	24.404***	(6.41)	3.807
1979	27.602***	(2.288)	12.062	24.108***	(2.288)	10.536	23.76***	(6.926)	3.431
1983	25.2***	(2.288)	11.013	22.686***	(2.288)	9.914	22.074***	(2.288)	9.647
1987	25.155***	(5.105)	4.927	22.899***	(2.288)	10.007	22.071***	(2.288)	9.645
1992	21.573***	(3.789)	5.693	20.581***	(5.23)	3.935	19.599***	(2.288)	8.565
(%) votes against legalization of:									
Divorce (1972 referendum)	34.354***	(6.405)	5.364	32.482***	(9.045)	3.591	30.407***	(2.288)	13.288
Abortion (1981 referendum)	30.998***	(4.095)	7.570	30.292***	(5.062)	5.984	28.364***	(3.772)	7.520

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It is provided as a benchmark. $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are the west and east comparisons, and their difference $\widehat{\tau}_D IG$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates include as covariates altitude, urban population in 1300, and longitude along the river. DIG standard errors are obtained by non-parametric bootstrapping.

Table E.23: Dell estimates with Conley standard errors (cutoff=100km)

	Overall GRD			$\widehat{\tau}_W(\boldsymbol{b})$			$\widehat{\tau}_E(\boldsymbol{b})$		
Dependent variable	ATT	s.e.	T stat	ATT	s.e.	T stat	ATT	s.e.	T stat
(%) votes for the catholic party in year:									
1948	28.61***	(2.288)	12.503	25.275***	(2.288)	11.046	23.03**	(7.761)	2.968
1953	29.097***	(3.923)	7.417	22.837	(21.712)	1.052	26.794***	(7.171)	3.736
1958	31.086***	(2.288)	13.585	24.207	(13.772)	1.758	28.907***	(5.322)	5.431
1963	32.212***	(6.279)	5.130	25.068**	(9.632)	2.603	30.363***	(4.994)	6.079
1968	31.942***	(3.018)	10.584	26.262	(11.3)	2.324	29.239***	(6.343)	4.610
1972	30.275***	(2.819)	10.741	25.524*	(10.953)	2.330	27.322***	(5.63)	4.853
1976	27.959***	(2.531)	11.047	24.148	(11.789)	2.048	24.404***	(4.658)	5.239
1979	27.602***	(2.288)	12.062	24.108***	(2.288)	10.536	23.76***	(4.771)	4.980
1983	25.200***	(2.288)	11.013	22.686	(10.809)	2.099	22.074***	(2.288)	9.647
1987	25.155***	(2.06)	12.211	22.899***	(2.288)	10.007	22.071***	(2.288)	9.645
1992	21.573***	(2.692)	8.014	20.581***	(2.288)	8.994	19.599***	(2.024)	9.684
(%) votes against legalization of:									
Divorce (1972 referendum)	34.354***	(2.288)	15.013	32.482**	(10.809)	3.005	30.407***	(2.288)	13.288
Abortion (1981 referendum)	30.998***	(1.241)	24.969	30.292***	(6.773)	4.472	28.364***	(3.67)	7.728

Notes: *p<0.1; **p<0.05; ***p<0.01, Bonferroni-adjusted p-values. For each election, the overall GRD is the traditional regression discontinuity estimated at river Po for the entire sample. It is provided as a benchmark. $\widehat{\tau}_W(\boldsymbol{b})$ and $\widehat{\tau}_E(\boldsymbol{b})$ are the west and east comparisons, and their difference $\widehat{\tau}_D IG$ identifies the ATT of theocracy. The Catholic party is *Democrazia Cristiana*. All estimates include as covariates altitude, urban population in 1300, and longitude along the river. DIG standard errors are obtained by non-parametric bootstrapping.

E.4 Distance-Adjusted-Propensity-Score matching and balance

For all three GRDs (overall, $\tau_W(\boldsymbol{b})$ and $\tau_E(\boldsymbol{b})$), this section will show a balance table. For each baseline covariate X in the table, the Absolute Standardized Difference (ASD) is computed in the entire sample and in the matched one as:

$$ASD(X) \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X) + Var_C(X)}}$$

Balance tables also report sample size both before and after matching.

E.4.1 Overall sample

Table E.24: Balance table: overall GRD sample

		Pre-match ($N = 923$)			**Post-match** ($N = 398$)		
		ASD	**Mean, (C)**	**Mean, (T)**	**ASD**	**Mean, (C)**	**Mean, (T)**
Baseline Covariates	Minimum altitude (m)	0.064	109.493	126.1	0.433	107.857	32.857
	Maximum altitude (m)	0.091	503.625	599.045	0.45	507.655	181.857
	Urban inhabitants in year 1300	0.036	16950.147	18266.071	0.218	20591.133	30541.872
	River longitude (UTM32N)	0.770	654229.79	713053.039	0.106	697833.241	703912.414
	Distance to river (km)	0.390	46.864	66.462	0.761	61.083	33.096
Outcomes	Votes to DC (%) in 1979	1.397	32.765	57.213	1.506	30.022	54.027
	Votes against abortion (%)	1.491	27.45	49.665	1.613	25.654	48.362
	Votes against divorce (%)	1.380	35.515	59.868	1.507	33.428	58.553

Notes: the overall sample is never used to estimate the west and east comparisons, but it can be used to estimate an overall GRD to provide a benchmark. Denoting treated units (north of the Po river) as T and control units as C (south of the river), the Absolute Standardized Difference (ASD) for variable X is computed as: $ASD \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X) + Var_C(X)}}$.

E.4.2 West subsample (used to estimate $\tau_W(\boldsymbol{b})$)

Table E.25: Balance table: West sample

		Pre-match ($N = 769$)			**Post-match** ($N = 40$)		
		ASD	**Mean, (C)**	**Mean, (T)**	**ASD**	**Mean, (C)**	**Mean, (T)**
Baseline Covariates	Minimum altitude (m)	0.254	65.519	126.1	0.227	65.519	35.948
	Maximum altitude (m)	0.235	369.045	599.045	0.333	369.045	169.675
	Urban inhabitants in year 1300	0.198	26103.896	18266.071	0.103	26103.896	22064.935
	River longitude (UTM32N)	0.074	716671.475	713053.039	0.248	716671.475	705190.74
	Distance to river (km)	0.030	64.898	66.462	0.997	64.898	27.531
Outcomes	Votes to DC (%) in 1979	1.866	27.858	57.213	1.683	27.858	54.096
	Votes against abortion (%)	1.726	24.603	49.665	1.785	24.603	49.142
	Votes against divorce (%)	1.672	31.771	59.868	1.706	31.771	59.184

Notes: the overall sample is used to estimate the $\tau_W(\boldsymbol{b})$ GRD at the Po river. Denoting treated units (north of the Po river) as T and control units as C (south of the river), the Absolute Standardized Difference (ASD) for variable X is computed as: $ASD \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X) + Var_C(X)}}$.

E.4.3 East subsample (used to estimate $\tau_E(\boldsymbol{b})$)

Table E.26: Balance table: East sample

		Pre-match ($N = 736$)			**Post-match** ($N = 308$)		
		ASD	**Mean, (C)**	**Mean, (T)**	**ASD**	**Mean, (C)**	**Mean, (T)**
Baseline Covariates	Minimum altitude (m)	0.073	145.706	126.1	0.219	92.5	39.8
	Maximum altitude (m)	0.014	614.455	599.045	0.118	235.9	151.4
	Urban inhabitants in year 1300	0.274	9411.765	18266.071	0.106	7000	5300
	River longitude (UTM32N)	2.075	602807.225	713053.039	0.14	662531.166	666785.098
	Distance to river (km)	0.781	32.013	66.462	0.248	31.286	24.486
Outcomes	Votes to DC (%) in 1979	1.143	36.806	57.213	1.983	26.958	53.214
	Votes against abortion (%)	1.342	29.795	49.665	2.128	22.53	49.915
	Votes against divorce (%)	1.198	38.598	59.868	1.883	29.547	57.867

Notes: the overall sample is used to estimate the $\tau_E(\boldsymbol{b})$ GRD at the Po river. Denoting treated units (north of the Po river) as T and control units as C (south of the river), the Absolute Standardized Difference (ASD) for variable X is computed as: $ASD \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X) + Var_C(X)}}$.

E.4.4 Balance tables with $w = 0, 1$

Table E.27: Balance table when $w = 0$ (no weight given to propensity scores)

		Pre-match ($N = 923$)			**Post-match** ($N = 398$)		
		ASD	**Mean, (C)**	**Mean, (T)**	**ASD**	**Mean, (C)**	**Mean, (T)**
Baseline Covariates	Minimum altitude (m)	0.064	109.493	126.1	0.546	108.574	21.642
	Maximum altitude (m)	0.091	503.625	599.045	0.607	510.667	117.76
	Urban inhabitants in year 1300	0.036	16950.147	18266.071	0.239	20490.196	31151.961
	River longitude (UTM32N)	0.77	654229.79	713053.039	0.147	697459.028	705958.223
	Distance to river (km)	0.39	46.864	66.462	0.81	61.144	31.916
Outcomes	Votes to DC (%) in 1979	1.397	32.765	57.213	1.537	30.078	53.737
	Votes against abortion (%)	1.491	27.45	49.665	1.613	25.654	48.362
	Votes against divorce (%)	1.380	35.515	59.868	1.507	33.428	58.553

Notes: the overall sample is used to estimate the $\tau_E(\boldsymbol{b})$ GRD at the Po river. Denoting treated units (north of the Po river) as T and control units as C (south of the river), the Absolute Standardized Difference (ASD) for variable X is computed as: $ASD \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X) + Var_C(X)}}$.

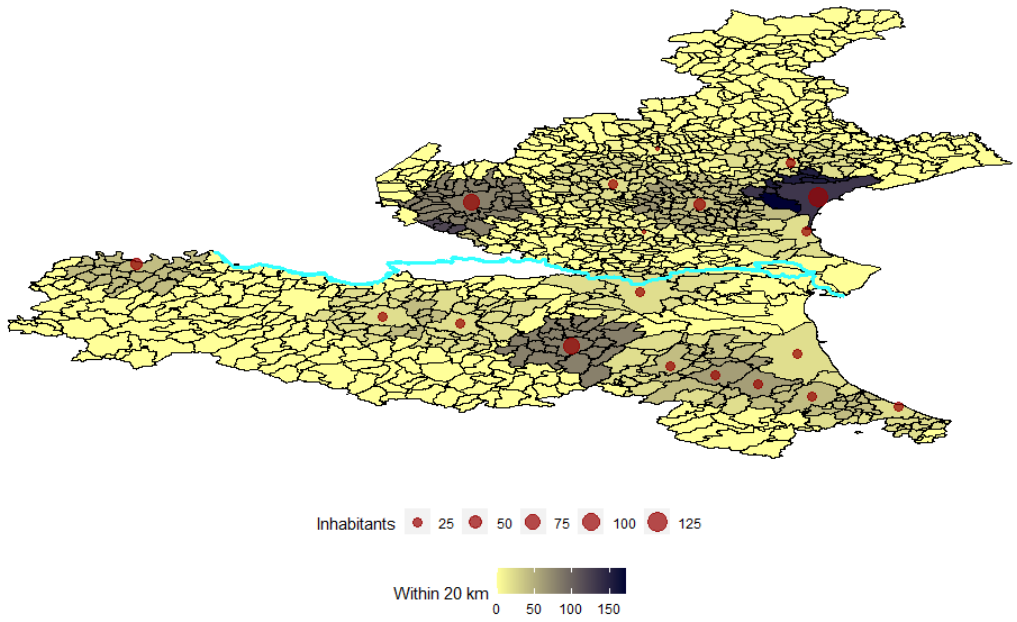
Table E.28: Balance table when $w = 1$ (no weight given to geographic distance)

		Pre-match ($N = 923$)			**Post-match** ($N = 398$)		
		ASD	**Mean, (C)**	**Mean, (T)**	**ASD**	**Mean, (C)**	**Mean, (T)**
Baseline Covariates	Minimum altitude (m)	0.064	109.493	126.1	0.048	103.959	114.093
	Maximum altitude (m)	0.091	503.625	599.045	0.196	493.777	689.088
	Urban inhabitants in year 1300	0.036	16950.147	18266.071	0.066	21554.404	24673.575
	River longitude (UTM32N)	0.77	654229.79	713053.039	0.031	701655.038	703408.436
	Distance to river (km)	0.39	46.864	66.462	0.136	62.049	55.599
Outcomes	Votes to DC (%) in 1979	1.397	32.765	57.213	1.547	29.635	54.582
	Votes against abortion (%)	1.491	27.45	49.665	1.531	25.403	48.035
	Votes against divorce (%)	1.38	35.515	59.868	1.511	33.019	58.298

Notes: the overall sample is used to estimate the $\tau_E(\boldsymbol{b})$ GRD at the Po river. Denoting treated units (north of the Po river) as T and control units as C (south of the river), the Absolute Standardized Difference (ASD) for variable X is computed as: $ASD \equiv \frac{|\bar{X}_T - \bar{X}_C|}{\sqrt{Var_T(X)+Var_C(X)}}$.

F Additional figures

Figure F.8: Thousands urban inhabitants within one day of travel (20 km) in 1300



Notes: Red dots show urban population estimates in thousands inhabitants for year 1300, before the Black Death demographic crisis (Sonnino, 1996). For each municipality, the colour indicates city inhabitants (thousands) within a 20km radius, which approximates the maximum distance that a man could walk in a day.

Figure F.9: Catholic votes (%) in 1953

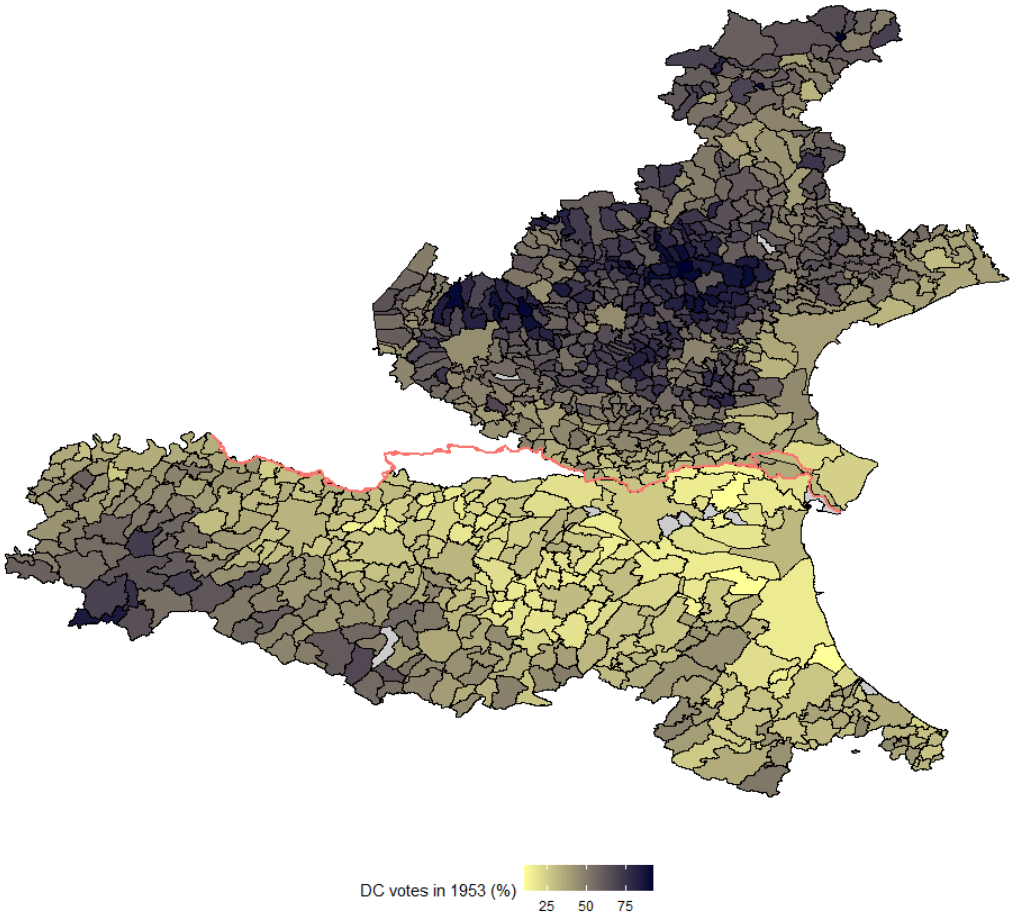


Figure F.10: Catholic votes (%) in 1979, plotting Po and Piave rivers

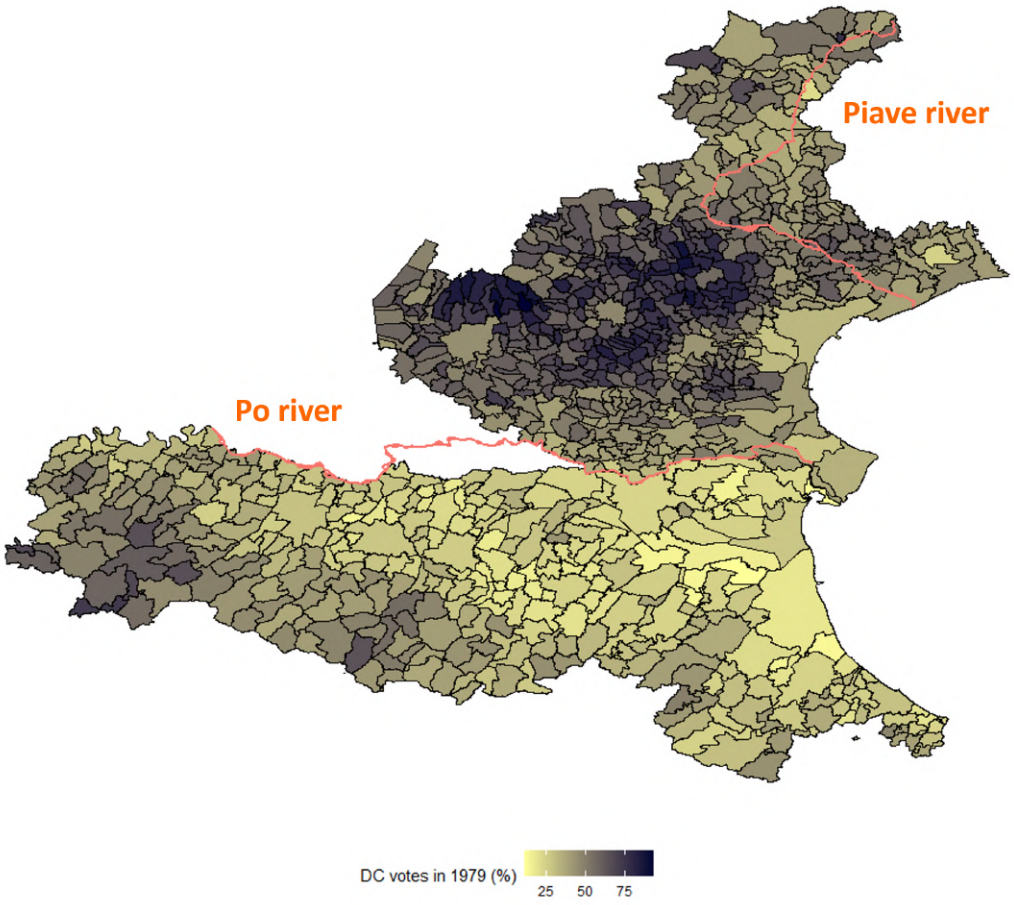


Figure F.11: Catholic votes (%) in 1979, including Mantua

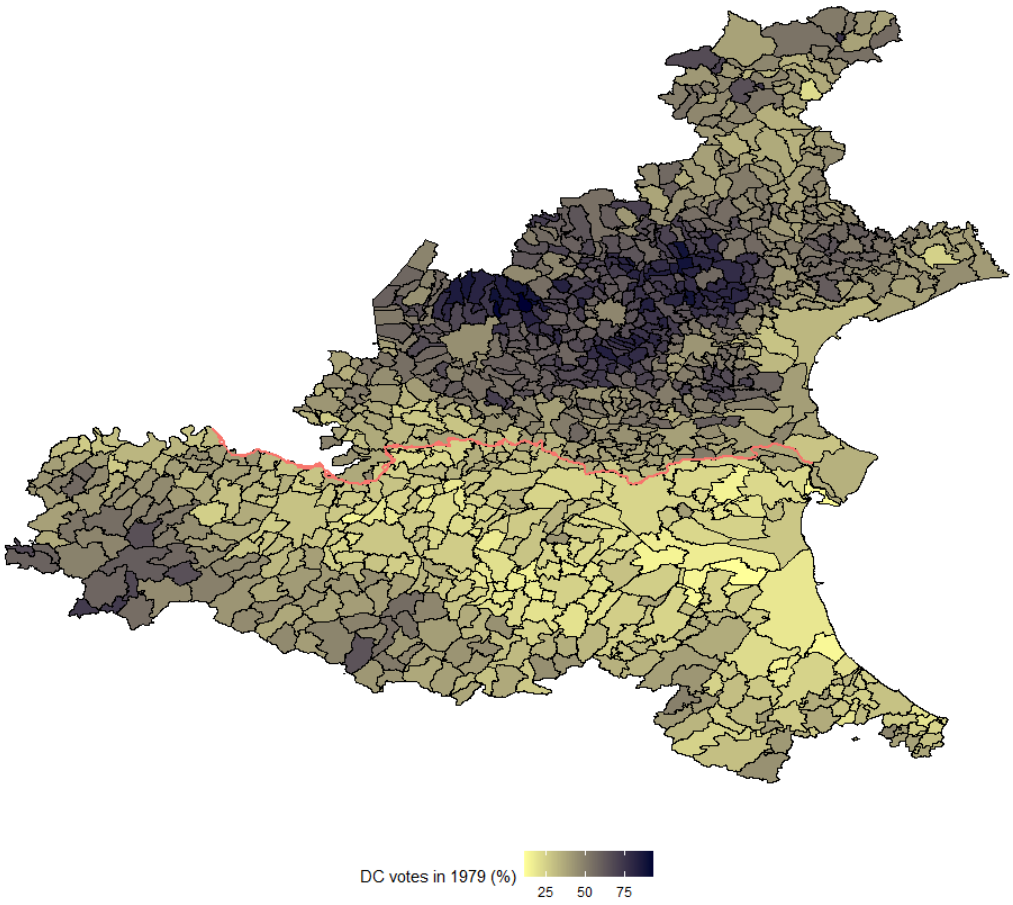


Figure F.12: Average family size in 1953

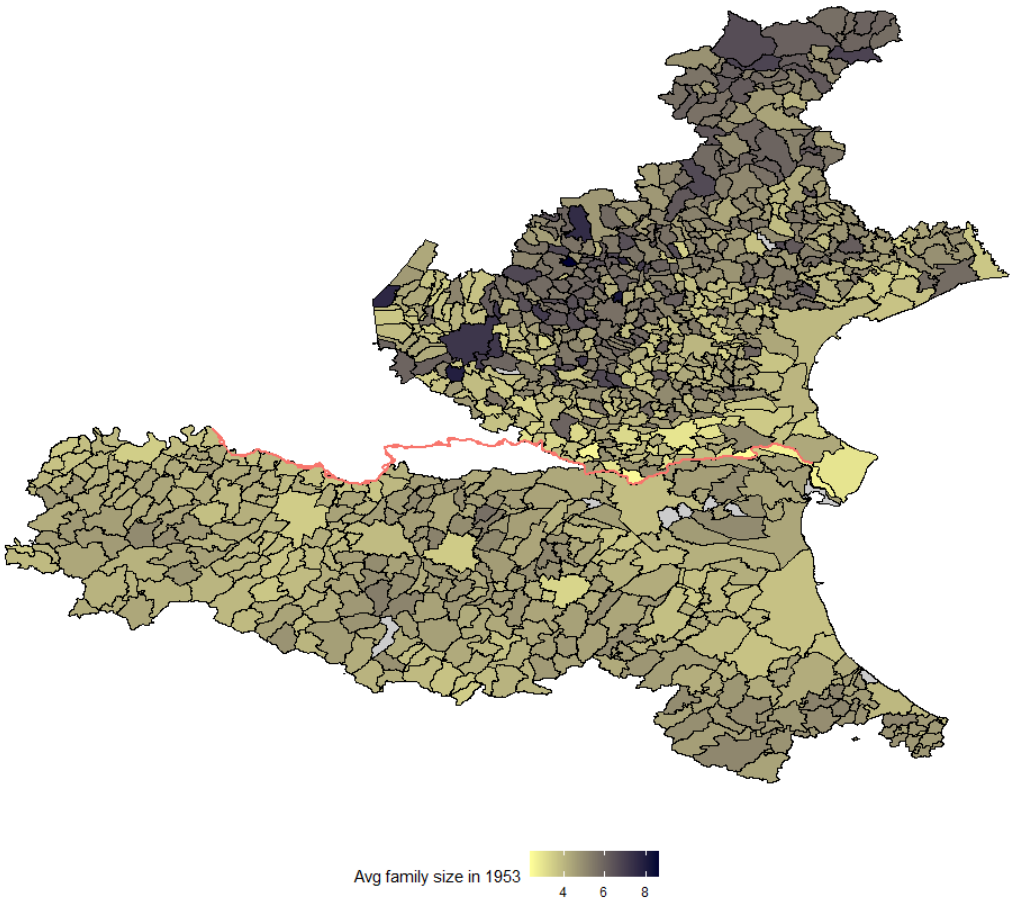


Figure F.13: Average family size in 1971

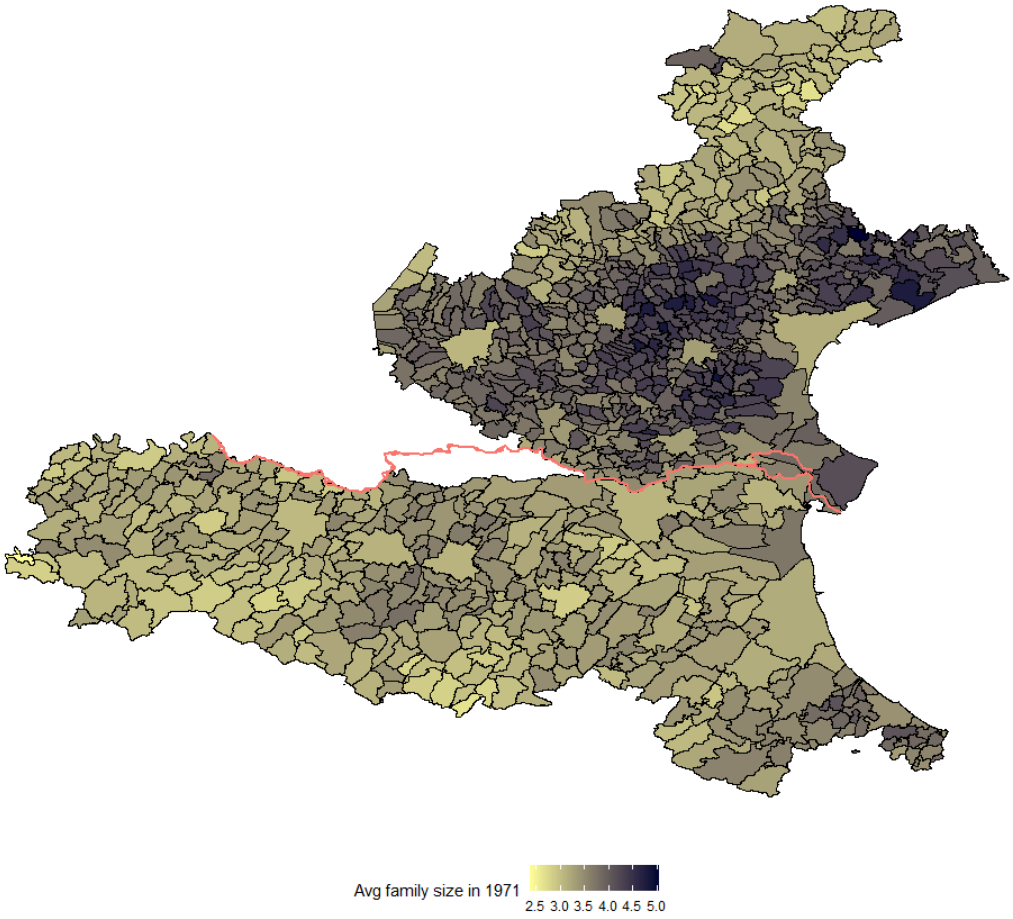


Figure F.14: Maximum altitude (m)

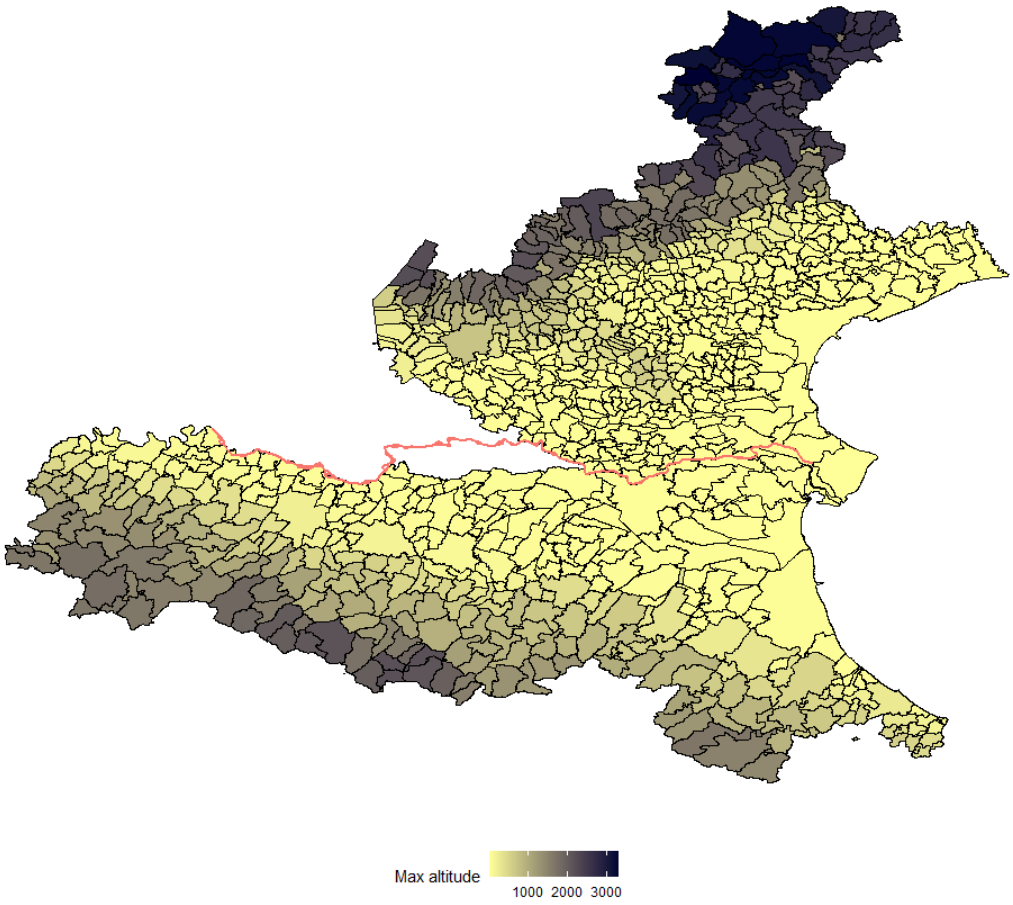


Figure F.15: Number of non-religious NGOs per capita

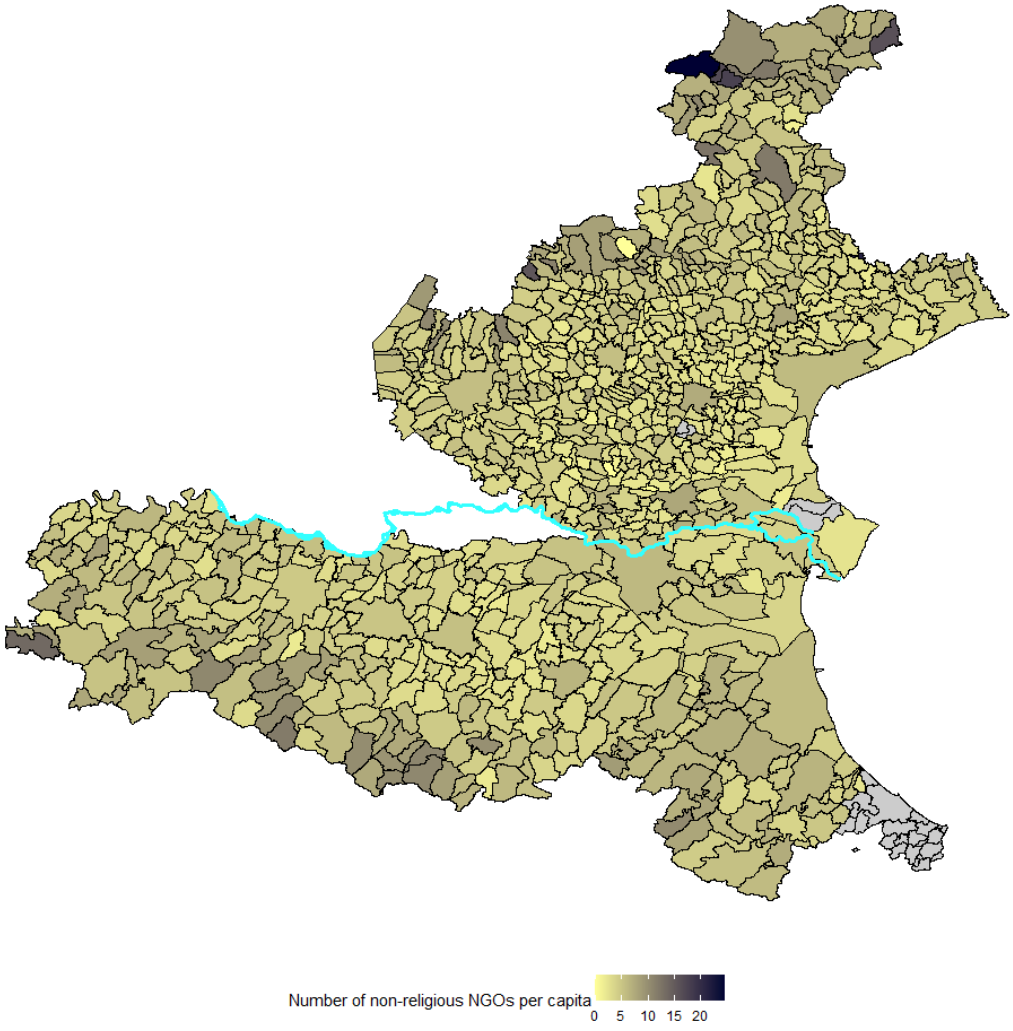


Figure F.16: Presence of organ donation NGO local chapter