

# BRIGANDAGE AND THE POLITICAL LEGACY OF MONARCHICAL LEGITIMACY IN SOUTHERN ITALY<sup>♠</sup>

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## Abstract

Political legitimacy plays a pivotal role in securing the effectiveness and longevity of a governing system, yet it can be eroded by the way rulers handle popular uprisings. This paper studies whether a historical shock in the legitimacy of monarchic rule can have long-term, intergenerational consequences on political attitudes. The unification of Italy ignited a violent reaction against the new ruler in its southern provinces known as the “Great Brigandage”. We use fixed effects regressions with a wide set of controls and an instrumental variable approach based on military suitability of the terrain in order to show that, *ceteris paribus*, municipalities exposed to brigandage in the 1861-1870 period had lower turnout in the 1946 Institutional Referendum and were significantly less likely to vote for the survival of the monarchy. Heterogeneity analysis leveraging a spatial discontinuity in martial law suggests that anti-monarchic sentiment likely stemmed from the collective memory of brigandage repression. We interpret our findings as evidence that latent preferences toward political systems are endogenously shaped by historical events and can be brought to the surface by changes in the institutional environment.

**Keywords:** political legitimacy, monarchy, tradition, civil conflict, repression, collective memory, persistence of preferences, *Risorgimento*, Southern Italy.

**JEL Codes:** N43, D72, H73, P16.

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# 1 Introduction

Political legitimacy has been widely acknowledged as an essential component of governance in that it sustains compliance with public policies, such as military conscription, taxation, and economic regulation, without the necessity of resorting to force. In many historical contexts, legitimacy can provide the least costly means for authorities to foster compliance, especially when coercive power is deemed unviable, and so bolster the efficacy of policies. As a consequence, legitimate rulers play a crucial role in determining a regime's effectiveness and long-term stability (Greif and Rubin, 2023).

An institution where legitimacy is particularly relevant is the one of monarchies. Monarchy was the prevalent form of government in Europe from the early Middle Ages through most of the 19th century – with some countries still keeping this institution well alive today – and paved the way to the development of the nation state. During the formation process of early European states, kings were deemed essential to reduce coordination costs among their subjects and allow deliberation on important societal matters. Their power was often legitimated through *tradition*, which served as a strong signal of their inherited capability to solve such coordination problems. Hence, the violent repression of individual freedom was justified by the threat of a worse-off equilibrium in the absence of any form of stable government.<sup>1</sup>

But, how do royal dynasties accumulate or erode their legitimacy over time? What role do historical episodes play in shaping the support for monarchy among its subjects and, in turn, contribute to its institutional endurance or demise? In this paper, we study how the legitimacy of monarchy can respond to violent waves of popular revolt

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<sup>1</sup> The political philosophers Thomas Hobbes and John Locke were the first to depict authoritarianism and stability as superior alternatives to a primordial, chaotic “state of nature”. This concept was later developed by Max Weber, who offered three formal justifications to the “legitimate monopoly of violence” (i.e., tradition, charisma, and legality). In his original formulation from the 1919 “Politics as a Vocation”, the first justification of (any) form of government is “*the authority of the ‘eternal yesterday’ i.e. of the mores sanctified through the unimaginably ancient recognition and habitual orientation to conform. This is ‘traditional’ domination exercised by the patriarch and the patrimonial prince of yore.*” The second justification is the “*the authority of the extraordinary and personal gift of grace (charisma)*”. The third justification is the “*domination by virtue of ‘legality,’ by virtue of the belief in the validity of legal statute and functional ‘competence’ based on rationally created rules. In this case, obedience is expected in discharging statutory obligations. This is domination as exercised by the modern ‘servant of the state’ and by all those bearers of power who in this respect resemble him*” (Weber, 1946, p. 4).

and repression and, therefore, affect political preferences over time. In particular, we explore whether areas experiencing a stronger clash with a ruling dynasty may retain their anti-monarchic sentiments across subsequent generations. We focus on the historical case of post-unification Italy, which features a widespread uprising against the new ruler in the early 1860s and a popular referendum on the survival of monarchy in 1946. This vote was a pivotal moment in Italian history: it represented a turning point in the country's transition from fascism to democracy and set the stage for the creation of a modern constitutional chart.

In the aftermath of Italy's unification under the Savoy crown, a diverse social stratum in the southern provinces – motivated by loyalty to the ousted rulers, resentment from unmet expectations, or economic hardship – reacted with an unprecedented burst of violence.<sup>2</sup> This, in turn, grew into a guerilla-based, hard-fought civil conflict: the “Great Brigandage” (*grande brigantaggio*). Famously, brigand bands lurked in the Mediterranean scrub or *macchia*, from where they sprang surprise attacks against the Italian authorities – still unfamiliar with the southern scenery and not always supported by the local population. Despite the effective repression put in place by the newborn national army, the failed revolt of the brigands still persists in the collective, folkloric memory of the Mezzogiorno – sometimes with an inflated emphasis on their heroism and a romanticized aura.<sup>3</sup>

The *war against brigandage* ended up engaging a large fraction of the southern population, which goes beyond the rebels themselves. On one hand, local peasants and shepherds were often suspected to aid the brigands and at times subject to reductions in the freedom of movement, restrictions in the performance of economic activity or, even, deliberate violence. The repressive techniques put in place during the “Great

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<sup>2</sup> In the mid-nineteenth century, the Italian peninsula was divided into eight small states. The House of Savoy ruled over the Kingdom of Sardinia-Piedmont, which was the northern hegemonic power. Through a series of diplomatic maneuvers and military operations, it was able to annex the other seven states and so unify modern-day Italy.

<sup>3</sup> Throughout the paper, we interchangeably use ‘Southern Italy’ or ‘Mezzogiorno’ to indicate the territory of the defunct Kingdom of the two Sicilies. This includes today's regions of Abruzzo, Apulia, Basilicata, Calabria, Campania, and Molise. Sicily is not in the study sample as it did not experience any comparable uprising. On the other hand, during this convulsive stage of Italian history, a new and more lasting phenomenon was planting its seeds: the Mafia (Marciante, 2023).

Brigandage” were very salient for the public as the military made extensive use of public executions and exposition of corpses, up to retaliation burning and massacres of entire villages.

We combine archival data on brigandage activity in the aftermath of Italian unification (1861-1870) from [Lecce et al. \(2022\)](#) with electoral outcomes from the 1946 round of voting, which included the Institutional Referendum and the Constituent Assembly elections. Using fixed effects regressions, we compare southern municipalities within a certain administrative unit and with similar geographic, demographic, and socio-economic characteristics that experienced brigandage versus southern municipalities that did not.<sup>4</sup> As an alternative approach to mitigate endogeneity bias, we employ an instrumental variable (IV) based on forest cover and terrain elevation, which serve as proxies for naturally-occurring environmental suitability to brigandage. The combination of these two pull factors, “montane forests” henceforth, strongly predicts the movement of brigand bands, even after controlling for several potential confounders, and is leveraged as a conditionally exogenous shifter in local exposure to their action and recruiting.

We find that, *ceteris paribus*, municipalities exposed to a higher number of brigandage events in the 1861-1870 period had lower turnout in the 1946 elections and were significantly less likely to vote for the survival of the monarchy. The effects are present both at the extensive and intensive margin, survive the inclusion of region, province, and district (i.e., *circondario*)<sup>5</sup> fixed effects as well as a wide array of controls measured before unification, and their sizes are of economic significance ([McCloskey and Ziliak, 1996](#); [Ziliak and McCloskey, 2004](#)). These results are reflected in decreased support for monarchist political parties in the simultaneous Constituent Assembly election. In addition, we rule out anti-fascist sentiments as mechanism of persistence in

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<sup>4</sup> The paper does not directly speak to the wide literature on the origins and consequences of Italy’s North-South divide (e.g., [Putnam et al., 1993](#); [Guiso et al., 2016](#); [Buonanno et al., 2022](#)). Post-unification brigandage was a phenomenon entirely confined to the South. Therefore, regression estimates capture local variation in electoral outcomes within southern provinces, which is not affected by underlying socio-economic gaps with the North.

<sup>5</sup> A *circondario* was a small administrative division in Italy, forming part of a province and encompassing multiple municipalities. These entities were suppressed in 1927.

anti-monarchic preferences. The IV estimation yields equally-signed, but larger-in-magnitude, coefficients, suggesting that, if anything, our OLS estimates may be biased towards zero.

To shed light on the mechanisms behind the effect of brigandage on political preferences, we leverage a geographical discontinuity in the enforcement of martial law. Using a spatial regression discontinuity design (SRDD), we show that brigandage repression led to a substantial decline in votes for the monarchy. The effects of anti-brigandage provisions on voting behavior are driven by areas where the intensity of repression was harsher. However, this intensity does not account for changes in turnout, suggesting that anti-monarchic sentiment did not arise from a general distrust in state institutions and reduced civic engagement, but rather as a direct reaction against the Savoy monarchy.

We interpret our findings through the lens of a theoretical model of revolts, borrowed by [Barbera and Jackson \(2020\)](#). The utility of revolting is shown to be a function of expected economic gains and the intrinsic value of monarchic ruling. In the Italian post-unification context, we argue that the conflict between dispersed brigand bands and royal troops may have incurably compromised the traditional legitimacy of the monarchy among the affected population. This antagonism was transmitted across generations, persisting as latent but unexpressed dissent during the 85-year duration of the kingdom, when the cost of rebelling was high. However, institutional changes that lowered the costs of political participation (namely, the introduction of free elections by universal suffrage in Italy) allowed anti-monarchist preferences to resurface, culminating in a vote for the republic over the monarchy.

Our paper aims at contributing to three strands of literature in economic history. First, we shed light on the political economy of monarchies by studying the short experience of the Savoy dynasty in Italy.<sup>6</sup> We exploit the spatial distribution of brigandage activ-

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<sup>6</sup> Extensive research has studied the role of primogeniture succession in providing political stability and economic growth. For instance, [Kurrild-Klitgaard \(2000\)](#) and [Kokkonen and Sundell \(2014\)](#) attempt an empirical test of the political stability ensured by hereditary succession, while [Besley and Reynal-Querol \(2017\)](#) document the association between economic growth and the hereditary succession rule.

ity and a border discontinuity in martial law as quasi-experimental sources of variation in social unrest and military repression. We measure political preferences through the post-World-War-II elections, which were highly participated by and salient for the citizenry. Importantly for our application, the Italian context features a tight correspondence between the legitimacy of monarchy *as an institution* and the legitimacy of the royal dynasty *as rulers* given that the Savoys represent the only family entitled to run unified Italy throughout its whole monarchic period. Our findings suggest that persistent attitudes toward government systems are endogenously forged by historical shocks and can be reactivated by changes in the underlying socio-economic and institutional environment.

Second, we echo recent work – both theoretical and empirical – on cultural transmission through time and the importance of collective memory. The long-lasting legacy of violent repression on political and economic preferences has been well documented in several contexts.<sup>7</sup> However, the circumstances under which attitudes, beliefs, and cultural traits persist over time remain an open question.<sup>8,9</sup> Post-unification Italy offers a compelling setting to study the intergenerational persistence of preferences, with an explicit emphasis on the perceived legitimacy of monarchies: the rebellion of southern brigands represents a clear challenge to the royal authority of Victor Emmanuel II, the first king of Italy. Our results are suggestive that episodes of brigandage during the 1860s are connected with political attitudes against the Savoy monarchy, as expressed

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Relatedly, Egorov and Sonin (2024) review recent theories and empirical evidence on the political economy of non-democracies, including the problem of succession.

<sup>7</sup> E.g., Lupu and Peisakhin (2017), Rozenas et al. (2017), Rozenas and Zhukov (2019), and Yaremko (2022) in Ukraine; Chiou and Hong (2021) in Taiwan; Fouka and Voth (2022) in Greece; Wang (2021) and Miao et al. (2023) in China; Dehdari and Gehring (2022) in France; Bühler and Madestam (2023) in Cambodia; Fontana et al. (2023) and Cannella et al. (2024) in Italy; Henn and Huff (2024) in Ireland; Ochsner and Roesel (2024) in Austria.

<sup>8</sup> E.g., Alesina and Fuchs-Schündeln (2007), Fernández and Fogli (2009), Nunn and Wantchekon (2011), Voigtländer and Voth (2012), Grosjean (2014), Becker et al. (2016), Guiso et al. (2016), Lowes et al. (2017), Dell et al. (2018), Campa and Serafinelli (2019), Valencia Caicedo (2019), Bazzi et al. (2020), Chen et al. (2020), and Giuliano and Nunn (2021). This growing wave of so-called “persistence studies” within economics was recently reviewed by Nunn (2020) and Voth (2021).

<sup>9</sup> An earlier strand of literature has also provided theoretical explanations of the process of cultural transmission. In particular, seminal work by Bisin and Verdier (2000a, 2001) introduced the concept of parental socialization choice and direct vertical transmission of cultural traits, where parents choose the probability of the offspring inheriting their own parents’ cultural traits. See Bisin and Verdier (2011) for a review on the topic.

85 years after, at the referendum.

Lastly, the phenomenon of brigandage has been studied by few recent papers. [Del Monte and Pennacchio \(2012\)](#) document that brigand bands were rooted in provinces with high concentration of land ownership and low agricultural productivity. [Amodio \(2012\)](#) looks at three massacres that occurred during the military intervention against brigandage and reveals that distance from these towns is associated with lower social capital in the twentieth century. [Accetturo et al. \(2017\)](#) show that tougher law enforcement in brigandage-ridden provinces increased political participation of the wealthy, who were the only citizens allowed to vote at that time. Finally, [Lecce et al. \(2022\)](#) find that brigandage episodes were less frequent in the proximity of communities founded by Piedmontese settlers, uncovering the potential role of cultural and social identification for fostering nation building. Our paper adds to the growing literature on Italian political history by focusing on the rejection of monarchy as a persistent response to the brutal war on brigandage. Among the many challenges – administrative, cultural, institutional, economic, and social – faced by the unified Italian state, brigandage stands out as one of the most significant, with profound and lasting effects on political attitudes.

The remainder of the paper is structured as follows. Section 2 introduces the historical background and context. Section 3 relates the study setting to our empirical exercise through a simple theoretical framework. Section 4 presents the econometrics analysis, including data, methodology, and results. Section 5 concludes with an overall interpretation of our findings. Online Appendix A sketches a theoretical framework to relate the study setting to our empirical exercise. Online Appendix B provides some examples of collective memory. Online Appendix C, D, and E contain supplementary results from OLS, IV, and SRDD estimation, respectively.

## 2 Historical Background

### 2.1 Italian Unification and the *Great Brigandage*

« In the first days of Italy's fledgling *Risorgimento*, unity seemed already achieved as if by magic. [...] On the contrary, the united provinces, held by a thousand ancient and new reasons, separate and distant from the rest of Italy, after the first ardor was extinguished, felt the iron and cold hand of the past weighing down on them. »

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— Giovanni Manna, “Le province meridionali del Regno d’Italia”, 1862, Stabilimento tipografico del Cav. Gaetano Nobile, Napoli.

The unification of modern-day Italy under the House of Savoy was a long and troubled process. It was driven both by an ideological impetus towards national self-determination – a resurrection or *Risorgimento* as it has gone down in history – and by a strategic involvement of the Kingdom of Sardinia-Piedmont, which initially sought to offer an alternative to the hegemonic pull of the revolutionary movements and their project of a federal republic. Precipitated by the Revolutions of 1848, the course of events spanned two wars, several diplomatic negotiations and treaties, and only came to a conclusion in 1861.<sup>10</sup>

Despite the failure of the First War of Independence (1848-1849), the Piedmontese were able to reorganize their forces and defeat the Austrians in a second attempt, with the support of France’s Napoleon III, and so annex Lombardy and the provinces of Central Italy by 1860.<sup>11</sup> In the same year, the revolutionary Giuseppe Garibaldi led the expedition of a thousand Italian volunteers, known as the Redshirts, to the conquest of Sicily and a victorious march through the other regions of the Kingdom of the Two Sicilies.

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<sup>10</sup> The military effort will only be considered completed with the annexation of the region of Venetia in 1866 and the Capture of Rome in 1871. The territories of Julian March and Trentino-Alto Adige would also be annexed in 1919. For a concise review of the economic and political implications of the unification, see [Zamagni \(2019\)](#) and [Federico \(2023\)](#), among many others.

<sup>11</sup> With regard to the Piedmontese strategy mentioned in the first paragraph of this section, notice that the alliance between Sardinia-Piedmont and France had the goal of dividing the Italian Peninsula into two spheres of influence, rather than unifying it under the Savoyard crown.



At last, he handed over his power to King Victor Emmanuel II of Sardinia–Piedmont at the celebrated encounter of Teano.

The success of these military campaigns initially received some vast and enthusiastic support among the annexed regions: central provinces were hoping to bring an end to the Austrian domination and misrule, while southern popular masses saw Garibaldi as a timely ally in their uprising against the Bourbons of Naples. However, after the proclamation of the Kingdom of Italy on March 17, 1861, the first breaches in the national unity emerged. The extension of the Piedmontese institutions and laws to the rest of Italy was coupled with a process of administrative centralization. In a perhaps emblematic move, the first king of Italy kept his old royal title: Victor Emmanuel *the second*.<sup>12</sup>

In the Mezzogiorno, the introduction of new taxes, compulsory military service, regulation of agricultural markets, and anti-clerical provisions were frowned upon.<sup>13</sup> The liberal regime was accused to implement reforms that favored the bourgeoisie rather than local landowners and peasants. In particular, common lands were abolished and the promised redistribution was never delivered. Soon, a motley assortment of common criminals (such as former prisoners and bandits), mercenaries and loyalists of the Bourbon army, some dismissed nobles, many peasants and shepherds took up arms and revolted against the new rulers.<sup>14</sup>

The phenomenon of *brigandage* precedes the unification of the Italian Peninsula and dates back at least to the Middle Ages feudal system. In the small, pre-unification

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<sup>12</sup> “A new crown, an old numeration” (our translation from Viarengo, 2017, p. 257).

<sup>13</sup> The salience of the institutional changes brought about by the unification process was heightened by the level of poverty among peasants, the structure of land ownership, and the history of weak authority and low public investments of the Bourbon state – primarily focused on a few urban centers and marked by little to no interaction with rural areas. See, e.g., the writings on Italy’s Southern Question by Villari (1885) and Fortunato (1911). For more recent contributions, see Cafagna (1989), Vecchi (2011), and Felice (2013).

<sup>14</sup> This episode has been subject to an extensive historiography, which would be inconceivable to accurately review in this paper. In a nutshell, three main interpretations – political, social, and criminal – have been advanced to explain the emergence of brigandage in post-unification Italy, and historians have debated on which specific nature was the most prevalent one. We refer to Vigna (2020) for a comparison of different exponents and a systematic account of the scholarly progress recently made on this topic.

states, roving bandits were seen as an endemic problem and often repressed with extraordinary violence. This was especially true in the Mezzogiorno, where every revolutionary disturbance, such as the anti-French uprisings of the eighteenth and nineteenth century, saw recurring resurgence of brigandage. However, it is only in the aftermath of Italian unification that such resurgence culminated into a national emergency and became known as the “Great Brigandage”. At the height of the revolt, brigands were organized into bands, with a hierarchical structure, and lurked in the dense forests and steep mountains, typical of the Mediterranean Apennines. They practiced a fierce guerrilla warfare against the Piedmontese army and the newly formed national guard – a number of times with the connivance and support of the local peasantry.<sup>15</sup>

*« Brigandage is a great evil, but an even greater evil is its repression. The time spent hunting brigands is a true feast for civil and military officers; and the immorality of the means [...] has corrupted and brutalized. The families of the brigands are arrested, along with the most distant relatives; and their mothers, wives, sisters, and daughters serve to satiate the lust, sometimes of those in command, sometimes of those carrying out the arrests. »*

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— Vincenzo Padula di Acri, “Antonello capobrigante calabrese”, 1864, Tipografia di Giuseppe Migliaccio, Cosenza.

The new kingdom reacted with an even more ferocious repression, which widely employed public executions and exemplary displays of corpses, often captured with a camera and spread to local prints (Ciconte, 2018).<sup>16</sup> A state of siege was declared in 1862, and transhumance was prohibited by military decree ahead of the spring of 1863. Following public outrage over the investigation into brigandage of a parliamentary

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<sup>15</sup> Molfese (1966) remains unsurpassed as reference monograph on post-unification brigandage in Southern Italy. Inspired by the Gramscian re-interpretation of the Risorgimento through the lens of class struggle, Molfese’s research was pivotal in reviving historical interest in this phenomenon after decades of neglect.

<sup>16</sup> In the words of Bollati (1983, pp. 142–143, own translation), “The military, usually so stingy with images, reveals a sudden photographic prodigality during the repression of brigandage [...]. All of a sudden, the distant and objectified impassivity, the silent view, are set aside, and the previously hidden corpses are flaunted. Officers and soldiers collaborate in posing the shot in front of the lens, organize staged performances in which the still-living play the part of the brigand. A crowd of southern and central peasants faces the nation’s history in this macabre way.”

commission (the *Relazione Massari*) and the attempted escape abroad of two notorious brigands, martial law was enacted in eleven of southern Italy's sixteen provinces to formally sanction the crime of brigandage.<sup>17</sup> The law, known as *Legge Pica* after its proponent Giuseppe Pica, stipulated that individuals could be charged and tried by military courts if they were "members of a group or armed band composed of at least three people, who roam public roads or the countryside to commit crimes or offenses, and their accomplices". Sentences for those found guilty of brigandage or aiding brigands (through sheltering, food, information, or any kind of assistance) included execution by shooting and life imprisonment with hard labor.

At its peak in 1863, the troops deployed in the Mezzogiorno to quell brigands, counted at least 90,000 soldiers (Cesari, 1920). The massive presence of the military and their actions determined the defeat of brigand bands and their gradual disappearance by 1870.<sup>18</sup> Despite their defeat, brigandish acts remained imprinted in the collective memory and passed down through the generations, in particular by means of orally-transmitted folk ballads and tales that, at times, mix real characters with mythical events.<sup>19</sup>

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<sup>17</sup> The provinces that were identified in the decree as "infested by brigandage" were Abruzzo Citeriore, Abruzzo Ulteriore II, Basilicata, Benevento, Calabria Citeriore, Calabria Ulteriore II, Capitanata, Molise, Principato Citeriore, Principato Ulteriore, and Terra di Lavoro; Abruzzo Ulteriore I, Calabria Ulteriore I, Naples, Terra di Bari, and Terra d'Otranto were exempted (online Appendix Figure E1).

<sup>18</sup> Historians have struggled at gauging the extent of brigandage-related casualties due to the lack of (comprehensive and reliable) official information for both sides of the belligerents. Recent estimates suggest a toll of up to 8,000 losses for the Italian armed forces and 20,000 for the brigands (Ciocca, 2013).

<sup>19</sup> The 1945 memoir by Carlo Levi, "Christ Stopped at Eboli", being a prominent literary testimony of this tradition. In online Appendix B, we draw some illustrative examples of collective memory from Levi's writing. Readers may refer to Marmo (2016) for a further exploration on this theme. Other reviews of post-unification brigandage in Italian literature and cinema are Martelli (1983), Nigro (2008), and Marmo (2011).

« For the southern plebs, the brigand was very often the avenger and the benefactor: sometimes he was justice itself. [...] The people of the southern country very often do not even know the names of the founders of unified Italy, but they remember with admiration the names of Abbate Cesare and Angelo Duca [two famous bandits] and their more recent imitators. »

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— Francesco Saverio Nitti, “Eroi e Briganti”, 1946, Longanesi, Milano.  
(all our own translation from Italian)

Three key features of the anti-brigandage provisions stand out, likely amplifying the public’s perception of the Savoy monarchy’s role. First, the prohibition of transhumance aimed to suppress insurgent activity by targeting the rural population, which was seen as closely linked to brigands. This measure banned the seasonal migration of flocks, with potentially severe economic and social repercussions, and led to the systematic surveillance of shepherds on farms (Sanguolo, 1975; Colapietra, 1983). Second, military-backed councils, tasked with identifying brigands, relied heavily on local sources and informants to compile lists of suspects, while public funds were allocated to bounties and rewards for capturing or killing them. Such approach fostered a pervasive climate of suspicion, as accusations could be made with minimal evidence and were at times used to settle long-standing family feuds and personal disputes through false denunciations (Martucci, 1980). Finally, Lupo (1993) underscores how the draconian Pica Law not only suspended constitutional rights for the newly Italian citizens in the Mezzogiorno but also enforced the concept of “collective punishment”, holding entire communities accountable before military authorities.<sup>20</sup>

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<sup>20</sup> The arrest of brigands’ relatives, up to the third degree of kinship, and extrajudicial executions became increasingly widespread. Insurrections were suppressed through acts of retaliation, raids, and the burning of entire villages. Particularly nefarious in this regard were the massacres perpetrated by the Italian Army in Auletta (today’s province of Salerno) in 1860 as well as Pontelandolfo and Casalduni (Benevento) in 1861.

## 2.2 The Institutional Referendum: “Republic or Monarchy?”

On June 2, 1946, Italy held a historic referendum on the constitutional form of the future state, with voters choosing between a republican and a monarchical system. This vote was the first to be held in Italy with universal suffrage, for both males and females aged over 21, and it would be remembered as a momentous event in the country’s history.<sup>21</sup> However, to understand its significance, it is necessary to look at the context that led up to it.

Italy had been ruled by a one-party dictatorship under Benito Mussolini for over twenty years, until the Allied forces helped partisan Resistance groups to liberate the country from Nazi occupation. After the fall of the Fascist regime, power passed to a transitional government that included both anti-fascist forces and members of the former administration. During this time, King Victor Emmanuel III abdicated in favor of his son, Umberto II, in a desperate bid to preserve the integrity of the kingship, which had been severely undermined by his support for Mussolini in 1922 and a catastrophic participation in the Second World War.<sup>22</sup>

The referendum was a crucial moment, as it would determine the future of Italy’s institutional form. The emergent political factions were divided on the issue: the Christian Democrats took a neutral position, while the Communists and Socialists were in favor of a republic;<sup>23</sup> the monarchists were supported by the conservative parties and the Catholic Church.<sup>24</sup>

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<sup>21</sup> Since 1861, Italy had been a representative monarchy with a hereditary crown and limited male suffrage. The bicameral parliament was formed by the Senate, fully appointed by the King, and the Chamber of Deputies, democratically elected by the propertied and educated classes. Despite the Italian fall into a totalitarian dictatorship during the so-called *ventennio* (1922-1943), the founding constitution remained in effect, at least formally. In the aftermath of the March on Rome, Victor Emmanuel III appointed Mussolini as prime minister and, during the following years, the growing political abuses of the fascist regime were unopposed by the King – deemed as “weak, indecisive and excessively devoted to Mussolini” by papal diplomats (Mack Smith, 1989, p. 303). Therefore, the “monarchy” option at the 1946 referendum was effectively to return to the pre-Fascist constitutional monarchy – with enlarged enfranchisement – while democracy was not at stake.

<sup>22</sup> Many voters, however, saw his abdication as an admission that he did not have the backing of the public opinion; this likely contributed to the strong approval for the republican shift.

<sup>23</sup> Besides the distrust on the ruling dynasty, some of the anti-monarchic votes were anti-fascist given that fascism claimed an ideological continuity with the Risorgimento, seen as both founding myth and incomplete project of Italian nationalism (Baioni, 2006).

<sup>24</sup> The Christian Democrats’ decision came despite many members of the party being in favor of the republic as a way to break with the fascist period. The pro-monarchy position of the Catholic Church,

The vote was extremely polarized, with the North predominantly in favor of the republic, and the South largely supporting the monarchy.<sup>25</sup> Nevertheless, there were notable exceptions, with some areas in the North voting for the monarchy and some in the South supporting the republic. In provinces such as Cuneo, Asti, Bergamo, and Padua in the North, the monarchy won the majority of the votes, while Pescara, Teramo, and Trapani in the South supported the republic.<sup>26</sup> This demonstrates the complex nature of the Italian political landscape at the time, with regional, social, and cultural factors playing a paramount role in explaining voting patterns.

The outcome of the referendum was a resounding victory for the republic, with 54.3% of voters choosing this option. The Constituent Assembly, which was elected on the same day, was composed of representatives from all of the main political parties in Italy.<sup>27</sup> This temporary chamber was tasked with the delicate responsibility of drafting a new constitution that would ensure the protection of individual rights and freedom in a democratic framework. The final text, shaped by the different views in the Assembly, was enacted on December 22, 1947 and came into force on January 1, 1948. The Assembly was replaced by the newly constituted Italian Parliament on January 31, 1948.

### 3 Theoretical Framework

The historical context we focus on was characterized by a delicate and evolving balance between the incumbent monarchy and multiple forms of political dissent. The

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however, forced the party into a rather uncommitted stance.

<sup>25</sup> 64% of the voters went to the republic in the Centre-North, while 66% of the votes in the southern regions were in favor of the monarchy.

<sup>26</sup> There is a total of 7 other provinces in the North where the monarchy surpass 40% of votes without winning, while 11 were the provinces in the South where the republic won more than 40% of votes. A related point is made in the Italian newspaper article "*Referendum, si fa presto a dire 'Sud monarchico'.*"

<sup>27</sup> For completeness, the composition of the assembly was the following: the Christian Democrats (DC – acronyms henceforth in Italian) got 35.21% of the votes; among monarchist parties, the Italian Liberal Party (PLI), received 6.78% joint with the Labour Democratic Party (PDL), the Common Man's Front (UQ) 5.27%, and the National Bloc of Freedom (BNL) 2.77%; in the anti-monarchist front, the Italian Socialist Party (PSIUP), drew 20.68%, the Italian Communist Party (PCI) 18.93%, the Italian Republican Party (PRI) 4.36%, the Action Party (PdA) 1.45%, and the Republican Progressive Democratic Front (FDPR) 0.09%.

royal dynasty of Savoy faced the most serious threats of dispossession during the first decade of the Italian Kingdom, when repressive military operations managed to save their crown, and after World War II, when they ended up losing power so that Italy became a democratic republic. Building on [Barbera and Jackson \(2020\)](#)'s model of revolts, we propose a theoretical framework that connects these two events to the underlying preferences for monarchy and help explain why dissidents were not able to overturn the monarchy in the early 1860s, but succeeded in 1946. The details and relevant equations are provided in online Appendix [A](#).

We interpret agents' preferences as being shaped by their level of consumption, current government policies, and intrinsic preferences for a certain form of government. These preferences depend on three factors, one of which is rooted in traditions. During the early 1860s, the most traditional and economically disadvantaged groups under Savoy rule actively rebelled, giving rise to the "Great Brigandage". After the violent suppression of the brigands, memories of their resistance were preserved and passed down to subsequent generations, especially via oral accounts (e.g., online Appendix [B](#)), sustaining an enduring aversion to the monarchy. In line with the canonical model of [Bisin and Verdier \(2001\)](#), parents have incentives to socialize and transmit cultural traits, including political preferences, to their children.<sup>28</sup> This transmission of latent preferences became evident during the 1946 referendum when the cost of expressing dissent – i.e., voting against the monarchy – was significantly lower than 80 years before. As a result, the need for coordination diminished, allowing for a free expression of anti-monarchist preferences at the polls.

Our model highlights two key mechanisms behind the persistence of political dissent and its eventual manifestation: the importance of traditional legitimacy of the government and the costs of expressing political preferences. These mechanisms guide our empirical predictions. Specifically, we expect areas with higher levels of brigandage during the 1860s to exhibit stronger anti-monarchist sentiment in the 1946 referendum. These areas likely housed populations that were both disadvantaged by Savoy rule

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<sup>28</sup> See also [Bisin and Verdier \(2000b\)](#) for an application to voting and public goods provision.

and sympathetic to the brigands. The prediction rests on two theoretical assumptions: that preferences for or against the monarchy were transmitted across generations and that the cost of rebelling was high in the 1860s but negligible in the universal suffrage referendum of 1946.

## 4 Empirical Analysis

### 4.1 Data and Descriptive Statistics

We combine archival information on brigandage activity during the post-unification period with electoral data from the 1946 Institutional Referendum and the simultaneous Constituent Assembly election outlined in Section 2.

To quantify the spatial exposure to brigandage in the aftermath of Italian unification, we rely on the novel dataset assembled by [Lecce et al. \(2022\)](#), which records the number of episodes of brigandage in the 1861–1870 period for every municipality of Southern Italy at the time. ‘Brigandage’ is broadly defined as spanning from large eruptions of violence against the local authorities and the Piedmontese army, assault on carriages, kidnapping and extortion, non-violent crimes (mostly, arson and theft of cattle), and other evidence on the presence of brigands from official or citizen reports.<sup>29</sup>

Armed with this information, we define a measure of (i) intensity of brigandage, which is equal to the actual number of episodes as described above, and (ii) exposure to brigandage at the extensive margin, taking value one if the municipality experienced at least one event during the study period and zero otherwise.<sup>30</sup> Based on these indicators, the average number of brigandage episodes in a municipality is 5.82 – with 63.1% of municipalities experiencing at least one occurrence. Figure 1 displays the spatial distribution of brigands, documenting how their actions were widely spread

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<sup>29</sup> We refer to the original paper for a more detailed account of how this count variable was constructed as well as for more descriptive statistics. The archival source from which the data were digitized is [Ministero per i Beni e le Attività Culturali \(1999–2001\)](#).

<sup>30</sup> For robustness, we also consider transformations of the explanatory variable, such as the inverse hyperbolic sine and the natural logarithm of (i).



across the Mezzogiorno, with the highest concentration in the rural and mountainous areas between Basilicata and Campania.

We observe ‘turnout’ at the municipality level (defined as the share of registered voters who showed up at the polls), the shares of blank, pro-monarchy, and pro-republic votes, and the shares of each political party that ran in that municipality. There were no important cases of vote rigging, which implies that we can interpret these variables as revealing the political preferences of voters, rather than elite capture. We further classify parties based on their declared indication of voting to their electorate.<sup>31</sup> After merging this information with the brigandage dataset, we are left with a sample of 1,642 municipalities.<sup>32</sup>

Figure 2 confirms the historical picture we depicted in Section 2.2: the majority of Southern Italians voted for keeping the Savoy king in power – with the highest consensus in the Campanian districts of Naples (78.9%) and Salerno (72.1%) and in the Apulian districts of Lecce (75.3%). However, substantial heterogeneity is visible, with some municipalities supporting the republic in Abruzzo, Northern Apulia and Calabria, and along the border between Basilicata and Campania. On the other hand, the dominant party was the Christian Democracy (33.9%), with pro- and anti-monarchist parties getting a similar share of the remaining votes (26.5% and 21.3%, respectively).

We measure forest cover through the *Forest Map of the Italian Kingdom*, which was published by the Forestry Militia (*Milizia Forestale*) in 1936. This is the first historical document recording the national distribution of forest coverage in 1:100,000 scale: it was digitized and made available by the Italian Forest Service and proven to be reliable for GIS processing by Ferretti et al. (2018).<sup>33</sup> To the extent of our knowledge, we are

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<sup>31</sup> The Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL) were monarchist, while the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR) were anti-monarchist. Despite some debate within the party, the Christian Democrats (DC) decided to not provide any explicit guidance to their supporters. In the results section, we will define the latter group as “free votes”.

<sup>32</sup> The matching was done on municipality names after correcting for minor differences in spelling, changes of name, and municipality annexations. We did not attempt to match new municipalities, which were formed after 1870.

<sup>33</sup> This map captures the existence of different types of forests more than 60 years after the end of

the first to bring historical data on Italian forests to the economics literature. Terrain elevation is obtained from the Italian National Agency for New Technologies, Energy and Environment (*Ente per le Nuove tecnologie, l'Energia e l'Ambiente* – ENEA).

We borrow a wide set of characteristics of Southern Italian provinces and municipalities from [Lecce et al. \(2022\)](#). Importantly for our econometric exercise, all these variables are measured before the unification process, so they can help predict brigandage, but they are not determined by it. Finally, to provide additional evidence on mechanisms of persistence, we use municipality-level data on post-brigandage crime rates and on the rise of fascism from [Acemoglu et al. \(2022\)](#).

## 4.2 Methodology

### 4.2.1 Fixed Effects Regression: Brigandage Across Municipalities

We consider the following least squares estimating equation,

$$Y_{mdpr} = \alpha + \beta \cdot B_{mdpr} + \mathbb{X}'_{mdpr} \delta + f(\text{geolocation}_{mdpr}) + \varepsilon_{mdpr} \quad (1)$$

where  $Y$  is the electoral outcome in municipality  $m$ , district  $d$ , province  $p$ , and region  $r$ .<sup>34</sup>  $B$  measures brigandage activity,  $\mathbb{X} = [W_{pr}, W_{mdpr}]$  is a vector of covariates, either at the province- or municipality-level depending on data availability, and  $\varepsilon_{mdpr}$  is the error term. We begin by including region fixed effects,  $\alpha_r$ , and therefore augment the regression model with province covariates,  $W_{pr}$ , province fixed effects,  $\alpha_p$ ,<sup>35</sup> district fixed effects,  $\alpha_d$ , and municipal covariates,  $W_{mdpr}$ , respectively. All controls enter linearly with the exception of longitude and latitude, *geolocation*, that are accounted

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brigandage, possibly introducing some classical measurement error in our regression analysis. Despite such timing, it is highly improbable that brigand activity could have determined any systematic change in forestation. For instance, [Camarretta et al. \(2018\)](#) study the long-term dynamics of the Italian landscapes and show that the largest patches of forest have been maintained over the last century.

<sup>34</sup> In the Italian administrative jargon of the time, these correspond to *comune*, *circondario*, *provincia*, and *regione*, respectively.

<sup>35</sup> As the Pica Law was implemented at the province level, province fixed effects should account for “de jure” differences in anti-brigandage provisions. Indeed, there may be additional within-province variation in the intensity of implemented repression. We further explore the potential role of repressive measures in Section 4.5. However, we are not able to fully disentangle the long-term effect of brigandage through government repression compared to the one of brigandage as violent act on its own as these two phenomena are fundamentally bundled in this historical context and difficult to separate out in our data.

for with a smooth function of polynomials,  $f(\cdot)$ .<sup>36</sup> We use robust heteroskedasticity-consistent (Eicker-White) standard errors.<sup>37</sup> As an alternative to asymptotic inference, we also consider Conley (1999) adjustments for spatial correlation of an unknown form<sup>38</sup> and the randomization inference procedure proposed by Kelly (2021), which determines the significance level by looking at the fraction of simulations where a regressor outperforms synthetic noise while holding its estimated spatial structure fixed.

The parameter of interest from our regression model is  $\beta$ . This identifies the effect of brigandage on electoral outcomes provided that there exists no correlation between our explanatory variable  $B$  and the error term  $\varepsilon$ , after conditioning on fixed effects and covariates. It would be unwise to argue that brigandage events occurred in random locations and with stochastic intensity. On the contrary, brigands were motivated by several factors, such as economic hardship, unmet expectations from the unification process, dissatisfaction with nation-building policies, namely the military draft and taxes; operational and military support were also provided by the Catholic Church and the ousted Bourbons, respectively. Our empirical exercise attempts to address endogeneity by focusing on within-region, within-province and, lastly, within-district variation as well as by partialing out the role of a wide array of potential confounders.<sup>39</sup> Our preferred specification almost boils down to comparing bordering villages, within the same district, where one experienced brigandage and the other did not.

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<sup>36</sup> The basic specification uses a linear polynomial in longitude-latitude, but our results are robust to further expansions, such as adding quadratic and cubic terms.

<sup>37</sup> Clustering at the district level yields very similar confidence intervals. Yet, cluster-robust standard errors may be too conservative for our regression model, given that we only have 55 clusters of different size.

<sup>38</sup> The sensitivity of our OLS estimates to spatial dependence is tested using different cutoff distances (namely, 10, 25, and 50 kilometers). The resulting standard errors are quite stable across specification.

<sup>39</sup> In the region-fixed effects specification, we control for a set of province characteristics, such as the number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Moreover, municipality-level variables encompass geographic confounding factors, such as altitude, ruggedness, latitude and longitude of the municipality in 1861, which are proxies for both soil and climate characteristics, demographics, such as population in 1861 and population growth since 1821, and a finer list of institution- and infrastructure-related classifications, such as the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839.

## 4.2.2 Instrumental Variable Approach: “Taking to the Woods”

Despite ruling out some omitted-variable bias, the fixed effects estimation strategy described above does not address selection of brigandage activity on *un*-observables. To assuage further concerns of endogeneity, we propose an alternative identification strategy, which leverages exogenous variation in exposure to brigandage presence driven by pre-determined geographical characteristics.

As we recounted in Section 2.1, the military tactics of the brigands consisted of pillaging raids into rural towns and ambushes towards the Italian authorities. Despite their explicit distribution into groups,<sup>40</sup> roving horseback bands were rather mobile across the southern provinces and exploited their local knowledge (and, sometimes, connivance) in order to surprise the much more modern and organized enemy. Based on this historical evidence, we instrument brigandage presence at the municipality level ( $B_{mdpr}$  in Equation 1) with surrounding forest cover and elevated terrain, which are viewed as providing potential campsites for hideout and point of attack for brigands, rather than recruiting location for new combatants. To achieve that, we adopt two strategies: (i) measure distance from the centroid of each municipality in our estimation sample to its closest forest;<sup>41</sup> (ii) build buffers of different radii around such centroid and, then, compute the share of forest as a percentage of the total area of such buffer.<sup>42</sup> As second predictor of municipalities that are naturally suitable to brigandage activity, we use a municipality’s height above the sea level or terrain elevation.

Municipalities in (or close to) wooded and inaccessible areas, where our “montane forest” instruments take higher values, are clearly different – smaller in size and population, more agrarian and isolated societies, less developed and connected to central rulers, etc. Therefore, our causal identification necessarily hinges on the following control strategy: first, we attempt to purge most of these underlying, endogenous dif-

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<sup>40</sup> Molfese (1966) counts 388 brigand bands, who were active between 1861 and 1870: while some of these were composed by few rebels (5-15), the largest ones reached up to 300-400 individuals.

<sup>41</sup> In the data, only 23 municipalities have their centroid inside a forest. In these cases, our measure of distance is set to zero.

<sup>42</sup> We consider three radii: 0.05, 0.10, and 0.25 degrees. These are equivalent to 5.55, 11.1, and 25 kilometers, respectively.

ferences by including pre-unification variables at the municipality level ( $W_{mdpr}$ ) as a conditioning set; then, we leverage the quasi-random movement of brigand bands using “montane forests” as a *pull factor* that is orthogonal to municipality-level political attitudes themselves. The exclusion restriction – our key identifying assumption – holds if the effect of montane forests on electoral outcomes only goes through brigandage after fixing demographic and socio-economic characteristics, which might be potentially correlated with both montane forests and electoral outcomes.

Besides mitigating endogeneity bias, our IV approach may partially correct for imperfect measurement of treatment exposure. Given the historical nature of our data, mostly based on local reports and court rulings collected by the State Archives, exploiting variation in known geographical predictors of brigandage might reduce attenuation bias in our OLS estimates due to misreporting.

#### 4.2.3 Spatial Regression Discontinuity Design: Repressing Provinces “Infested by Brigandage”

The sudden and somehow unexpected outburst of violence in Southern Italy was quelled by the national government through repressive military operations and restrictive measures on socio-economic activity. As described in Section 2.1, martial law was stipulated for eleven out of sixteen provinces in the Mezzogiorno with the objective of crushing brigand bands and deterring complicity among the broader population. This resulted in four borders between provinces with and without Pica Law.<sup>43</sup> Moreover, the repressive effort of the government was primarily directed to the interior parts of such provinces, meaning that distance from the Pica Law borders within treated provinces can serve as a proxy of repression intensity.<sup>44</sup> We leverage this ge-

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<sup>43</sup> The provincial borders along which the law varies are the following: one within Abruzzo, one within Campania, the Basilicata-Capitanata-Apulia border, and one within Calabria (online Appendix Figure E1).

<sup>44</sup> Accetturo et al. (2017) refer to this differential enforcement of the Pica Law as *preventive* versus *repressive* arm. By restricting their estimation sample to municipalities within 50 kilometers from the border, their analysis almost exclusively compares areas where the Pica Law was not enforced to areas where only the preventive arm was applied (i.e., heightened police presence and law enforcement), leaving out areas with repression in full force (i.e., active fighting between brigand and the army).

ographical discontinuity to study the impact of brigandage repression on electoral outcomes.

We replicate the estimation strategy of [Accetturo et al. \(2017\)](#),

$$Y_{mdpr} = \alpha + \pi \cdot PicaLaw_{pr} + \phi_{b(m)} + f(\text{geolocation}_{mdpr}) + \mathbb{X}'_{mdpr} \delta + \varepsilon_{mdpr} \quad (2)$$

where indices are the same as in Equation 1, while  $b$  denotes the closest border to the municipality.  $PicaLaw$  is equal to one if a province was targeted by the law and zero otherwise. Following [Gelman and Imbens \(2019\)](#), we include a linear polynomial in latitude and longitude to account for the geographic location and augment the model with province-level and municipality-level covariates (the same listed in Footnote 39).<sup>45</sup> No fixed effect, other than at the border level, is included as it would be collinear with our binary measure of Pica Law exposure. As an alternative specification of  $f(\cdot)$ , we directly control for distance to the closest Pica Law border as a single-dimensional forcing variable.

The parameter of interest  $\pi$  identifies the causal effect of brigandage repression on electoral outcomes assuming that other determinants of voting do not change discretely at the border. [Accetturo et al. \(2017\)](#) support this identifying assumption by showing that proxies of socio-economic conditions and political competition are balanced between Pica Law provinces and other provinces. Moreover, they notice that (i) law enforcement was mostly determined by centralized, nationwide directives rather than local preferences for public order and that (ii) provincial borders, dating back to the Napoleonic era, are not endogenous to brigandage.

It is important to stress that  $\beta$  in Equation 1 and  $\pi$  in Equation 2 are two distinct but potentially related parameters. While  $\beta$  measures how voting changes due to brigandage activity,  $\pi$  measures how voting changes due to *repressed* brigandage activity. To assess whether  $\beta$  is approximately equal to  $\pi$ , i.e., whether the effects of brigandage

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<sup>45</sup> [Accetturo et al. \(2017\)](#) consider the dependent variable in first-differences, which helps control for time-invariant confounding factors at the municipality level that might be correlated with the outcomes of interest. Given the nature of the electoral cycle under study, we cannot rely on time variation for causal identification. The inclusion of covariates seeks to control for pre-Pica-Law confounding factors that might be correlated with outcome variables.

activity are attributable to its repression, one would need to have an additional comparison group with repressive provisions and no brigand presence. However, such comparison is not feasible in the Italian post-unification context, given that government repression explicitly targeted brigand bands and their supporters. Despite this key limitation, equally-signed  $\beta$  and  $\pi$  would provide suggestive evidence on (the memory of) repression as mechanism behind changes in voting behavior in areas with brigands. Opposite signs would instead indicate that repression mitigated the electoral effects of brigandage violence.<sup>46</sup>

Finally, we propose a second empirical test: as repression was arguably harsher in the interior, we can explicitly estimate heterogeneous  $\pi$ 's by distance to the border. This is done by interacting log-distance (centered at its mean) with our binary treatment indicator as follows,

$$Y_{mdpr} = \alpha + \pi \cdot PicaLaw_{pr} + \phi_{b(m)} + f(\text{geolocation}_{mdpr}) + \mathbb{X}'_{mdpr} \delta + \eta \cdot PicaLaw_{pr} \times \log(\text{Distance})_{mdpr} + \varepsilon_{mdpr} \quad (3)$$

where the additional parameter  $\eta$  quantifies whether effects of the Pica Law vary with the intensity of brigandage repression.

### 4.3 OLS Results

**Institutional Referendum.** We begin by regressing referendum voting outcomes on the number of brigandage events. Given that the latter is a non-negative, count variable with many zero-valued observations, in our baseline econometric model, we transform it through the inverse hyperbolic sine (IHS) function. The resulting measure is defined for all the values of the explanatory variable and, so, allows one to blend extensive and intensive margin; its properties have been shown to be similar to the ones of the logarithmic transformation, namely reducing the impact from outliers

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<sup>46</sup> Also, to keep in mind when comparing estimates of these two parameters is that identification leverages different local variation:  $\beta$  compares municipality with similar characteristics, within the same district;  $\pi$  compares municipality with similar characteristics, across the provincial border. To aid comparability and not exclude the so-called "repressive arm" (Footnote 44), we keep the full sample of municipalities and consider the radius around the border as a heterogeneity margin of enforcement (namely, higher distance implying harsher implementation of the repressive provisions) and so effect of the law.

(Burbidge et al., 1988; MacKinnon and Magee, 1990).

Table 1 presents the set of regression estimates derived from different model specifications: turnout is consistently found to be negatively associated with the intensity of brigandage. The coefficients remain statistically significant at the 1 percent level and their magnitude stable after the inclusion of higher-dimensional fixed effects and controls. According to our preferred, most demanding specification in Column (7), a one percent change in brigandage, *ceteris paribus*, decreases the share of municipality turnout by 0.59 percentage points (pp), on average.<sup>47</sup> We interpret this as suggestive evidence of reduced political representation and civic involvement in locations affected by brigands. However, it is important to notice that the sample mean of the outcome variable is 88.8%, one of the highest turnout rate in Italian history. Besides witnessing the prominence of this round of elections – the first after twenty years of Fascism – this suggests that sample selection into voting is not a reading key to understanding the results that follow.

Among the population who went to the polls, the shares of votes for monarchy is lower in municipalities with higher levels of brigandage; this mechanically results in a higher share for the republic. Analogously to what we saw for turnout, all the estimated coefficients are statistically significant at the 1 or 5 percent level – both when allowing for heteroskedasticity and spatial dependence in the errors – and remain stable after augmenting the model with fixed effects and controls. Using the final specification in Column (7), experiencing an additional percent of brigandage decreases the share of monarchy supporters by 2pp, a sizable change in comparison to the sample mean of the outcome variable (i.e., 63.1%).

The effects are present both at the extensive and intensive margin. Online Appendix Table C3 considers a specification with both a binary treatment (brigandage versus no

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<sup>47</sup> Using the untransformed regressor in online Appendix Table C1, one additional episode of brigandage decreases the share of municipality turnout by 0.04 pp ( $p$ -value < 0.001). Notice that one episode represents a 17.1% increase compared to the mean number in the estimation sample. As an alternative transformation, we apply the natural logarithmic function to  $B + 1$  in online Appendix Table C2: the direction, magnitude, and statistical significance of the resulting estimates are almost equal to the ones obtained with the IHS.



brigandage) and the continuous measure (untransformed). Being exposed to at least one episode of brigandage is associated with a 0.68pp decrease in turnout and a 4.04pp decrease in monarchy. Compared to the sample mean, these coefficients are politically meaningful differences, which we will further relate to the national outcome of the referendum in our concluding remarks. Also, the (positive) number of brigandage episodes predicts lower turnout and less votes for the monarchy, suggesting that the intensity of brigandage affects voting outcomes also in the sample of municipalities with at least one episode, i.e., around two-third of the original one.

Our results are not driven by a few, staunch pro-republic municipalities. Online Appendix Figure C1 plots Gaussian kernel densities of the three main outcomes evaluated so far. Rather than polarizing the electorate into a larger dispersion of votes, the historical exposure to brigandage shifted the entire distribution of monarchic voting to the left. Interestingly, we find negative effects on the share of monarchy across all southern regions, with Basilicata being the one with the highest incidence of and largest reaction to brigandage (online Appendix Table C4), albeit statistical significance is not always maintained due to the smaller sub-samples. While brigandage occurred in different contexts and assumed slightly different flavors, its legacy is felt across the board.

Finally, we assess the degree of spatial correlation in our geographic data. The Moran's  $I$  statistics of the regression residuals, i.e., the two-dimensional analogue of the Durbin-Watson test, across the different model specifications of Equation 1 are reported in online Appendix Table C5. Despite rejecting the null hypothesis of global spatial independence, the magnitude of Moran's  $I$  is low and falls substantially when we control for district fixed effects, suggesting that focusing on within-district variation mitigates the extent of spatial correlation. We take this concern seriously and implement the two-stage randomization inference procedure proposed by Kelly (2021): we generate spatial noise based on 10,000 simulations and regress it on our main explanatory variable.<sup>48</sup> The resulting  $t$ -statistics and  $p$ -values, plotted in online Ap-

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<sup>48</sup> The spatial noise results from drawing a vector of spatially correlated random values of brigandage

pendix Figure C2, demonstrate that the synthetic spatial noise variable has very low explanatory power: compared to the specification in Column (7) of Table 1, noise regressions hardly ever outperform our original measure of brigandage. Taken this together, we conclude that our results are likely not an artifact of spatial correlation and captures the persistent effect of post-unification brigandage on voting preferences.

**Election of the Constitutional Assembly.** We continue our econometric analysis by looking at the preferences for political parties, which were revealed in a simultaneous election. We fit the same regression models as for referendum outcomes and present our baseline estimates in Table 2; the supplementary specifications are then replicated in online Appendix C.

We find that, *ceteris paribus*, both the binary exposure to brigandage and its intensity increase the share of votes to parties that were overtly opposed to the monarchy by 3.23pp and 0.17pp, respectively (online Appendix Table C8). At the extensive margin, the anti-monarchist effect is explained by less votes for monarchist parties. At the intensive margin, the increased support for anti-monarchists is compensated by less votes for the Christian Democrats, who had not given any indication on the referendum vote, resulting in a null effect on monarchists. We do not have any definitive answer to explain this discrepancy, but it may be related to both differential turnout and party representation at the polls being correlated with brigandage.

The evidence from referendum and election outcomes presented so far suggests that brigandage affected the distribution of votes along the monarchy-republic margin. It is worth mentioning that these effects are unlikely explained by increased support for a specific, left-wing party. As noted by Blok (1972), brigandage was fundamentally conservative on political grounds and, we argue, it did not have any long-term consequence on ideological preferences for single political parties.

We also rule out that anti-monarchic preferences activated by brigandage are merely

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from a standard normal distribution with a Matérn variance covariance matrix. The shape parameter regulating how fast correlation falls with the range is set to 2 degrees, but results hold with alternative degrees.

stemming from anti-fascist sentiments. One may hypothesize that the attempted repression of organized crime in the 1920s – promoted by Mussolini and its early supporters – targeted areas that had experienced brigandage in the 1860s and, perhaps so, exhibited persistently higher rates of criminal activity.<sup>49</sup> In such case, voters associating the monarchy with the fascist regime might want to “get their vengeance” at the polls. The empirical results in online Appendix Table C10 reject this potential mechanism: municipalities with higher brigandage activity experienced similar crime rates in the following decade and no detectable difference in fascist violence; votes for the Fascist Party in the 1921 and 1924 elections are also balanced. Ultimately, including all of these measures as additional controls in Equation 1 does not affect our main estimates of interest (online Appendix Table C11).<sup>50</sup>

#### 4.4 IV Results

As an alternative to the fixed effects models estimated above, we fit two-stage least squares (2SLS) regressions, where our endogenous measure of brigandage is instrumented by two exogenous regressors, i.e., forest cover and terrain elevation, and a varying set of controls. Online Appendix Tables D1 (instruments in levels) and D2 (instruments in logs for easier coefficient comparison) provide evidence of instrument strength: both distance to the closest forest and terrain elevation positively predict the emergence of brigandage in that municipality – with *F*-statistics mostly above the canonically-accepted thresholds.

Armed with a strong first stage, Table 3 reports second-stage estimates. In Column (1) and (2), we control for municipality-level characteristics, which capture demographic and socio-economic proxies of development, market access, and political connection.

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<sup>49</sup> Mussolini’s iron-fisted campaign against the Mafia, which culminated with the appointment of Cesare Mori as Prefect of Palermo in 1925, was especially focused on Sicily (Duggan, 1989), which is not part of our study sample (see Footnote 3).

<sup>50</sup> Historical data on post-1870 crime and the rise of fascism from Acemoglu et al. (2022) are only available for a sub-set of our original estimation sample. Therefore, before controlling for potential effect mediators related to fascist repression, we confirm that the brigandage coefficients maintain the same sign and significance level of those in Table 1. Despite losing more than half of the Southern municipalities in our study, the estimates are quantitatively similar to the ones with the full sample.

As we pointed out in Section 4.2, we believe this set of included instruments to be key to ensure the credibility of our exclusion restriction, which is a fundamentally untestable assumption of our identification strategy: only after conditioning on such set of municipal traits, the effect of montane forests on individual attitudes towards political institutions and parties can be thought to solely go through brigandage. Columns (3) to (5) take this approach to the extreme by demeaning both instruments and outcome of interest within region, province, and district. This comes at the cost of reducing the extent of unexplained residual variation in our instrument given that the fixed effects mechanically predict a large share of spatial variation in surrounding forest and elevation.

The causal effect of brigandage on turnout is found to be negative, statistically significant at the 1 percent level, and larger in magnitude compared to the OLS estimates in the previous sub-section.<sup>51</sup> Also, experiencing brigandage causes a municipality to express a lower share of votes to the monarchy and, so, to boost preferences for a republican system. This is true across specifications, indicating that, even within the same district, the residual variation in montane forests maintains sufficient power to explain participation in the referendum. The estimated coefficients on vote for the monarchy are robust to using alternative measures of forest cover but lose statistical significance in the most conservative specifications with province and district fixed effects in line with the over-controlling bias contemplated above (online Appendix Tables D3, D4, and D5).

Finally, Table 4 reports IV results for Constituent Assembly voting outcomes. These 2SLS estimates broadly confirm a robust, negative relationship between brigandage and preference for monarchist parties. However, the substitution towards explicitly

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<sup>51</sup> The larger magnitude of the 2SLS coefficients can be explained by: (i) the existence of omitted variables that are positively correlated with electoral outcomes and so introduce upward bias in the OLS estimates; (ii) measurement error that attenuates these coefficients toward zero; (iii) heterogeneity in the study population. In particular, the instrument may be shifting the behavior of a sub-group of municipalities where monarchical legitimacy is particularly responsive to a negative shock, such as brigandage. The IV regression leverages this identifying variation, rather than averaging across all the municipalities in the study population, and captures a distinct causal parameter, which is “local” or rather relevant to a sub-set of municipalities.

republican parties versus the neutral Christian Democrats is less clear and somewhat noisier. This can be partly reconciled with the OLS results by the fact that our instruments mostly capture variation at the intensive, rather than extensive, margin of exposure to brigandage (online Appendix Tables D6 and D7).

## 4.5 SRDD Results

As mentioned in Section 2.1, the national government targeted its military, repressive effort to internal areas “infested by brigandage”. This spatial focus is confirmed in our data: municipalities in Pica Law provinces are 12.8 pp more likely to have experienced brigandage at the extensive margin and have 2.7 more episodes, on average (online Appendix Figure E2). These estimates should not be taken as causal as they may suffer of either downward or upward bias. On one hand, history tells us the repression was effective at quelling the uprising, leading to a potential decrease in brigandage in Pica Law provinces. On the other hand, the presence of the army may have increased either fighting with the brigands or the number of reported cases we observe in local reports and court rulings, holding actual fighting constant.

While we cannot conclusively assess the extent to which the province-level implementation of the Pica Law affected brigandage, we leverage it as an exogenous source of variation in repression. To this end, we employ a SRDD and report estimates with different set of controls in Tables 5 and 6. Brigandage repression significantly decreased votes for the monarchy and increased votes for the republic. Specifically, in municipalities exposed to the Pica Law, the share of monarchist (republican) preferences at the Institutional Referendum was 15pp lower (17.7pp higher) relative to a comparable municipality on the opposite side of the provincial border. These effects are statistically significant, with  $p < 0.001$ , and economically meaningful, amounting to  $-22.5\%$  ( $+63.4\%$ ), relative to the sample mean of the outcome variable in untreated provinces. This evidence aligns with a similar shift away from monarchist parties and the Christian Democrats towards the anti-monarchist alternative in the Constitutional

Assembly elections. When controlling linearly for distance, rather than for the two-dimensional latitude-longitude space, the effects of the Pica Law remain in the same direction, albeit with smaller magnitudes (online Appendix Tables E1 and E2).

As further noted in Section 4.5, historical evidence indicates that the intensity of repression was not homogeneous within Pica Law provinces: internal municipalities were more exposed than bordering areas. Was this heightened repression the main factor behind the average differences in political preferences estimated above, or did the Pica Law affect preferences through other channels?

Online Appendix Figure E3 plots the share of monarchy voters at the referendum binned by distance to the Pica Law border, revealing a stark relationship. In treated provinces, the further away a municipality is from the border, the lower the votes for the monarchy are. On the contrary, in untreated provinces, the share of monarchic votes increases with distance from the border. We formally test for this heterogeneity by estimating Equation 3. The negative effect of the Pica Law on monarchic votes appears to be entirely driven by repression and survives the inclusion of border fixed effects as well as a wide set of controls (online Appendix Table E3). This is paralleled by heterogeneously positive effect on votes for anti-monarchist parties (online Appendix Table E4).

In online Appendix Figure E4a, we further evaluate the marginal effects of the Pica Law at different values of log-distance from the border. While pro-monarchy votes were almost not affected by the enforcement of the law in the average municipalities in terms of distance, the effects become more and more negative as one moves away from the border towards interior, heavily repressed areas.

Finally, we show that the Pica Law increased turnout by 4.3pp, on average. While statistically significant, this effect is relatively small in magnitude (i.e., only 5% compared to the sample mean). However, we find no evidence of heterogeneity by distance: municipalities with higher distance from the Pica Law border do not exhibit significantly higher turnout. In contrast to the results on the monarchy-versus-republic choice, the

marginal effects on turnout remain essentially constant across the distribution of distance in the sample (online Appendix Figure E4b).

The average effect estimates suggests that the findings in [Accetturo et al. \(2017\)](#) may have persisted to a longer time horizon and a broader electorate than the one studied in the original paper. On the other hand, the heterogeneous effects are in line with their conjecture that effects on turnout are driven by law enforcement rather than repression. We interpret this as suggestive evidence that the anti-monarchic sentiment triggered by brigandage does not arise from a lower level of dissatisfaction with the state, but is instead a direct reaction against the Savoy monarchy. All in all, as discussed in Section 4.5, these results provide suggestive evidence of repression as a plausible – but not necessarily exclusive – mechanism behind the effect of brigandage on voting outcomes.

## 5 Conclusion

Nowadays, Europe is often praised as a bastion of parliamentary democracy yet, through most of its modern history, it was ruled by monarchical systems. In this paper, we delve into the brief history of Italian monarchy, from the initial clash in its southern provinces – known as war on brigandage – to its final ousting – brought about by a popular referendum. In particular, we test whether municipalities with a higher exposure to the violent conflict between brigand bands and royal troops retained anti-monarchic sentiments in the long term. Based on our empirical results, we suggest that such confrontation had intergenerational consequences on political attitudes towards monarchic ruling. This enduring legacy can be rationalized through a model of revolts, where the utility of supporting the king is a function of the intrinsic value of monarchical legitimacy. Parents can pass down their political preferences to the following generations, although these can remain dormant until institutional changes reduce the costs associated with voicing political dissent.

Our findings are particularly striking in light of the fact that, in the regions of interest, the monarchy won with a rather large margin (approximately 66% of the votes). However, electoral data at the municipality level unveil how this victory hides a wide degree of spatial heterogeneity: the mountainous, rural areas where brigands were the most active and, therefore, harsher the military repression, retained their antagonism towards the Savoy dynasty and were more likely to vote for the republic 80 years after.

While these results may not easily extend to other contexts, our empirical analysis of the mechanisms suggest that state repression, rather than generalized violence, explains variation in political attitudes associated with brigandage. Therefore, our findings are likely applicable to other institutional settings where a clear link exists between the agents of repression (e.g., a royal dynasty or a political leader) and the legitimacy of a certain institution (e.g., a monarchy or a political party). Importantly, theory suggests that the relevance of political preference transmission hinges on conditions that allow dissent to surface, such as the concession of free elections. This dynamic is particularly evident in the post-World-War-II Italian case, but may also extend to other historical or contemporary contexts featuring new institutions, for instance where authoritarian regimes transition to multi-party elections.

Taking our point estimates (perhaps too) seriously, we can perform a back-of-the-envelope calculation to quantify the extent to which the experience of brigandage shaped the referendum outcomes at the national level. We can compute a linear prediction of voting outcomes for the southern regions, in the absence of brigandage (i.e., setting  $B = 0$  in Equation 1). Assuming no change in turnout, we find that removing brigandage would have increase the votes for the monarchy in our sample by 121,275 units, i.e., 2.25pp. Factoring in the effect of brigandage on turnout is not consequential as the predicted rise in the pro-monarchy front is just of an additional 1,000 votes, without affecting the relative shares. Even if we were to assume that all those who did not go to the polls would have voted for the Monarchy, we would still be below 200,000 extra votes for the king. Keeping everything fixed in the North and in the islands, the margin of republican victory would be reduced from the observed 9pp to



an estimated 7pp. After all, a counterfactual world devoid of brigandage would have not prevented the birth of the Italian parliamentary republic. ♦

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# Main Tables

Table 1: Effect of Brigandage on Referendum Voting Outcomes – OLS Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Turnout</b>							
<b>Number of brigandage episodes (IHS)</b>	-0.5007*** (0.0890)	-0.7023*** (0.0875)	-0.7307*** (0.0887)	-0.7768*** (0.0902)	-0.6606*** (0.0897)	-0.6225*** (0.0936)	-0.5887*** (0.1019)
<i>p</i> -values corrected for spatial correlation	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	88.792						
Sample mean of the explanatory variable	1.512						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.096	0.147	0.150	0.207	0.221	0.224	0.222
<b>Vote for Monarchy</b>							
<b>Number of brigandage episodes (IHS)</b>	-1.3050*** (0.3642)	-2.0915*** (0.3564)	-2.0855*** (0.3596)	-1.8512*** (0.3687)	-1.8929*** (0.3906)	-1.8691*** (0.4064)	-1.9975*** (0.4379)
<i>p</i> -values corrected for spatial correlation	[0.012] {0.097} (0.210)	[<0.001] {<0.001} (0.005)	[<0.001] {<0.001} (0.004)	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	63.123						
Sample mean of the explanatory variable	1.512						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.141	0.235	0.235	0.306	0.308	0.307	0.309
<b>Vote for Republic</b>							
<b>Number of brigandage episodes (IHS)</b>	1.2812*** (0.3648)	2.0719*** (0.3553)	2.0776*** (0.3590)	1.8306*** (0.3657)	1.9687*** (0.3879)	1.9379*** (0.4040)	2.0212*** (0.4351)
<i>p</i> -values corrected for spatial correlation	[0.014] {0.110} (0.230)	[<0.001] {<0.001} (0.006)	[<0.001] {<0.001} (0.005)	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	30.706						
Sample mean of the explanatory variable	1.512						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.139	0.243	0.243	0.321	0.323	0.322	0.323
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality in 1861. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table 2: Effect of Brigandage on Constituent Assembly Voting Outcomes – OLS Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Monarchist Parties</b>							
<b>Number of brigandage episodes (IHS)</b>	-0.0020 (0.3662)	-0.8512** (0.3481)	-0.6841** (0.3449)	-0.9389*** (0.3558)	-0.8656** (0.3745)	-0.9398** (0.3874)	-0.8276* (0.4246)
<i>p</i> -values corrected for spatial correlation	[0.997] {0.998} (0.998)	[0.031] {0.061} (0.066)	[0.073] {0.096} (0.137)	[0.009] {0.017} (0.054)	[0.025] {0.029} (0.070)	[0.019] {0.022} (0.048)	[0.058] {0.059} (0.122)
Sample mean of the outcome variable	26.479						
Sample mean of the explanatory variable	1.512						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.098	0.270	0.280	0.316	0.318	0.317	0.318
<b>Anti-Monarchist Parties</b>							
<b>Number of brigandage episodes (IHS)</b>	1.3831*** (0.3269)	1.9864*** (0.3193)	1.9191*** (0.3206)	1.7833*** (0.3182)	2.0548*** (0.3316)	2.0205*** (0.3451)	1.9646*** (0.3693)
<i>p</i> -values corrected for spatial correlation	[0.003] {0.052} (0.144)	[<0.001] {<0.001} (0.004)	[<0.001] {<0.001} (0.005)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)
Sample mean of the outcome variable	21.243						
Sample mean of the explanatory variable	1.512						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.080	0.189	0.194	0.277	0.282	0.281	0.285
<b>Christian Democrats: Free Vote</b>							
<b>Number of brigandage episodes (IHS)</b>	-1.6626*** (0.3457)	-1.5850*** (0.3577)	-1.3043*** (0.3589)	-0.8823** (0.3663)	-1.2014*** (0.3801)	-1.0805*** (0.3924)	-1.2069*** (0.4314)
<i>p</i> -values corrected for spatial correlation	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[0.002] {0.004} (0.001)	[0.020] {0.025} (0.015)	[0.004] {0.002} (0.001)	[0.012] {0.006} (0.001)	[0.011] {0.007} (0.001)
Sample mean of the outcome variable	33.894						
Sample mean of the explanatory variable	1.512						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.059	0.101	0.118	0.188	0.197	0.197	0.196
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. "Monarchist Parties" are the Italian Liberal Party (PLI), the Common Man's Front (UQ), and the National Bloc of Freedom (BNL). "Anti-Monarchist Parties" are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The explanatory variable is constructed by taking the inverse hyperbolic sine transformation (arsinh) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.



Table 3: Effect of Brigandage on Referendum Voting Outcomes – 2SLS Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Number of brigandage episodes (IHS)</b>	-3.5933*** (0.8844)	-3.3658*** (0.7040)	-5.3023*** (2.0096)	-2.8765*** (0.6862)	-3.6051*** (0.9843)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	16.9	28.0	5.6	28.3	17.6
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<b>Vote for Monarchy</b>					
<b>Number of brigandage episodes (IHS)</b>	-23.9472*** (4.8862)	-20.6841*** (3.5640)	-27.3634*** (9.3404)	-5.5708** (2.3833)	-5.2182* (3.0997)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	16.9	28.0	5.6	28.3	17.6
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<b>Vote for Republic</b>					
<b>Number of brigandage episodes (IHS)</b>	20.5317*** (4.4180)	17.8556*** (3.2887)	22.5020*** (8.1483)	2.8717 (2.3550)	1.5750 (3.0109)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	16.9	28.0	5.6	28.3	17.6
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. All regressions are two-stage least squares (2SLS), where the endogenous variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are (i) the distance from the municipality's centroid to the closest forest and (ii) terrain elevation; excluded instruments are indicated in the "Regression Model Specification" panel at the bottom of the table. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013). Full first-stage estimates are in online Appendix Table D1.

Table 4: Effect of Brigandage on Constitutional Assembly Voting Outcomes – 2SLS Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	-14.2050*** (3.5000)	-12.0865*** (2.6457)	-11.3936** (5.6460)	-5.1412** (2.1131)	-7.7116*** (2.7841)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.0	28.0	5.7	28.3	17.7
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<b>Anti-Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	8.9328*** (2.5727)	8.0178*** (2.0687)	7.3132 (4.6963)	-2.2136 (2.2220)	-4.2095 (2.8783)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.0	28.0	5.7	28.3	17.7
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<b>Christian Democrats: Free Vote</b>					
<b>Number of brigandage episodes (IHS)</b>	6.0163** (2.6189)	4.9599** (2.1158)	1.0832 (4.7091)	5.1614** (2.4366)	8.0259** (3.2582)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.0	28.0	5.7	28.3	17.7
Partial <i>R</i> -squared	0.021	0.031	0.007	0.033	0.021
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). All regressions are two-stage least squares (2SLS), where the endogenous variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are (i) the distance from the municipality’s centroid to the closest forest and (ii) terrain elevation; excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013). Full set of first-stage estimates and statistics are in online Appendix Table D1.

Table 5: Effect of Brigandage Repression on Referendum Voting Outcomes – Spatial RDD Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Pica Law (0/1)</b>	0.616** (0.283)	4.492*** (0.882)	4.204*** (0.839)	4.211*** (0.836)	4.350*** (0.838)
Sample mean of the outcome variable in provinces without Pica Law	88.789				
Number of observations	1,631				
Adjusted R-squared	0.108	0.128	0.164	0.172	0.174
<b>Vote for Monarchy</b>					
<b>Pica Law (0/1)</b>	-4.521*** (1.041)	-15.055*** (3.702)	-15.506*** (3.638)	-15.402*** (3.640)	-15.045*** (3.660)
Sample mean of the outcome variable in provinces without Pica Law	66.586				
Number of observations	1,631				
Adjusted R-squared	0.171	0.224	0.230	0.230	0.232
<b>Vote for Republic</b>					
<b>Pica Law (0/1)</b>	3.744*** (1.046)	17.878*** (3.707)	18.182*** (3.673)	18.110*** (3.675)	17.693*** (3.697)
Sample mean of the outcome variable in provinces without Pica Law	27.924				
Number of observations	1,631				
Adjusted R-squared	0.178	0.234	0.236	0.235	0.238
<i>Regression Model Specifications:</i>					
Linear polynomial in longitude–latitude	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is a binary variable equal to 1 if the municipality is in a province with Pica Law and to 0 otherwise (online Appendix Figure E1). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

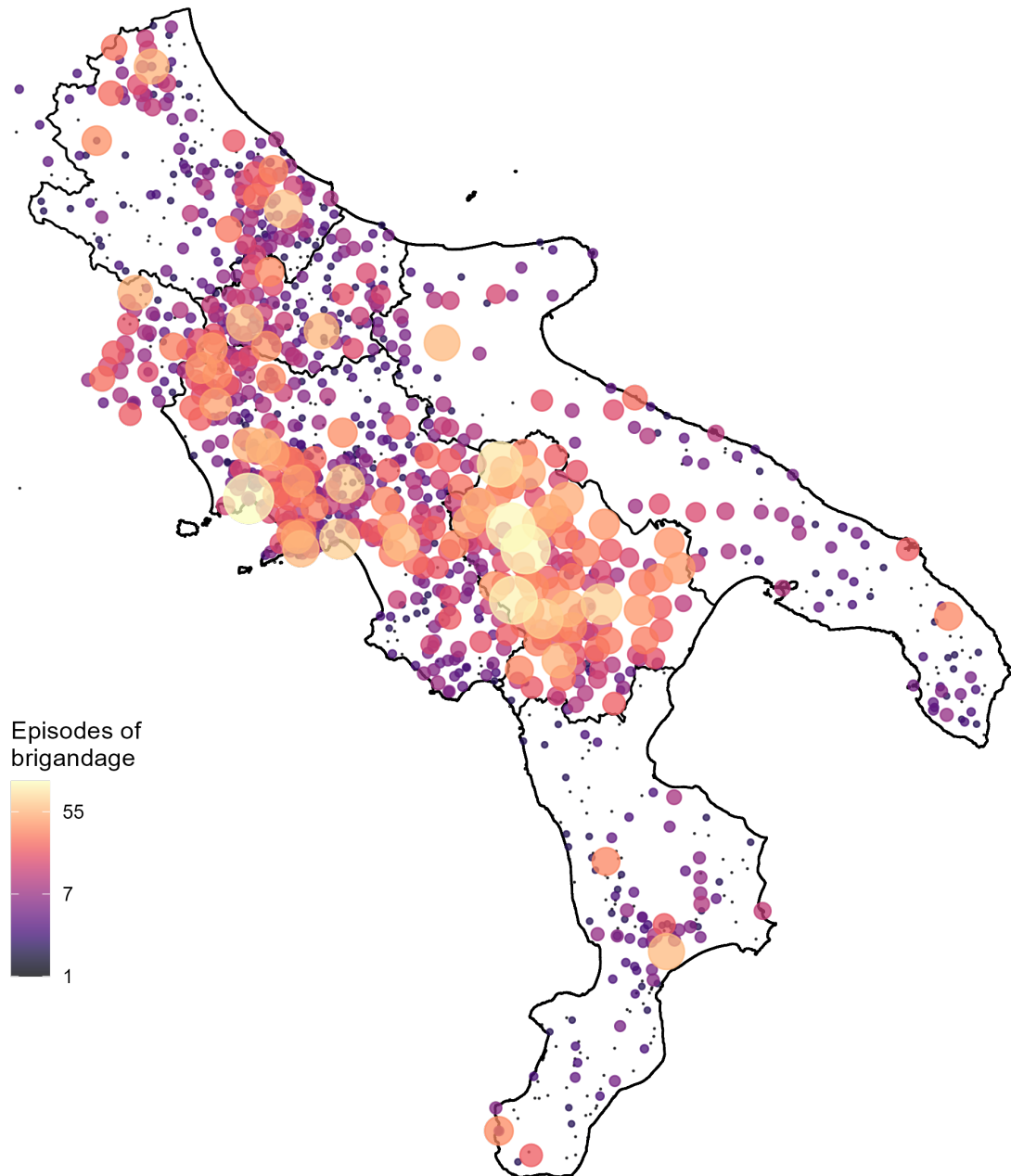
Table 6: Effect of Brigandage Repression on Constitutional Assembly Voting Outcomes – Spatial RDD Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	1.057 (0.902)	-5.002 (3.544)	-5.251 (3.529)	-5.363 (3.533)	-4.866 (3.556)
Sample mean of the outcome variable in provinces without Pica Law	26.497				
Number of observations	1,629				
Adjusted R-squared	0.210	0.241	0.244	0.243	0.247
<b>Anti-Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	0.108 (0.934)	14.299*** (3.410)	14.284*** (3.421)	14.231*** (3.422)	13.866*** (3.434)
Sample mean of the outcome variable in provinces without Pica Law	20.901				
Number of observations	1,629				
Adjusted R-squared	0.131	0.167	0.167	0.167	0.174
<b>Christian Democrats: Free Vote</b>					
<b>Pica Law (0/1)</b>	-2.845*** (1.070)	-13.099*** (3.307)	-12.995*** (3.313)	-12.735*** (3.313)	-12.874*** (3.336)
Sample mean of the outcome variable in provinces without Pica Law	34.429				
Number of observations	1,629				
Adjusted R-squared	0.063	0.109	0.108	0.111	0.108
<i>Regression Model Specifications:</i>					
Linear polynomial in longitude–latitude	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The explanatory variable is a binary variable equal to 1 if the municipality is in a province with Pica Law and to 0 otherwise (online Appendix Figure E1). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

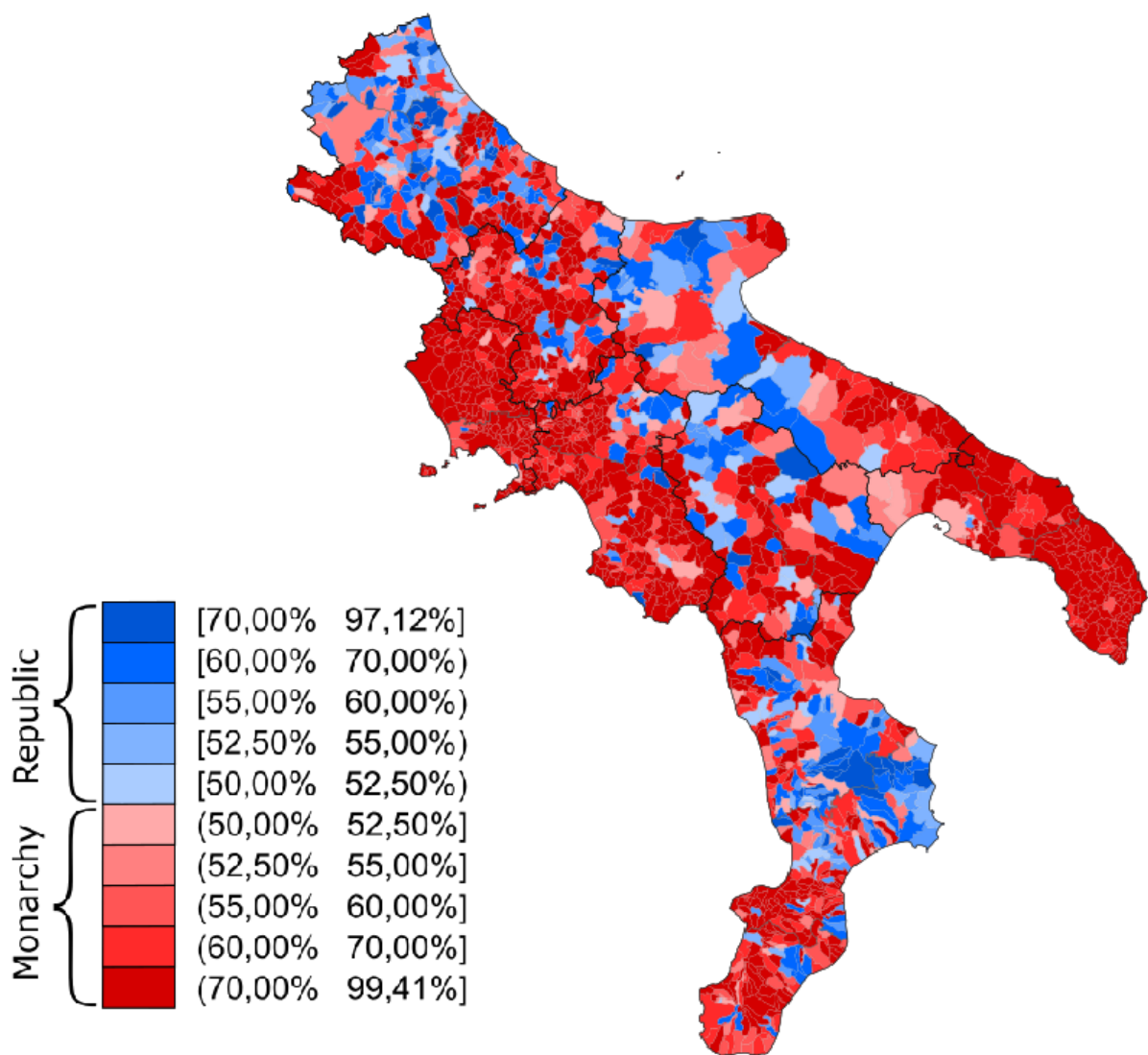
# Main Figures

Figure 1: Spatial Distribution of Brigandage



*Notes:* colored circles indicate municipalities with at least one reported event of brigandage in the 1861-1870 period in the southern provinces of the Italian Kingdom (Lecce et al., 2022). The size of the circles is weighted by the total number of brigandage events in that municipality. The black borders are based on the contemporary regions of Italy, i.e., its first-level administrative divisions.

Figure 2: Spatial Distribution of Referendum Voting Outcomes



Notes: The original SVG file behind this map was produced by [Francesco Migliorini](#) under the [CC BY-SA 4.0](#) license and subsequently edited by the authors.

# ONLINE APPENDIX

## for “BRIGANDAGE AND THE POLITICAL LEGACY OF MONARCHICAL LEGITIMACY IN SOUTHERN ITALY”

by Matteo Ruzzante and Cristoforo Pizzimenti

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# A Theoretical Framework: Details

## A.1 A Model of Revolts

Barbera and Jackson (2020) develop a model to understand the main incentives that agents face when deciding whether to revolt or not revolt. The authors assume there exists a continuum of citizens of mass 1, indexed by  $i \in [0, 1]$ , who have the choice to participate in a revolt. The revolt is successful if at least  $q \in (0, 1]$  agents participate, otherwise it fails. Here, we will focus on one specific version of the model with three types and one period. The payoffs are relevant only at the end of the game after the potential revolt, as illustrated below:

	<i>Success</i>	<i>Failure</i>
<i>Participate</i>	$\theta_i$	$-C$
<i>Not Participate</i>	$a_i$	0

While the authors focus on the case where  $a_i = 0$  and, therefore, the types only depend on  $\theta_i \in \{\theta_H, \theta_M, \theta_L\}$ , in what follows we will assume that  $a_i \neq 0$ .<sup>52</sup> In our application, the types are such that high types  $H$  will benefit the most from the revolt, so  $\theta_H > a_H$  and  $\theta_H > C$ . Moderate types  $\theta_M$  also benefit from the revolt, but less than high types, so  $0 < \theta_M - a_M < \theta_H - a_H$  and  $0 < \theta_M - C < \theta_H - C$ . Low types, instead, prefer the failure of the revolt, so  $\theta_L < C$  and  $a_L < 0$ .

Following Barbera and Jackson (2020), we assume the economy can be in two states: a *High state*, where a share  $1 - z$  of the population are  $\theta_L$ ,  $z/2$  are  $\theta_M$ , and  $z/2$  are  $\theta_H$ , and a *Low state*, where  $z$  of the population are  $\theta_L$ ,  $(1 - z)/2$  are  $\theta_M$ , and  $(1 - z)/2$  are  $\theta_H$ , with  $1 > z > q$ , as represented in Figure A1. Since low types have no incentives to participate, only high- and moderate-type beliefs matter. Indeed, to participate in the revolt we need to have  $b_i\theta_i - (1 - b_i)C \geq b_ia_i$ , where  $b_i$  is the subjective belief that the revolt will succeed. In words, the inequality means that it is more convenient for the

<sup>52</sup> The analysis follows the same intuition as long as  $\gamma_i := \theta_i - a_i$ , and  $\theta_i$  and  $\gamma_i$  are perfectly and positively correlated so that  $\gamma_i \in \{\gamma_H, \gamma_M, \gamma_L\}$  fully captures the types that coincide with  $\{\theta_H, \theta_M, \theta_L\}$ . In the remainder of this section, we will focus on what  $\theta$  and  $a$  represent, since we can assume that the former parameter is perfectly correlated with  $\gamma$ .



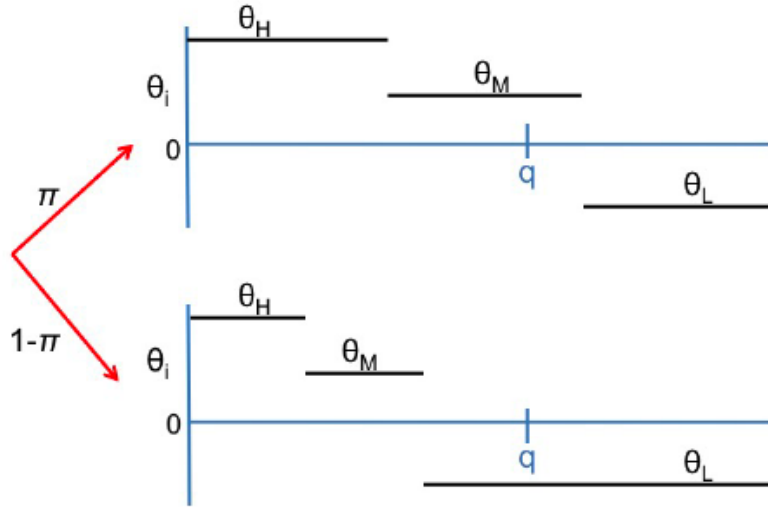


Figure A1: Two possible states (from Barbera and Jackson, 2020, p. 306)

agent to participate than not to participate. The condition boils down to a threshold value for beliefs: the agent will revolt if  $b_i \geq b^* = \frac{C}{\theta_i - a_i + C}$ .

Assuming agents are independent and identically distributed conditional on the type, we have that beliefs are:  $b_i = \frac{\pi z}{\pi z + (1 - \pi)(1 - z)}$ . Hence, high types will revolt if  $\theta_H, a_H, C, z, \pi$  are such that:

$$\frac{\theta_H - a_H}{C} \geq \frac{(1 - \pi)(1 - z)}{\pi z} \quad (\text{A4})$$

and, similarly, moderate types will do the same if:

$$\frac{\theta_M - a_M}{C} \geq \frac{(1 - \pi)(1 - z)}{\pi z} \quad (\text{A5})$$

Notice that knowing  $z \geq q$  does not imply knowing that the other agents will revolt; that is why agents need to form beliefs about the success of the revolt based on what they think others will do. Also, given our assumptions, if Condition (A5) is satisfied, also (A4) will be: the moderate types are the only ones marginally necessary for the revolt.<sup>53</sup>

<sup>53</sup> The two-period version of the game looks at the case where Condition (A4) is satisfied but (A5) is not, i.e., moderate types do not have enough incentives to participate. Adding an intermediate period, where high types can “protest” and signal they are high types, make moderate types more confident on the true size of  $z$  and, therefore, on the success of the revolt. The cost of protesting for high types is

## A.2 Setting the Model in Our Historical Environment

The model of [Barbera and Jackson \(2020\)](#) described above has been developed to explore the coordination problem of revolts. We now attempt to interpret the phenomenon of brigandage in Southern Italy and its relationship with the later referendum on monarchy through the lens of this model.

First, we define citizens' payoffs by assuming that agents have utility that depends on both the outcome of the revolt and on their decision, so we can rewrite payoffs as:

	<i>Success</i>	<i>Failure</i>
<i>Participate</i>	$U_{i,p,k}$	$U_{i,p,m}$
<i>Not Participate</i>	$U_{i,np,k}$	$U_{i,np,m}$

where  $U_{i,p,k}$  is the utility when the agent participates and the revolt succeeds so that they accomplish an alternative form of government  $k$ ;<sup>54</sup>  $U_{i,np,k}$  is the utility when the agent does not participate but the revolt still succeeds;  $U_{i,np,m}$  is the utility when the agent does not participate and the revolt fails so they still have the monarchy in power; lastly,  $U_{i,p,m}$  is the utility when the agent participates but the revolt fails anyway. These four payoffs can depend on many features of the revolt and of its outcome. Based on our historical setting, we will focus on two main aspects: consumption and monarchical legitimacy.

We can rewrite  $U_{i,np,m} = u(c_{i,np,m}) + v_i(m)$ , where  $u(c_{i,np,m})$  is the utility function on consumption and  $v_i(m)$  indicates the intrinsic value of being ruled by the monarchy in power,  $m$ . We can further assume that  $U_{i,np,m} = 0$  and so  $\theta_i := U_{i,p,k} - U_{i,np,m} = u(c_{i,p,k}) - u(c_{i,np,m}) + v_i(k) - v_i(m)$ ,  $C := U_{i,np,m} - U_{i,p,m} = u(c_{i,np,m}) - u(c_{i,p,m})$ ,  $a_i := U_{i,np,k} - U_{i,np,m} = u(c_{i,np,k}) - u(c_{i,np,m}) + v_i(k) - v_i(m)$ . In particular, we conjecture that high and moderate types would have two incentives from revolting. On one hand,

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$c < C$  and they will protest if:

$$\frac{\theta_H - a_H}{c} \geq \frac{(1 - \pi)(1 - z)}{\pi z} \quad (\text{A6})$$

which is, in turn, satisfied if the condition for high types to revolt is satisfied.

<sup>54</sup> In our setting, the alternative will be the return to power of the House of Bourbon in Southern Italy in the early 1860s and the establishment of a Republic in 1946.

both the phenomenon of brigandage and the referendum implementation originated from a push for improvement of economic and social conditions, which we proxy by consumption. On the other hand, revolts were connected to the relative value of the new government – with respect to the ruling monarchy –  $V_i := v_i(k) - v_i(m)$ , which is the subject of next Section A.3. Finally, the difference  $\theta_i - a_i = u(c_{i,p,k}) - u(c_{i,np,k})$  derives from the fact that, by participating in the revolt, agents might benefit from the favorable position they will be in the aftermath of their victory.<sup>55</sup> We abstract from the potential, intrinsic value that agents may derive from being part of a revolt.

### A.3 Defining the *Legitimacy of the Monarchy*

**A Longstanding Literature.** We see the component of utility derived from the intrinsic value of an alternative government,  $V_i$ , as deeply connected with the concept of monarchical legitimacy. The literature on this theme grounds its roots in the seminal theories of Thomas Hobbes and John Locke, who believed the monarch was the one with the ability to enforce a state of law and help humankind break out from the chaos of the primordial “state of nature”. In their work, the legitimacy of monarchies stems directly from the necessity of a unitary and stable government.<sup>56</sup>

Later in the twentieth century, in one of his most influential works, Max Weber offered three formal justifications to the “*legitimate monopoly of violence*”, which is the backbone of the state and of its authority on citizens: “*tradition*”, “*charisma*”, and “*legality*” (see definitions in Footnote 1). The idea of “legal legitimacy” was further developed by Kelsen (1945) and recently explored by Olson (1993), Grossman (2002), and Gerring et al. (2021), among others. These authors argue that the legitimacy of monarchs rest on several factors broadly associated to “tradition”. In their explanatory framework, finding a stable government can be seen as a coordination game where decisions on

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<sup>55</sup> This would be the case only for types  $H$  and  $M$ , where  $u(c_{H,p,k}) - u(c_{H,np,k}) > u(c_{M,p,k}) - u(c_{M,np,k}) > 0$ .

<sup>56</sup> Locke agrees with the concept of state of nature developed by Hobbes, however he believes that certain rights should still be guaranteed to citizens upon entering society. Given this, the two authors diverge over the necessary qualifications to be a good leader. Hobbes posits that being able to enforce law and order was all that was needed to be a leader, while Locke objects that the leader should enforce the law while being able to preserve a certain level of freedom for his citizens.

important matters can be legitimated through the force of tradition, represented by the monarch. This way, the symbolic power of kings proves essential to solve the coordination and deliberation problem of politics. In addition, as highlighted by [Greif and Rubin \(2023\)](#), political legitimacy motivates compliance based on intrinsic motivation and does not depend on extrinsic rewards or punishment.

**Back to the Model.** Inspired by the literature above, we rewrite  $v_i(m) := v_i^t(m) + v_i^l(m) + v_i^c(m)$ , where we are simply assuming the three justifications of legitimacy of a monarch proposed by Weber are separable and additive.<sup>57</sup> We can assume the same decomposition holds for the alternative  $v_i(k)$ , so that  $V_i = V_i^t + V_i^l + V_i^c$ . Using this model, we can analyze these components in the two historical moments of interest and set the stage for our empirical analysis.<sup>58</sup>

Building on the economics literature of cultural transmission, initiated by [Bisin and Verdier \(2000a\)](#) and reviewed by [Bisin and Verdier \(2011\)](#), we argue that preferences regarding the form of government can persist over time through intergenerational transmission. In this literature, it is shown that parents invest in their children’s cultural education to ensure the transmission of their values, with the equilibrium depending on the costs of transmission and the substitutability between parental investment and societal influences (i.e., *direct vertical socialization* in the family versus *oblique/horizontal socialization* through imitation and learning).<sup>59</sup> While our model does not explicitly formalize the cultural transmission mechanism, we interpret the persistence of preferences toward the Savoy monarchy as the *inheritance* of the traditional value of legitimacy,  $v_i^t(m)$ , which is passed down from parents to children with varying probabilities across agents.

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<sup>57</sup>  $v_i^t(m)$  is the value of the monarch in power that comes from “tradition”;  $v_i^l(m)$  is the value that comes from “legality”;  $v_i^c(m)$  is the value that comes from “charisma”. The assumption of separable and additive values are to simplify the analysis and have no theoretical underpinning.

<sup>58</sup> Here, we do not provide an endogenous formulation of legitimacy, as in [Coşgel et al. \(2012\)](#) and [Greif and Rubin \(2024\)](#), nor the full equilibrium problem including the response of the ruling authority. Instead, we focus on a decomposition of legitimacy inspired by [Weber \(1946\)](#).

<sup>59</sup> Parental socialization choice is motivated by *imperfect empathy* – a form of altruism biased towards the parents’ own traits – where parents care about the choices made by their children but evaluate those choices based on their own preferences (i.e., the parents’ ones) rather than the children’s.

The probabilistic nature of this transmission is key to understanding the persistence of heterogeneous preferences in the population. Unlike models where cultural traits converge to a single dominant preference, the variation in inheritance probabilities ensures a dynamic evolution of cultural traits over time. This interpretation is consistent with [Bisin and Verdier \(2000a\)](#)'s baseline framework, in which cultural transmission is costly and parental investment in cultural education substitutes for external influences, such as schooling or media. Under these conditions, we propose that individuals who suffered losses during the brigandage period, whether high or low social types, would have had a stronger incentive to invest in transmitting their aversion to the monarchy. On the other hand, individuals who benefited from the monarchy could rely more on societal influences to align their children's preferences with their own, thus reducing the need for direct investment.

In our context, the investment in cultural transmission can be thought of as oral traditions, where parents and grandparents recount stories of the brigands in ways that diverge from mainstream narratives. Such tales serve as a medium through which distinct preferences are preserved, with evidence of this mechanism found in regional oral histories. This process highlights the interplay between familial transmission and societal influences, which jointly shape the persistence of cultural preferences over time. We have included some references to this oral tradition in [Appendix B](#).

Ultimately, our model relies on two key mechanisms to explain the persistence of preferences. First, the transmission of  $v_i^t(m)$  across generations provides a foundation for the sustained heterogeneity of preferences in the population. Second, institutional changes, which we interpret as reductions in the cost term  $C$ , influence the broader dynamics of cultural traits and the extent to which preferences persist. Together, these mechanisms allow us to capture the long-term effects of cultural transmission.

## A.4 Taking Predictions to the Data

Following the discussion in Section A.3, we now outline how interpreting the intrinsic value of monarchical legitimacy in the theoretical framework above can help us draw a throughline between the two events we study in this paper.

During the early establishment of the Italian Kingdom, the traditional legitimacy component of the relative utility of the alternative, i.e., the return of the ousted Bourbons,  $V_i^t$ , was likely very high in Southern Italy as the new king, Victor Emmanuel II of Sardinia–Piedmont, had just annexed the whole peninsula at the expenses of the previous king Francis II of Bourbon. Hence, we can imagine that the loyalist faction among the population – our *high types* – and civilian sympathizers close to them – our *moderate types* – would have had a particularly high  $V_i^t$  in that they viewed the exiled monarch as the only legitimate one. In this time period,  $V_i^t$  was arguably the main component of  $V_i$  as new laws were just being announced and established by the new administration and the king was not seen as a principal actor in the annexation process.

The situation was different in 1946, right before the referendum. The royal family of Savoy had been in power for more than eight decades and so  $V_i^t$  should have been, on average, lower compared to the early 1860s. Differently  $V_i^c$  was probably high as many citizens wanted to recover the civil rights they lost during the fascist dictatorship and so embrace a fully democratic system. Finally,  $V_i^l$  might have also been relatively low as the ruler in power was the monarch.<sup>60</sup> However, as the referendum was a legal process to allow the citizens to express their direct preferences over the form of government, it might not have been particularly far from 0 for many agents  $i$ .

In the empirical analysis in Section 4, we explore the relation between these two historical episodes. As suggested by the literature on collective memory and on cultural transmission, cited in the introduction, we hypothesize that the component of preferences related to monarchical traditions, i.e.,  $V_i^t$ , may persist over time and shape the

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<sup>60</sup> In this case, the young Umberto II, as Victor Emmanuel III abdicated a month before the referendum, with the hope of dissociating his personal history as king from the monarchical institution and bolstering support for his successor.

political preferences of future generations. This implies that people living in areas that experienced higher intensity of brigandage in the 1860s – hence with higher  $V_i^t$  – should have, *ceteris paribus*, stronger preferences against the Savoy crown. Therefore, we expect them to express lower support for the monarchy at the 1946 polls. Our empirical analysis provides a regression-based test of this implication.

## B Collective Memory

The figure of the brigand plays a leading role in the common mythology of the collective past in the Mezzogiorno. Their reputation for bravery and ferocity – mostly told through oral history, local tales and songs – often takes a fictional dimension, turning news stories into myth. Hereafter, we provide some excerpts from “Christ Stopped at Eboli”, as translated from the Italian by Frances Frenaye (Farrar, Straus and Giroux edition, New York). Published in 1945, this memoir was written by the anti-fascist intellectual Carlo Levi during his 1935–1936 exile in rural Basilicata. Levi’s description of the local peasants vividly documents the importance and persistence of collective, social memory around post-unification brigandage in a remote Southern municipality.

- ▷ “The peasants of Gagliano were indifferent to the conquest of Abyssinia and they neither remembered the World War nor spoke of its dead, but one war was close to their hearts and constantly on their tongues; it was already a fable, a legend, a myth, an epic story. This was the war of the brigands. Brigandage came to an end in 1865, seventy years before, and only a very few of them were old enough to remember it, either as participants or eyewitnesses. But all of them, old and young, men and women, spoke of it with as much passion as if it were only yesterday. When I talked to the peasants I could be sure that, whatever was the subject of our conversation, we should in one way or another slip into mention of the brigands. Their traces are everywhere; there is not a mountain, gully, wood, fountain, cave, or stone that is not linked with one of their adventures or that did not serve them as a refuge or hideout; not a dark corner that was not their meeting-place; not a country chapel where they did not leave threatening letters or wait for ransom money. Many places, like the Fossa del Bersagliere, were named for their deeds. Every family was at one time for or against them: one of its members was an outlaw, or they took in and hid a brigand, or a wandering band killed some relative, or set fire to their crops. Then it was that the feuds arose which were to be handed down from generation to generation and which rage even today. The peasants, with a few exceptions, were all on the side



of the brigands and, with the passing of time, the deeds which so struck their fancy became bound up with the familiar sites of the village, entered into their everyday speech with the same ease as animals and spirits, grew into legends and took on the absolute truth of a myth. [...] They neither judge nor defend it and, when they dwell on it with such passion, they are not boasting. Of the historical motives, the interests of the Bourbons, the Pope, and the feudal barons, they are not conscious, although they dimly perceive that these are sorry and unpleasant affairs. But the myth of the brigands is close to their hearts and a part of their lives, the only poetry in their existence, their dark, desperate epic" (pp. 138–139).

- ▷ "These clay mountains are studded with holes and natural caves. Here the brigands lay low, hiding in the trunks of hollow trees the money obtained from robbery and ransom. When the brigand bands were at last dispersed, their loot remained in the woods. At this point the history of the brigands passes into legend and is bound up with age-old superstitions. For the brigands hid their spoils in the places where the peasants had always imagined there was hidden treasure. In this way the brigands came to be looked upon as beings with the dark powers of the nether regions" (p. 45).
- ▷ "Now, of course, they were all Fascists. But that meant nothing. Once they had all been partisans of Nitti or Salandra, for or against Giolitti, of the Right or of the Left, for the brigands or against the brigands, followers of the Bourbons or liberals, and in times still more remote, divided in other ways. But in the very beginning there were the decent people and there were the brigands; the sons of the decent people and the sons of the brigands. Fascism had not made much of a change" (p. 24).

## C Supplementary OLS Estimates

Table C1: Effect of Brigandage Events on Referendum Voting Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Turnout</b>							
<b>Number of brigandage episodes</b>	-0.0563*** (0.0097)	-0.0646*** (0.0097)	-0.0654*** (0.0097)	-0.0707*** (0.0096)	-0.0621*** (0.0093)	-0.0570*** (0.0110)	-0.0543*** (0.0128)
<i>p</i> -values corrected for spatial correlation	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	88.792						
Sample mean of the explanatory variable	5.829						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.094	0.136	0.138	0.196	0.216	0.217	0.216
<b>Vote for Monarchy</b>							
<b>Number of brigandage episodes</b>	-0.1046*** (0.0381)	-0.1543*** (0.0368)	-0.1531*** (0.0367)	-0.1483*** (0.0371)	-0.1439*** (0.0375)	-0.1461*** (0.0421)	-0.1721*** (0.0460)
<i>p</i> -values corrected for spatial correlation	[0.021] {0.093} <0.232	[<0.001] {0.001} <0.019	[<0.001] {0.001} <0.018	[<0.001] {0.001} <0.005	[<0.001] {0.001} <0.006	[0.001] {0.005} <0.010	[0.001] {0.007} <0.014
Sample mean of the outcome variable	63.123						
Sample mean of the explanatory variable	5.829						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.137	0.227	0.226	0.301	0.303	0.302	0.304
<b>Vote for Republic</b>							
<b>Number of brigandage episodes</b>	0.1090*** (0.0381)	0.1585*** (0.0364)	0.1580*** (0.0364)	0.1548*** (0.0369)	0.1555*** (0.0374)	0.1564*** (0.0425)	0.1757*** (0.0477)
<i>p</i> -values corrected for spatial correlation	[0.017] {0.092} <0.234	[<0.001] {0.001} <0.022	[<0.001] {0.001} <0.019	[<0.001] {0.001} <0.008	[<0.001] {0.001} <0.006	[0.001] {0.004} <0.012	[0.001] {0.008} <0.022
Sample mean of the outcome variable	30.706						
Sample mean of the explanatory variable	5.829						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.136	0.235	0.235	0.317	0.318	0.317	0.319
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable counts the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table C2: Effect of Brigandage Events on Referendum Voting Outcomes –  $\log(B + 1)$ , OLS Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Turnout</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	-0.6173*** (0.1087)	-0.8559*** (0.1070)	-0.8893*** (0.1083)	-0.9486*** (0.1101)	-0.8090*** (0.1096)	-0.7619*** (0.1150)	-0.7238*** (0.1264)
<i>p</i> -values corrected for spatial correlation	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	88.792						
Sample mean of the explanatory variable	1.205						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.096	0.147	0.150	0.207	0.221	0.224	0.222
<b>Vote for Monarchy</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	-1.5825*** (0.4435)	-2.5340*** (0.4326)	-2.5261*** (0.4363)	-2.2590*** (0.4475)	-2.3061*** (0.4737)	-2.2847*** (0.4949)	-2.4748*** (0.5372)
<i>p</i> -values corrected for spatial correlation	[0.011] {0.099} <0.214	[<0.001] {<0.001} <0.006	[<0.001] {<0.001} <0.005	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	63.123						
Sample mean of the explanatory variable	1.205						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.141	0.235	0.234	0.306	0.308	0.307	0.309
<b>Vote for Republic</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	1.5584*** (0.4444)	2.5148*** (0.4315)	2.5209*** (0.4358)	2.2407*** (0.4443)	2.4037*** (0.4709)	2.3732*** (0.4928)	2.5054*** (0.5349)
<i>p</i> -values corrected for spatial correlation	[0.013] {0.111} <0.233	[<0.001] {<0.001} <0.007	[<0.001] {<0.001} <0.006	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001	[<0.001] {<0.001} <0.001
Sample mean of the outcome variable	30.706						
Sample mean of the explanatory variable	1.205						
Number of observations	1,642						
Adjusted <i>R</i> -squared	0.139	0.243	0.242	0.321	0.323	0.322	0.323
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. The explanatory variable is constructed by taking the natural logarithmic transformation of the total number of brigandage events reported for the municipality in the 1861-1870 period, +1 to avoid dropping zero-valued observations (Lecca et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table C3: Effect of Brigandage Events on Referendum Voting Outcomes – Extensive and Intensive Margin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Turnout</b>							
<b>Brigandage (0/1)</b>	-0.4338* (0.2298)	-0.8201*** (0.2235)	-0.8714*** (0.2265)	-0.9111*** (0.2283)	-0.6947*** (0.2256)	-0.7087*** (0.2261)	-0.6827*** (0.2283)
<b>Number of brigandage episodes</b>	-0.0513*** (0.0100)	-0.0561*** (0.0099)	-0.0566*** (0.0099)	-0.0623*** (0.0097)	-0.0565*** (0.0094)	-0.0513*** (0.0112)	-0.0495*** (0.0130)
Sample mean of the outcome variable	89						
Sample mean of the explanatory variable	1						
Number of observations	1642						
Adjusted R-squared	0.096	0.142	0.144	0.202	0.220	0.220	0.219
<b>Vote for Monarchy</b>							
<b>Brigandage (0/1)</b>	-3.3635*** (0.9843)	-4.7180*** (0.9698)	-4.6929*** (0.9747)	-4.0026*** (0.9599)	-4.1187*** (0.9676)	-4.1081*** (0.9707)	-4.0357*** (0.9791)
<b>Number of brigandage episodes</b>	-0.0654* (0.0388)	-0.1055*** (0.0366)	-0.1057*** (0.0366)	-0.1113*** (0.0372)	-0.1107*** (0.0375)	-0.1132*** (0.0424)	-0.1441*** (0.0464)
Sample mean of the outcome variable	63						
Sample mean of the explanatory variable	1						
Number of observations	1642						
Adjusted R-squared	0.143	0.237	0.236	0.308	0.311	0.309	0.311
<b>Vote for Republic</b>							
<b>Brigandage (0/1)</b>	3.2837*** (0.9864)	4.6691*** (0.9677)	4.6657*** (0.9736)	3.8991*** (0.9497)	4.1670*** (0.9574)	4.1690*** (0.9607)	4.0843*** (0.9699)
<b>Number of brigandage episodes</b>	0.0707* (0.0391)	0.1102*** (0.0364)	0.1108*** (0.0365)	0.1187*** (0.0373)	0.1220*** (0.0376)	0.1230*** (0.0430)	0.1473*** (0.0483)
Sample mean of the outcome variable	31						
Sample mean of the explanatory variable	1						
Number of observations	1642						
Adjusted R-squared	0.141	0.245	0.245	0.323	0.326	0.325	0.326
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The first explanatory variable is a binary variable equal to 1 if the municipality experienced (at least) one episode of brigandage in the 1861-1870 period and to 0 otherwise, while the second explanatory variable counts the total number of brigandage events (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Figure C1: Distribution of Voting Outcomes by Binary Exposure to Brigandage

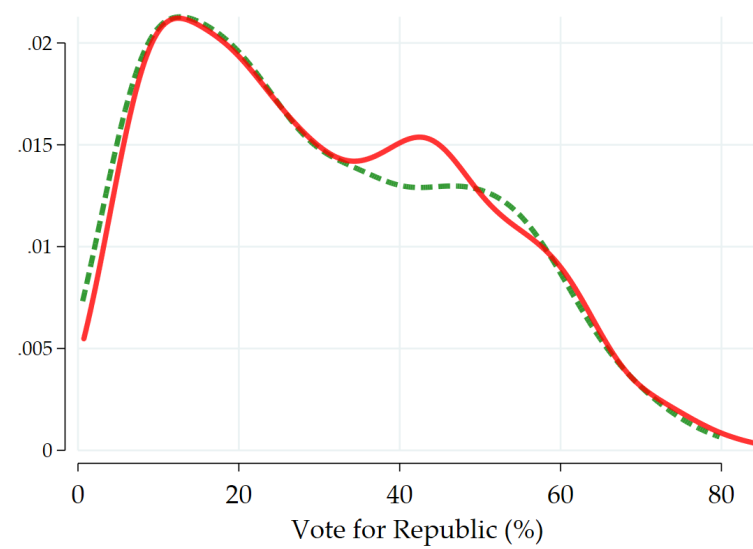
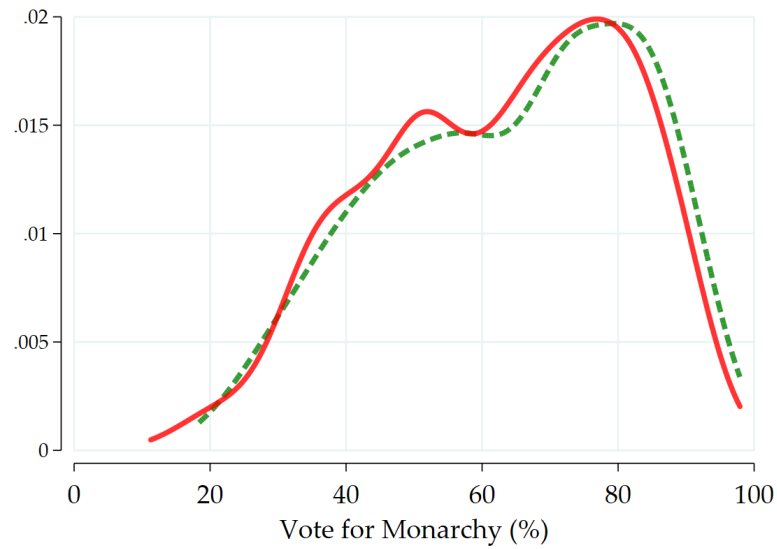
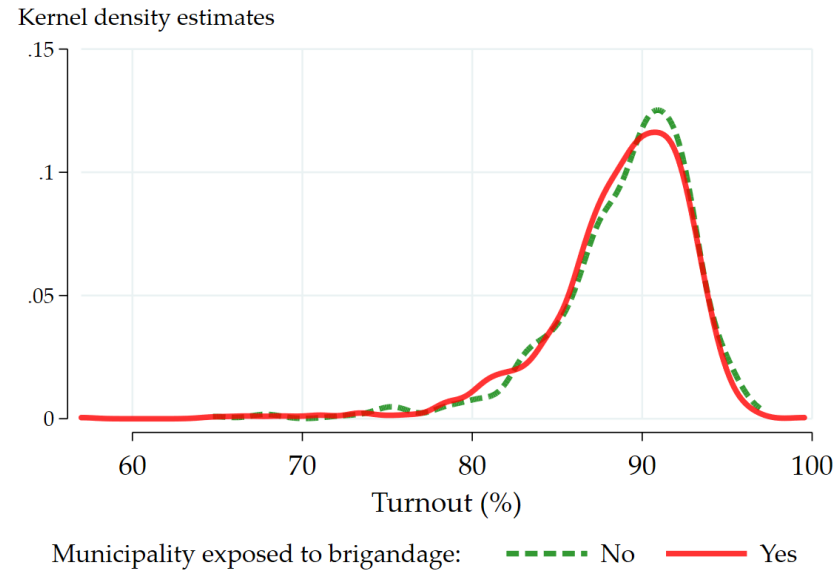


Table C4: Heterogeneous Effects of Brigandage Events on Referendum Voting Outcomes

	(1) Abruzzo and Molise	(2) Apulia and Basilicata	(3) Calabria	(4) Campania
<b>Turnout</b>				
<b>Number of brigandage episodes (IHS)</b>	-0.4510* (0.2582)	-0.2834 (0.2065)	-0.6070* (0.3145)	-0.5802*** (0.1323)
Sample mean of the outcome variable	88.683	90.309	87.084	89.139
Sample mean of the explanatory variable	1.525	1.967	0.650	1.849
Number of observations	418	348	383	493
Adjusted <i>R</i> -squared	0.223	0.322	0.152	0.129
<b>Vote for Monarchy</b>				
<b>Number of brigandage episodes (IHS)</b>	-1.0623 (1.0722)	-2.6443** (1.0920)	-1.5878 (1.2700)	-1.1819* (0.6795)
Sample mean of the outcome variable	56.642	66.220	56.784	71.355
Sample mean of the explanatory variable	1.525	1.967	0.650	1.849
Number of observations	418	348	383	493
Adjusted <i>R</i> -squared	0.175	0.381	0.244	0.165
<b>Vote for Republic</b>				
<b>Number of brigandage episodes (IHS)</b>	1.1860 (1.0726)	2.6567** (1.0685)	1.7956 (1.2593)	1.0552 (0.6617)
Sample mean of the outcome variable	36.755	27.849	37.700	22.161
Sample mean of the explanatory variable	1.525	1.967	0.650	1.849
Number of observations	418	348	383	493
Adjusted <i>R</i> -squared	0.197	0.383	0.253	0.169

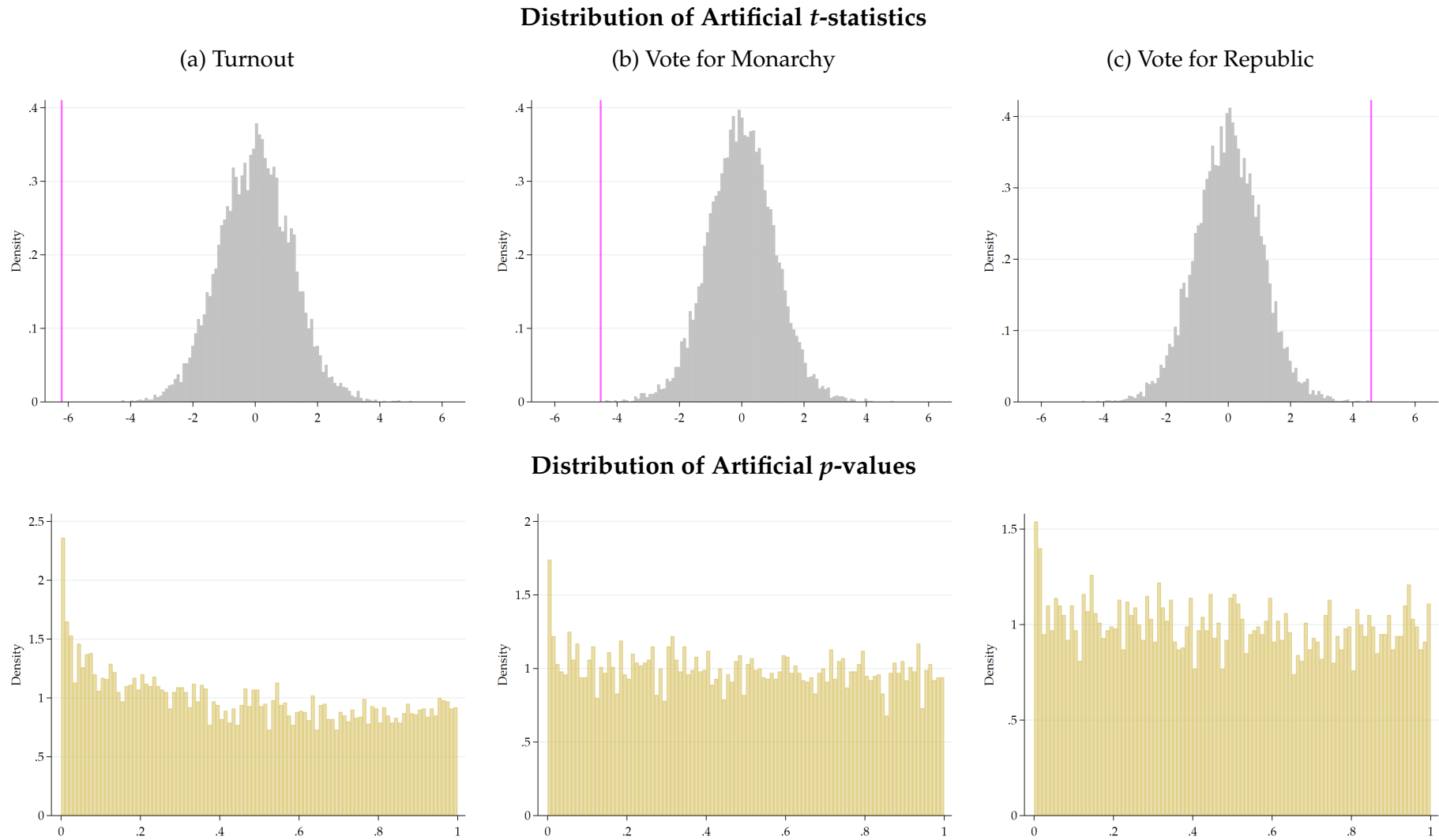
*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. Sample: regions indicated in the column header. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). All regressions are least squares with constituency fixed effects, municipality-level controls, and robust standard errors (in parentheses). Controls include altitude, ruggedness, latitude and longitude of the municipality, population in 1861 and population growth since 1821, the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Coefficients are expressed in percentage points.

Table C5: Spatial Correlation of Regression Residuals

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Turnout</b>							
Moran's <i>I</i> statistic	0.026	0.013	0.013	0.005	0.005	0.005	0.005
z-value	15.949	8.422	8.202	3.596	3.514	3.636	3.622
<b>Vote for Monarchy</b>							
Moran's <i>I</i> statistic	0.059	0.028	0.028	0.011	0.010	0.010	0.010
z-value	35.945	17.190	17.202	6.666	6.560	6.554	6.407
<b>Vote for Republic</b>							
Moran's <i>I</i> statistic	0.063	0.030	0.030	0.011	0.011	0.011	0.010
z-value	38.222	18.065	18.080	6.831	6.776	6.784	6.639
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

*Notes:* Moran's *I* statistics and z-values derived from OLS regression as in Table 1. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839.

Figure C2: Significance Level of Spatial Noise Regressions



*Notes:* Null randomization distributions derived from OLS regression as in Column (7) of Table 1, where the explanatory variable is replaced with spatial noise that has the same spatial structure of “Number of brigandage episodes (IHS)” across district. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. “Number of brigandage episodes (IHS)” is constructed by taking the inverse hyperbolic sine transformation (arsinh) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a manufacture, or a hospital in the municipality in 1839. Vertical lines (in magenta) indicate the actual  $t$ -statistics and estimated in Table 1; corresponding  $p$ -values are lower than 0.001.



Table C6: Effect of Brigandage Events on Constitutional Assembly Electoral Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Monarchist Parties</b>							
<b>Number of brigandage episodes</b>	0.0082 (0.0391)	-0.0297 (0.0370)	-0.0189 (0.0365)	-0.0358 (0.0369)	-0.0287 (0.0376)	-0.0373 (0.0429)	-0.0158 (0.0512)
<i>p</i> -values corrected for spatial correlation	[0.858] {0.882} (0.906)	[0.452] {0.459} (0.583)	[0.624] {0.619} (0.732)	[0.327] {0.261} (0.459)	[0.445] {0.380} (0.549)	[0.391] {0.294} (0.454)	[0.763] {0.747} (0.800)
Sample mean of the outcome variable	26.479						
Sample mean of the explanatory variable	5.833						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.098	0.267	0.278	0.314	0.316	0.315	0.317
<b>Anti-Monarchist Parties</b>							
<b>Number of brigandage episodes</b>	0.1489*** (0.0363)	0.1816*** (0.0348)	0.1756*** (0.0346)	0.1779*** (0.0336)	0.1870*** (0.0343)	0.1932*** (0.0377)	0.1953*** (0.0430)
<i>p</i> -values corrected for spatial correlation	[<0.001] {0.014} (0.079)	[<0.001] {<0.001} (0.011)	[<0.001] {<0.001} (0.013)	[<0.001] {<0.001} (0.006)	[<0.001] {<0.001} (0.003)	[<0.001] {<0.001} (0.003)	[<0.001] {0.001} (0.013)
Sample mean of the outcome variable	21.243						
Sample mean of the explanatory variable	5.833						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.078	0.183	0.188	0.274	0.278	0.276	0.281
<b>Christian Democrats: Free Vote</b>							
<b>Number of brigandage episodes</b>	-0.1518*** (0.0346)	-0.1604*** (0.0352)	-0.1453*** (0.0349)	-0.1251*** (0.0336)	-0.1407*** (0.0339)	-0.1345*** (0.0395)	-0.1652*** (0.0460)
<i>p</i> -values corrected for spatial correlation	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)	[<0.001] {<0.001} (0.001)
Sample mean of the outcome variable	33.894						
Sample mean of the explanatory variable	5.833						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.054	0.099	0.118	0.190	0.198	0.198	0.197
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. "Monarchist Parties" are the Italian Liberal Party (PLI), the Common Man's Front (UQ), and the National Bloc of Freedom (BNL). "Anti-Monarchist Parties" are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The explanatory variable counts the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table C7: Effect of Brigandage Events on Constituent Assembly Voting Outcomes –  $\log(B + 1)$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Monarchist Parties</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	<0.0014 (0.4463)	-1.0031** (0.4236)	-0.8011* (0.4195)	-1.1145** (0.4330)	-1.0249** (0.4557)	-1.1220** (0.4736)	-0.9871* (0.5241)
<i>p</i> -values corrected for spatial correlation	[1.000] {1.000} <1.000	[0.036] {0.069} <0.083	[0.085] {0.107} <0.162	[0.012] {0.020} <0.065	[0.030] {0.034} <0.084	[0.023] {0.025} <0.058	[0.069] {0.069} <0.144
Sample mean of the outcome variable	26.479						
Sample mean of the explanatory variable	1.205						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.098	0.270	0.280	0.316	0.318	0.317	0.318
<b>Anti-Monarchist Parties</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	1.7160*** (0.3989)	2.4419*** (0.3884)	2.3595*** (0.3898)	2.2123*** (0.3873)	2.5389*** (0.4037)	2.5063*** (0.4219)	2.4616*** (0.4549)
<i>p</i> -values corrected for spatial correlation	[0.002] {0.049} <0.140	<0.001 {<0.001} <0.005	<0.001 {<0.001} <0.006	<0.001 {<0.001} <0.001	<0.001 {<0.001} <0.001	<0.001 {<0.001} <0.001	<0.001 {<0.001} <0.001
Sample mean of the outcome variable	21.243						
Sample mean of the explanatory variable	1.205						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.080	0.189	0.194	0.277	0.282	0.281	0.285
<b>Christian Democrats: Free Vote</b>							
<b>Number of brigandage episodes + 1 (logged)</b>	-2.0488*** (0.4192)	-1.9759*** (0.4333)	-1.6408*** (0.4348)	-1.1415** (0.4439)	-1.5269*** (0.4601)	-1.3816*** (0.4776)	-1.5624*** (0.5297)
<i>p</i> -values corrected for spatial correlation	<0.001 {<0.001} <0.001	<0.001 {<0.001} <0.001	[0.001] {0.002} <0.001	[0.013] {0.016} <0.011	[0.002] {0.001} <0.001	[0.008] {0.004} <0.001	[0.007] {0.004} <0.001
Sample mean of the outcome variable	33.894						
Sample mean of the explanatory variable	1.205						
Number of observations	1,638						
Adjusted <i>R</i> -squared	0.059	0.102	0.119	0.188	0.198	0.198	0.196
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The explanatory variable is constructed by taking the natural logarithmic transformation of the total number of brigandage events reported for the municipality in the 1861-1870 period, +1 to avoid dropping zero-valued observations (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table C8: Effect of Brigandage Events on Constitutional Assembly Electoral Outcomes – Extensive and Intensive Margin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Monarchist Parties</b>							
<b>Brigandage (0/1)</b>	-1.6412* (0.9769)	-3.7493*** (0.9279)	-3.4749*** (0.9206)	-4.0437*** (0.9348)	-3.9268*** (0.9478)	-3.9647*** (0.9497)	-3.7911*** (0.9610)
<b>Number of brigandage episodes</b>	0.0273 (0.0403)	0.0091 (0.0376)	0.0162 (0.0372)	0.0016 (0.0372)	0.0030 (0.0378)	-0.0055 (0.0434)	0.0106 (0.0517)
Sample mean of the outcome variable	26.479						
Sample mean of the explanatory variable	1.000						
Number of observations	1,638						
Adjusted R-squared	0.099	0.274	0.284	0.322	0.323	0.322	0.323
<b>Anti-Monarchist Parties</b>							
<b>Brigandage (0/1)</b>	2.4675*** (0.8814)	3.6251*** (0.8662)	3.5195*** (0.8665)	2.9585*** (0.8382)	3.3795*** (0.8362)	3.3804*** (0.8391)	3.2344*** (0.8480)
<b>Number of brigandage episodes</b>	0.1202*** (0.0371)	0.1441*** (0.0349)	0.1400*** (0.0348)	0.1505*** (0.0341)	0.1598*** (0.0345)	0.1661*** (0.0383)	0.1728*** (0.0436)
Sample mean of the outcome variable	21.243						
Sample mean of the explanatory variable	1.000						
Number of observations	1,638						
Adjusted R-squared	0.082	0.191	0.196	0.279	0.284	0.283	0.287
<b>Christian Democrats: Free Vote</b>							
<b>Brigandage (0/1)</b>	-1.6598* (0.9821)	-0.8563 (0.9837)	-0.2968 (0.9777)	0.9190 (0.9809)	0.4119 (0.9857)	0.4721 (0.9871)	0.4016 (0.9979)
<b>Number of brigandage episodes</b>	-0.1325*** (0.0350)	-0.1515*** (0.0359)	-0.1423*** (0.0357)	-0.1336*** (0.0343)	-0.1440*** (0.0345)	-0.1383*** (0.0401)	-0.1680*** (0.0462)
Sample mean of the outcome variable	33.894						
Sample mean of the explanatory variable	1.000						
Number of observations	1,638						
Adjusted R-squared	0.055	0.099	0.118	0.190	0.198	0.198	0.196
<i>Regression Model Specifications:</i>							
Region fixed effects	✓	✓					
Province-level controls		✓					
Province fixed effects			✓				
District fixed effects				✓	✓	✓	✓
Municipality-level geographical controls					✓	✓	✓
Municipality-level demographic controls						✓	✓
Municipality-level economic controls							✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The first explanatory variable is a binary variable equal to 1 if the municipality experienced (at least) one episode of brigandage in the 1861-1870 period and to 0 otherwise, while the second explanatory variable counts the total number of brigandage events (Lecce et al., 2022). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with robust standard errors (in parentheses). *p*-values based on Conley (1999) adjustments for cross-sectional correlation up to a distance cutoff of 10, 25, and 50 kilometers (estimated with GMM and a uniform spatial weighting kernel) are reported in square brackets, curly braces, and angle chevrons, respectively. Coefficients are expressed in percentage points.

Table C9: Heterogeneous Effects of Brigandage Events on Constitutional Assembly Electoral Outcomes

	(1) Abruzzo and Molise	(2) Apulia and Basilicata	(3) Calabria	(4) Campania
<b>Monarchist Parties</b>				
<b>Number of brigandage episodes (IHS)</b>	-1.7758** (0.7283)	-0.7213 (1.2946)	-1.6442 (1.4424)	0.3503 (0.6768)
Sample mean of the outcome variable	16.955	29.526	27.994	31.173
Sample mean of the explanatory variable	1.523	1.967	0.652	1.849
Number of observations	415	348	382	493
Adjusted <i>R</i> -squared	0.574	0.119	0.179	0.097
<b>Anti-Monarchist Parties</b>				
<b>Number of brigandage episodes (IHS)</b>	1.3856 (0.8550)	2.7458** (1.0643)	1.5590 (1.1689)	0.9418* (0.5022)
Sample mean of the outcome variable	24.529	21.057	25.567	15.256
Sample mean of the explanatory variable	1.523	1.967	0.652	1.849
Number of observations	415	348	382	493
Adjusted <i>R</i> -squared	0.277	0.378	0.198	0.124
<b>Christian Democrats: Free Vote</b>				
<b>Number of brigandage episodes (IHS)</b>	-0.4000 (0.9269)	-2.5972** (1.2914)	0.3289 (1.2628)	-1.4913** (0.6803)
Sample mean of the outcome variable	40.446	31.252	31.626	32.002
Sample mean of the explanatory variable	1.523	1.967	0.652	1.849
Number of observations	415	348	382	493
Adjusted <i>R</i> -squared	0.140	0.052	0.217	0.221

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. Sample: regions indicated in the column header. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). The explanatory variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). All regressions are least squares with constituency fixed effects, municipality-level controls, and robust standard errors (in parentheses). Controls include altitude, ruggedness, latitude and longitude of the municipality, population in 1861 and population growth since 1821, the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Coefficients are expressed in percentage points.

Table C10: Effect of Brigandage Events on Crime and Fascist Repression

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome variable:	Crime rate	Violent crime rate	Fascist violence	Fascist local branch	Fascist vote share	Fascist vote share
	in 1874	in 1874	in 1920-22	in 1921	in 1921	in 1924
Number of brigandage episodes (IHS)	-0.4099* (0.2206)	-0.0747 (0.0918)	0.0021 (0.0018)	0.0265* (0.0145)	0.0048 (0.0030)	-0.0060 (0.0043)
Sample mean of the outcome variable	11.143	3.412	0.008	0.115	0.013	0.896
Number of observations	548	548	548	548	440	548
Adjusted R-squared	0.188	0.203	0.139	0.345	0.518	0.259

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. Sample: municipalities with non-missing outcome data from Acemoglu et al. (2022). ‘Crime rates in 1874’ outcomes are expressed as a share of population, ‘fascist violence events in 1920-22’ are per 1,000 inhabitants, ‘fascist local branch in 1921’ is a binary variable (0/1), and ‘fascist vote shares’ are from 0 to 1. The explanatory variable is constructed by taking the inverse hyperbolic sine transformation (arsinh) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). All regressions are least squares with district fixed effects and geographic, demographic, and economic controls. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Robust standard errors in parentheses.

Table C11: Effect of Brigandage Events on Referendum Voting Outcomes – Controlling for Fascist Repression

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome variable:	Turnout		Vote for Monarchy		Vote for Republic	
Number of brigandage episodes (IHS)	-0.3264** (0.1339)	-0.3334** (0.1337)	-2.4058*** (0.7168)	-2.3169*** (0.7288)	2.3815*** (0.7166)	2.2948*** (0.7292)
Sample mean of the outcome variable	89.757		67.351		26.498	
Number of observations	548		548		548	
Adjusted R-squared	0.269	0.265	0.292	0.294	0.297	0.300
<i>Fascism controls</i>		✓		✓		✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. Sample: municipalities with non-missing outcome data from Acemoglu et al. (2022). The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is constructed by taking the inverse hyperbolic sine transformation (arsinh) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). All regressions are least squares with district fixed effects and geographic, demographic, and economic controls. Geographic controls include altitude, raggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. Additional controls included in the regression model specifications behind the estimates in the even columns are crime rate and violent crime rates in 1874 (as a share of population), fascist violence events in 1920-22 (per 1,000 inhabitants), presence of a fascist local branch in 1921, and fascist vote share in 1924; fascist vote share in 1921 is not included because it is missing for almost 20% of our estimation sample – see online Appendix Table C10. Robust standard errors in parentheses.

## D Supplementary 2SLS Estimates

Table D1: Effect of the Instruments on Brigandage Events – First-Stage Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Distance to closest forest</b>	-0.0315** (0.0124)	-0.0457*** (0.0107)	-0.0232** (0.0108)	-0.0482*** (0.0112)	-0.0300*** (0.0116)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	6.1	13.4	3.9	17.0	6.1
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	6.4	18.4	4.6	18.6	6.7
Adjusted <i>R</i> -squared	0.047	0.113	0.380	0.452	0.504
<b>Terrain elevation</b>	0.0697*** (0.0124)	0.0819*** (0.0118)	0.0351*** (0.0116)	0.0859*** (0.0123)	0.0735*** (0.0129)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	35.5	52.0	10.1	50.6	33.5
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	31.5	48.3	9.2	48.7	32.4
Adjusted <i>R</i> -squared	0.064	0.133	0.382	0.463	0.513
<b>Distance to closest forest</b>	0.0018 (0.0138)	-0.0091 (0.0123)	-0.0120 (0.0116)	-0.0259** (0.0116)	-0.0102 (0.0120)
<b>Terrain elevation</b>	0.0704** (0.0136)	0.0783** (0.0132)	0.0313** (0.0123)	0.0779*** (0.0128)	0.0703*** (0.0134)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	17.7	26.2	5.5	27.7	17.1
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	15.8	25.3	5.3	26.7	16.5
Adjusted <i>R</i> -squared	0.064	0.133	0.382	0.465	0.513
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares, where the exogenous regressors are (i) the distance from the municipality's centroid to the closest forest (in kilometers) and (ii) terrain elevation (in 100 meters), while other covariates are indicated in the "Regression Model Specification" panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity.

Table D2: Effect of the Logged Instruments on Brigandage Events – First-Stage Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Distance to closest forest + 1 (logged)</b>	-0.1235** (0.0545)	-0.1890*** (0.0492)	-0.1145** (0.0478)	-0.2169*** (0.0498)	-0.1120** (0.0516)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	5.2	12.8	5.3	19.2	4.8
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	5.1	14.7	5.7	19.0	4.7
Adjusted <i>R</i> -squared	0.047	0.113	0.380	0.453	0.504
<b>Terrain elevation (logged)</b>	0.1468*** (0.0311)	0.1896*** (0.0274)	0.0996*** (0.0277)	0.2064*** (0.0308)	0.1813*** (0.0308)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	23.7	41.1	12.6	46.8	33.5
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	22.2	47.8	12.9	44.8	34.6
Adjusted <i>R</i> -squared	0.058	0.128	0.383	0.462	0.513
<b>Distance to closest forest + 1 (logged)</b>	0.0304 (0.0653)	-0.0082 (0.0595)	-0.0402 (0.0543)	-0.0897* (0.0534)	0.0199 (0.0555)
<b>Terrain elevation (logged)</b>	0.1562** (0.0373)	0.1871** (0.0332)	0.0887*** (0.0316)	0.1828** (0.0335)	0.1867** (0.0334)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	12.0	20.6	6.5	24.8	16.8
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	11.2	23.9	6.7	23.4	17.6
Adjusted <i>R</i> -squared	0.057	0.127	0.383	0.463	0.512
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variable is constructed by taking the inverse hyperbolic sine transformation ( $\text{arsinh}$ ) of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares, where the exogenous regressors are (i) the distance from the municipality's centroid to the closest forest (in kilometers – logged +1 to avoid dropping zero-valued observations) and (ii) terrain elevation (in 100 meters – logged), while other covariates are indicated in the "Regression Model Specification" panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity.

Table D3: Effect of Brigandage on Referendum Voting Outcomes – 2SLS Estimates, Short Radius

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Number of brigandage episodes (IHS)</b>	-4.1655*** (0.9289)	-3.7089*** (0.7199)	-3.0589*** (0.8425)	-2.4239*** (0.5406)	-2.5506*** (0.7318)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	17.6	27.4	19.1	47.6	25.8
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<b>Vote for Monarchy</b>					
<b>Number of brigandage episodes (IHS)</b>	-22.5155*** (4.5007)	-18.7919*** (3.2296)	-6.9040*** (2.6721)	-2.6495 (1.8406)	-2.9618 (2.3482)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	17.6	27.4	19.1	47.6	25.8
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<b>Vote for Republic</b>					
<b>Number of brigandage episodes (IHS)</b>	19.2702*** (4.0890)	16.1960*** (3.0110)	5.6368** (2.6184)	1.1137 (1.8505)	0.6789 (2.3392)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	17.6	27.4	19.1	47.6	25.8
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.05 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).



Table D4: Effect of Brigandage on Referendum Voting Outcomes – 2SLS Estimates, Medium Radius

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Number of brigandage episodes (IHS)</b>	-4.6379*** (0.9430)	-4.0411*** (0.7256)	-3.5292*** (0.8096)	-2.5207*** (0.4712)	-2.6699*** (0.6287)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	19.7	30.1	23.4	63.5	36.8
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<b>Vote for Monarchy</b>					
<b>Number of brigandage episodes (IHS)</b>	-21.0394*** (4.0689)	-18.1599*** (3.0442)	-6.6794*** (2.3722)	-2.0814 (1.5954)	-3.1117 (1.9735)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	19.7	30.1	23.4	63.5	36.8
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<b>Vote for Republic</b>					
<b>Number of brigandage episodes (IHS)</b>	17.9439*** (3.7167)	15.5999*** (2.8477)	5.2187** (2.3367)	0.6431 (1.6232)	1.0322 (1.9766)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	19.7	30.1	23.4	63.5	36.8
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.10 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).

Table D5: Effect of Brigandage on Referendum Voting Outcomes – 2SLS Estimates, Long Radius

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Number of brigandage episodes (IHS)</b>	-4.5477*** (0.9569)	-3.9120*** (0.7384)	-4.8695*** (1.2265)	-2.6801*** (0.4665)	-3.1686*** (0.6754)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	18.4	27.7	13.3	60.2	30.6
Partial <i>R</i> -squared	0.022	0.033	0.018	0.069	0.039
<b>Vote for Monarchy</b>					
<b>Number of brigandage episodes (IHS)</b>	-23.1486*** (4.5368)	-20.1287*** (3.4159)	-12.0312*** (3.5430)	-2.5353 (1.6341)	-4.3744** (2.1462)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	18.4	27.7	13.3	60.2	30.6
Partial <i>R</i> -squared	0.022	0.033	0.018	0.069	0.039
<b>Vote for Republic</b>					
<b>Number of brigandage episodes (IHS)</b>	19.8043*** (4.1156)	17.3317*** (3.1661)	9.6403*** (3.3549)	0.9511 (1.6675)	1.7677 (2.1276)
Number of observations	1,631	1,631	1,631	1,631	1,631
Effective first-stage <i>F</i> -statistic	18.4	27.7	13.3	60.2	30.6
Partial <i>R</i> -squared	0.022	0.033	0.018	0.069	0.039
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.25 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).

Table D6: Effect of the Instruments on Brigandage Events among Municipalities with at Least One Event – First-Stage Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Distance to closest forest</b>	-0.4171*** (0.1045)	-0.5560*** (0.0989)	-0.2402** (0.0934)	-0.3872*** (0.1033)	-0.2288** (0.1057)
Number of observations	1,126	1,126	1,126	1,126	1,126
Cragg-Donald Wald <i>F</i> -statistic	8.6	17.2	3.6	8.7	2.7
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	15.9	31.6	6.6	14.0	4.7
Adjusted <i>R</i> -squared	0.148	0.272	0.470	0.486	0.517
<b>Terrain elevation</b>	0.6450*** (0.1451)	0.8346*** (0.1371)	0.3343*** (0.1104)	0.6208*** (0.1306)	0.4964*** (0.1445)
Number of observations	1,126	1,126	1,126	1,126	1,126
Cragg-Donald Wald <i>F</i> -statistic	24.0	46.6	7.8	21.8	12.1
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	19.8	37.1	9.2	22.6	11.8
Adjusted <i>R</i> -squared	0.159	0.291	0.472	0.492	0.521
<b>Distance to closest forest</b>	-0.1511 (0.1175)	-0.2236* (0.1146)	-0.1371 (0.1053)	-0.2207* (0.1128)	-0.0917 (0.1186)
<b>Terrain elevation</b>	0.5855*** (0.1604)	0.7497*** (0.1517)	0.2906** (0.1210)	0.5519*** (0.1400)	0.4680*** (0.1568)
Number of observations	1,126	1,126	1,126	1,126	1,126
Cragg-Donald Wald <i>F</i> -statistic	12.5	24.5	4.4	12.2	6.3
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	12.3	24.0	6.3	15.0	7.1
Adjusted <i>R</i> -squared	0.159	0.291	0.472	0.492	0.521
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. Sample: municipalities with at least one episode of brigandage. The outcome variable counts the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares, where the exogenous regressors are (i) the distance from the municipality's centroid to the closest forest (in kilometers) and (ii) terrain elevation (in 100 meters), while other covariates are indicated in the "Regression Model Specification" panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity.

Table D7: Effect of the Instruments on Binary Exposure to Brigandage – First-Stage Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Distance to closest forest</b>	-0.0050 (0.0046)	-0.0081* (0.0045)	-0.0037 (0.0047)	-0.0092* (0.0048)	-0.0058 (0.0051)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	1.3	3.3	0.6	3.6	1.3
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	1.2	3.3	0.6	3.7	1.3
Adjusted <i>R</i> -squared	0.010	0.025	0.135	0.196	0.238
<b>Terrain elevation</b>	0.0137*** (0.0042)	0.0159*** (0.0041)	0.0065 (0.0046)	0.0188*** (0.0049)	0.0164*** (0.0053)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	11.2	15.0	2.1	13.9	9.2
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	10.9	14.8	2.1	14.7	9.7
Adjusted <i>R</i> -squared	0.016	0.032	0.136	0.201	0.242
<b>Distance to closest forest</b>	0.0019 (0.0052)	-0.0008 (0.0050)	-0.0015 (0.0050)	-0.0042 (0.0051)	-0.0013 (0.0054)
<b>Terrain elevation</b>	0.0145*** (0.0046)	0.0156*** (0.0046)	0.0061 (0.0049)	0.0175*** (0.0052)	0.0160*** (0.0055)
Number of observations	1,631	1,631	1,631	1,631	1,631
Cragg-Donald Wald <i>F</i> -statistic	5.7	7.5	1.1	7.3	4.6
Kleibergen-Paap <i>rk</i> Wald <i>F</i> -statistic	5.6	7.4	1.1	7.8	4.9
Adjusted <i>R</i> -squared	0.015	0.032	0.136	0.201	0.242
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variable is a binary variable equal to 1 if the municipality experienced (at least) one episode of brigandage in the 1861-1870 period and to 0 otherwise (Lecce et al., 2022). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares, where the exogenous regressors are (i) the distance from the municipality's centroid to the closest forest (in kilometers) and (ii) terrain elevation (in 100 meters), while other covariates are indicated in the "Regression Model Specification" panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity.

Table D8: Effect of Brigandage on Constituent Assembly Voting Outcomes – 2SLS Estimates, Short Radius

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	-11.8621*** (3.0648)	-9.6189*** (2.3211)	-2.6988 (2.5972)	-2.0037 (1.6235)	-4.0174* (2.1874)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.7	27.4	19.1	47.6	25.6
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<b>Anti-Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	8.1615*** (2.4347)	7.2213*** (1.9782)	2.4153 (2.3121)	-1.7918 (1.7551)	-3.1578 (2.2339)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.7	27.4	19.1	47.6	25.6
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<b>Christian Democrats: Free Vote</b>					
<b>Number of brigandage episodes (IHS)</b>	3.8039 (2.3583)	2.4318 (1.9198)	-4.7372* (2.4650)	0.8375 (1.8005)	3.5253 (2.3983)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	17.7	27.4	19.1	47.6	25.6
Partial <i>R</i> -squared	0.022	0.034	0.024	0.055	0.033
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.05 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).

Table D9: Effect of Brigandage on Constituent Assembly Voting Outcomes – 2SLS Estimates, Medium Radius

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	-10.0895*** (2.6896)	-8.7745*** (2.1550)	-3.6923 (2.2457)	-1.9977 (1.3698)	-4.3701** (1.8025)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	19.7	30.2	23.4	63.5	36.7
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<b>Anti-Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	7.4120*** (2.2635)	6.8173*** (1.8868)	1.8408 (2.0527)	-2.1127 (1.5306)	-2.7995 (1.8761)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	19.7	30.2	23.4	63.5	36.7
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<b>Christian Democrats: Free Vote</b>					
<b>Number of brigandage episodes (IHS)</b>	2.3674 (2.1583)	1.8021 (1.8318)	-3.2289 (2.2074)	1.1447 (1.5570)	3.7731* (2.0103)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	19.7	30.2	23.4	63.5	36.7
Partial <i>R</i> -squared	0.024	0.036	0.029	0.072	0.046
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.10 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).

Table D10: Effect of Brigandage on Constituent Assembly Voting Outcomes – 2SLS Estimates, Long Radius

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	-11.4941*** (3.0223)	-10.2490*** (2.4365)	-3.4199 (2.8687)	-0.8426 (1.3718)	-4.5631** (1.8632)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	18.5	27.7	13.4	60.7	30.8
Partial <i>R</i> -squared	0.023	0.033	0.018	0.070	0.039
<b>Anti-Monarchist Parties</b>					
<b>Number of brigandage episodes (IHS)</b>	8.3715*** (2.4346)	7.7121*** (2.0331)	3.7486 (2.7092)	-2.0561 (1.5746)	-2.8883 (2.0620)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	18.5	27.7	13.4	60.7	30.8
Partial <i>R</i> -squared	0.023	0.033	0.018	0.070	0.039
<b>Christian Democrats: Free Vote</b>					
<b>Number of brigandage episodes (IHS)</b>	3.2655 (2.3036)	2.7993 (1.9587)	-7.0483** (2.8894)	-0.3810 (1.5659)	3.9777* (2.1366)
Number of observations	1,629	1,629	1,629	1,629	1,629
Effective first-stage <i>F</i> -statistic	18.5	27.7	13.4	60.7	30.8
Partial <i>R</i> -squared	0.023	0.033	0.018	0.070	0.039
<i>Regression Model Specifications:</i>					
Municipality-level demographic controls	✓	✓	✓	✓	✓
Municipality-level economic controls		✓	✓	✓	✓
Region fixed effects			✓		
Province fixed effects				✓	
District fixed effects					✓

*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are two-stage least squares (2SLS), where the endogenous variable is equal to the inverse hyperbolic sine of the total number of brigandage events reported for the municipality in the 1861-1870 period (Lecce et al., 2022), the exogenous regressors or included instruments are the share of forest cover in a radius of degree 0.25 and terrain elevation, and excluded instruments are indicated in the “Regression Model Specification” panel at the bottom of the table. Standard errors (in parentheses) are robust to arbitrary heteroskedasticity. Effective *F*-statistics are based on the weak instrument test of Montiel Olea and Pflueger (2013).

## E Supplementary SRDD Estimates

Figure E1: Exposure to Pica Law

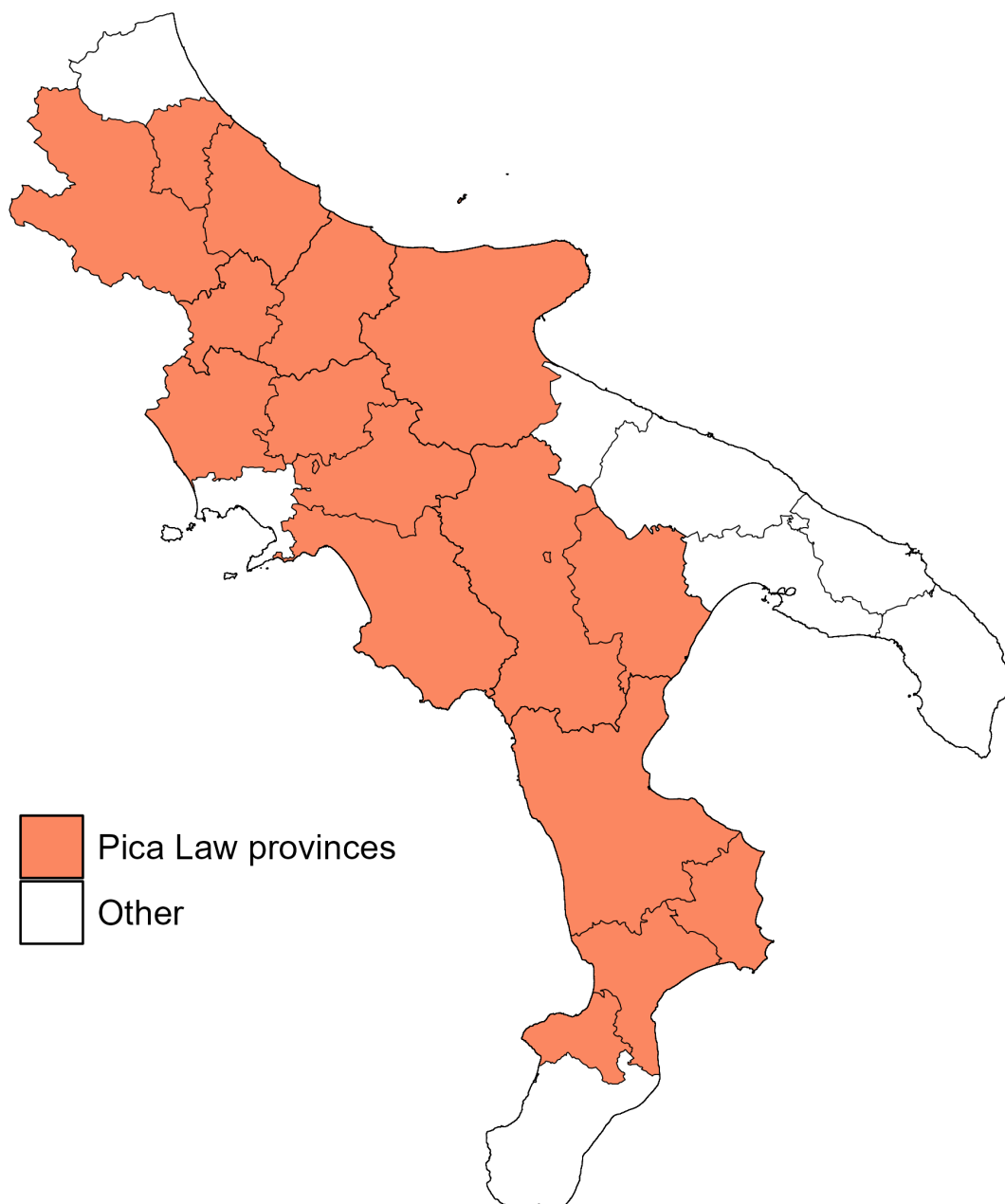
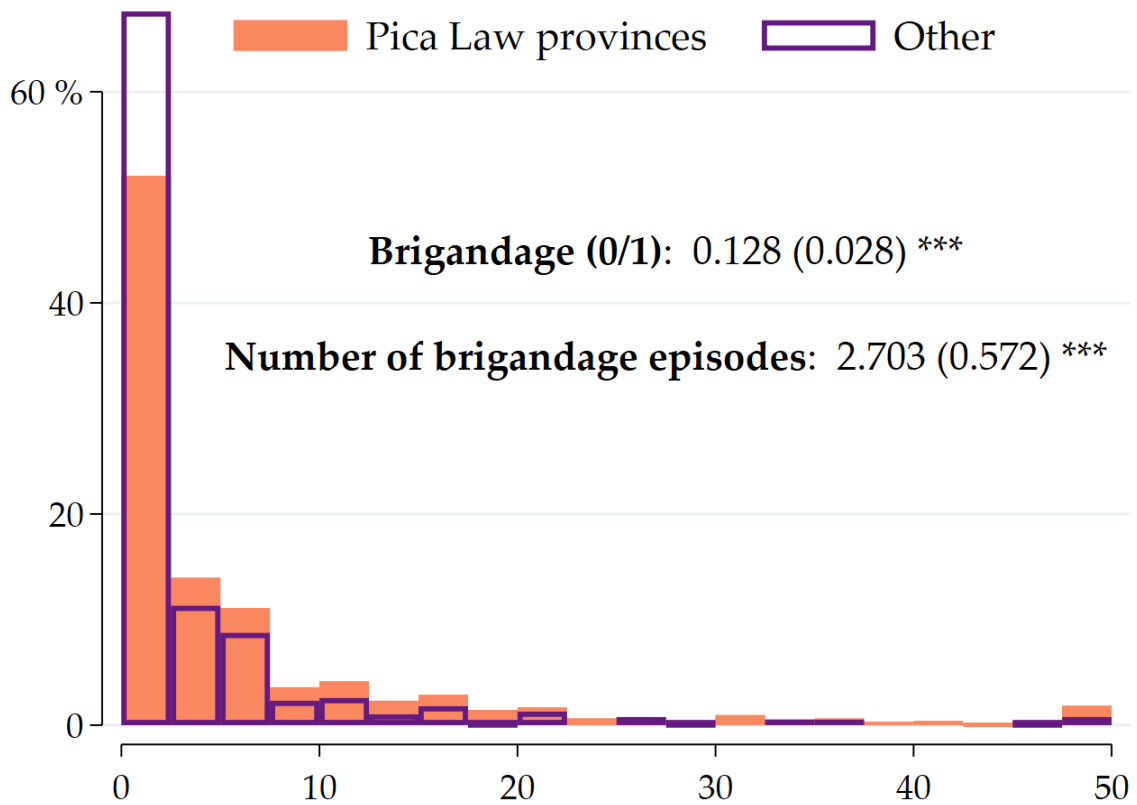




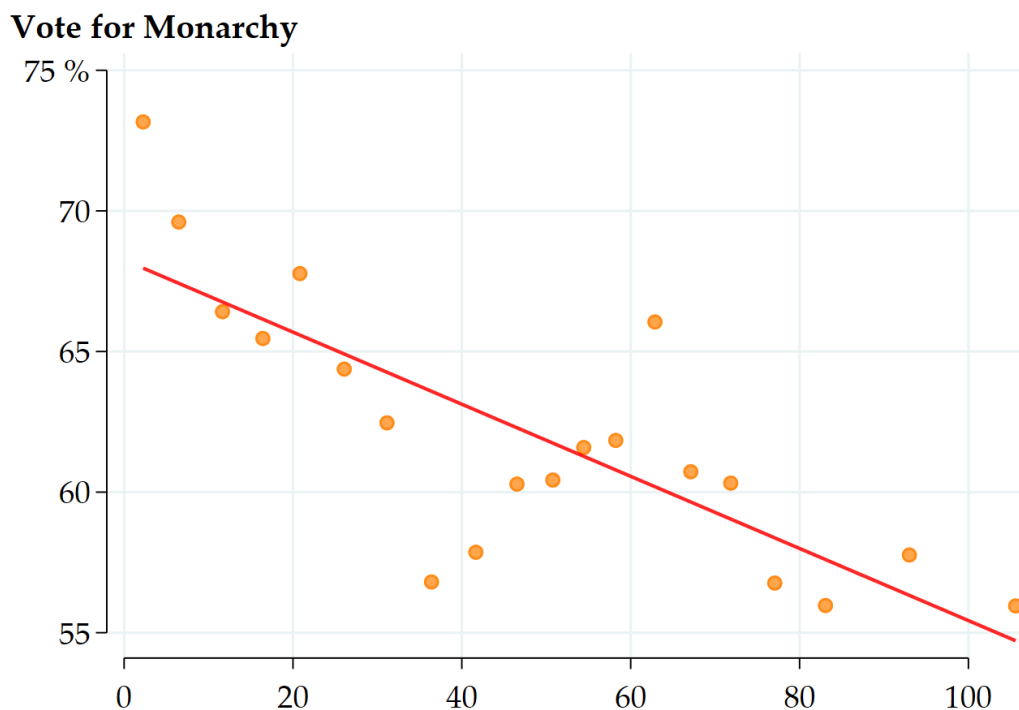
Figure E2: Distribution of Brigandage by Pica Law



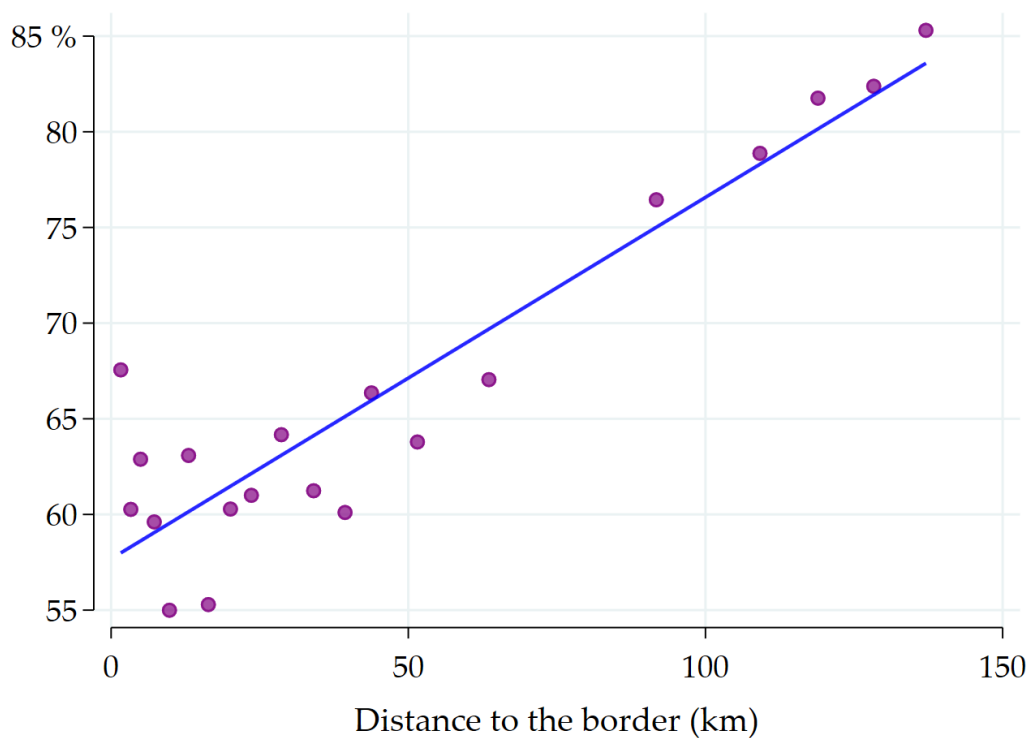
*Notes:* the vertical bars plot comparative histograms showing the distribution of the number of brigandage episodes (capped at 50 – i.e., the 99th percentile – for visualization purposes) for municipalities in provinces with Pica Law versus other provinces, scaled to percentages. The coefficients reported in the middle of the graph represent differences-in-means of the outcome in bold by Pica Law exposure (0/1). Robust standard errors in parentheses. \*\*\* indicates significance at the 1 percent level.

Figure E3: Non-Parametric Relationship Between Constitutional Assembly Voting Outcomes and Repression Intensity

(a) Pica Law Provinces



(b) Other Provinces



Notes: binned scatterplots are obtained by grouping votes (on the y-axis) and distance to the Pica Law border (on the x-axis) into twenty equal-sized bins. The solid lines plot a linear fit, i.e., the prediction for votes on distance to the border. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946.

Table E1: Effect of Brigandage Repression on Referendum Voting Outcomes – Spatial RDD Estimates Controlling for Distance from the Border

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Pica Law (0/1)</b>	0.124 (0.257)	1.414* (0.723)	2.166*** (0.722)	2.128*** (0.720)	2.169*** (0.722)
Sample mean of the outcome variable in provinces without Pica Law	88.789				
Number of observations	1,631				
Adjusted <i>R</i> -squared	0.061	0.107	0.154	0.161	0.162
<b>Vote for Monarchy</b>					
<b>Pica Law (0/1)</b>	-5.900*** (1.018)	-5.205* (3.056)	-4.848 (3.068)	-4.851 (3.064)	-4.545 (3.067)
Sample mean of the outcome variable in provinces without Pica Law	66.586				
Number of observations	1,631				
Adjusted <i>R</i> -squared	0.136	0.195	0.199	0.200	0.204
<b>Vote for Republic</b>					
<b>Pica Law (0/1)</b>	5.170*** (1.027)	6.701** (3.109)	6.648** (3.127)	6.676** (3.122)	6.346** (3.123)
Sample mean of the outcome variable in provinces without Pica Law	27.924				
Number of observations	1,631				
Adjusted <i>R</i> -squared	0.138	0.198	0.199	0.200	0.205
<i>Regression Model Specifications:</i>					
Log-distance from the border	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

*Notes:* \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is a binary variable equal to 1 if the municipality is in a province with Pica Law and to 0 otherwise (online Appendix Figure E1). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

Table E2: Effect of Brigandage Repression on Constitutional Assembly Voting Outcomes – Spatial RDD Estimates Controlling for Distance from the Border

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	-1.003 (0.961)	-5.115* (3.015)	-4.601 (3.017)	-4.643 (3.020)	-4.340 (3.027)
Sample mean of the outcome variable in provinces without Pica Law	26.497				
Number of observations	1,629				
Adjusted R-squared	0.198	0.238	0.243	0.242	0.247
<b>Anti-Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	2.607*** (0.920)	4.650 (2.919)	5.002* (2.932)	5.028* (2.927)	4.739 (2.916)
Sample mean of the outcome variable in provinces without Pica Law	20.901				
Number of observations	1,629				
Adjusted R-squared	0.091	0.132	0.132	0.134	0.144
<b>Christian Democrats: Free Vote</b>					
<b>Pica Law (0/1)</b>	-1.530 (1.051)	-2.804 (2.967)	-3.460 (2.978)	-3.367 (2.977)	-3.420 (2.988)
Sample mean of the outcome variable in provinces without Pica Law	34.429				
Number of observations	1,629				
Adjusted R-squared	0.055	0.089	0.091	0.094	0.091
<i>Regression Model Specifications:</i>					
Log-distance from the border	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the vote shares (from 0 to 100) for the election for the Constituent Assembly, held in Italy on 2 June 1946, and are specified in the bold panel header. “Monarchist Parties” are the Italian Liberal Party (PLI), the Common Man’s Front (UQ), and the National Bloc of Freedom (BNL). “Anti-Monarchist Parties” are the Italian Socialist Party (PSIUP), the Italian Communist Party (PCI), the Italian Republican Party (PRI), the Action Party (PdA), and the Republican Progressive Democratic Front (FDPR). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude and raggedness of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

Table E3: Heterogeneous Effects of Brigandage Repression on Referendum Voting Outcomes – Spatial RDD Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Turnout</b>					
<b>Pica Law (0/1)</b>	-0.024 (0.255)	1.408* (0.731)	2.130*** (0.727)	2.103*** (0.726)	2.148*** (0.727)
Log-distance to the border (mean-centered)	0.428*** (0.163)	-0.283 (0.246)	-0.240 (0.238)	-0.225 (0.237)	-0.224 (0.238)
Pica Law × log-distance	-0.800*** (0.191)	0.034 (0.277)	0.194 (0.281)	0.137 (0.279)	0.117 (0.280)
Sample mean of the outcome variable in provinces without Pica Law	88.789				
Number of observations	1,631				
Adjusted R-squared	0.069	0.106	0.153	0.161	0.162
<b>Vote for Monarchy</b>					
<b>Pica Law (0/1)</b>	-7.299*** (0.975)	-3.969 (3.015)	-3.764 (3.030)	-3.789 (3.026)	-3.523 (3.028)
Log-distance to the border (mean-centered)	4.636*** (0.731)	4.617*** (1.042)	4.474*** (1.027)	4.496*** (1.021)	4.382*** (1.018)
Pica Law × log-distance	-7.559*** (0.814)	-6.336*** (1.182)	-5.832*** (1.182)	-5.845*** (1.179)	-5.742*** (1.175)
Sample mean of the outcome variable in provinces without Pica Law	66.586				
Number of observations	1,631				
Adjusted R-squared	0.174	0.208	0.210	0.211	0.214
<b>Vote for Republic</b>					
<b>Pica Law (0/1)</b>	6.554*** (0.985)	5.515* (3.068)	5.562* (3.086)	5.605* (3.080)	5.312* (3.082)
Log-distance to the border (mean-centered)	-4.689*** (0.715)	-4.673*** (1.020)	-4.586*** (1.019)	-4.613*** (1.013)	-4.503*** (1.007)
Pica Law × log-distance	7.478*** (0.801)	6.081*** (1.162)	5.843*** (1.174)	5.891*** (1.170)	5.806*** (1.166)
Sample mean of the outcome variable in provinces without Pica Law	27.924				
Number of observations	1,631				
Adjusted R-squared	0.175	0.210	0.210	0.211	0.215
<i>Regression Model Specifications:</i>					
Linear polynomial in longitude–latitude	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is a binary variable equal to 1 if the municipality is in a province with Pica Law and to 0 otherwise (online Appendix Figure E1). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

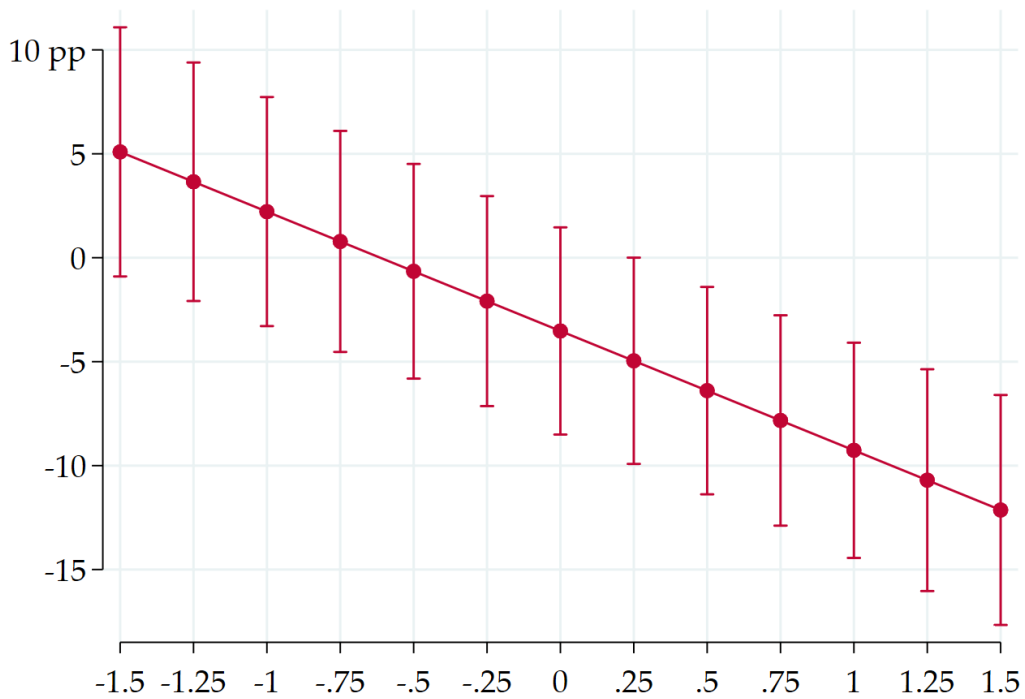
Table E4: Heterogeneous Effect of Brigandage Repression on Constitutional Assembly Voting Outcomes – Spatial RDD Estimates

	(1)	(2)	(3)	(4)	(5)
<b>Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	-1.510 (0.978)	-5.101* (3.033)	-4.717 (3.037)	-4.744 (3.039)	-4.454 (3.045)
Log-distance to the border (mean-centered)	2.628*** (0.749)	0.943 (1.075)	0.758 (1.067)	0.765 (1.069)	0.653 (1.066)
Pica Law × log-distance	-2.737*** (0.849)	-0.074 (1.224)	0.623 (1.231)	0.553 (1.236)	0.643 (1.233)
Sample mean of the outcome variable in provinces without Pica Law	26.497				
Number of observations	1,629				
Adjusted R-squared	0.203	0.238	0.243	0.242	0.246
<b>Anti-Monarchist Parties</b>					
<b>Pica Law (0/1)</b>	3.588*** (0.907)	3.992 (2.900)	4.341 (2.911)	4.373 (2.905)	4.105 (2.894)
Log-distance to the border (mean-centered)	-4.431*** (0.602)	-3.655*** (0.932)	-3.670*** (0.951)	-3.697*** (0.946)	-3.610*** (0.940)
Pica Law × log-distance	5.302*** (0.676)	3.371*** (1.059)	3.556*** (1.084)	3.598*** (1.082)	3.560*** (1.075)
Sample mean of the outcome variable in provinces without Pica Law	20.901				
Number of observations	1,629				
Adjusted R-squared	0.117	0.137	0.137	0.139	0.149
<b>Christian Democrats: Free Vote</b>					
<b>Pica Law (0/1)</b>	-1.646 (1.078)	-1.942 (2.952)	-2.574 (2.960)	-2.522 (2.960)	-2.578 (2.972)
Log-distance to the border (mean-centered)	0.629 (0.688)	3.427*** (0.858)	3.459*** (0.867)	3.470*** (0.864)	3.520*** (0.867)
Pica Law × log-distance	-0.630 (0.797)	-4.417*** (1.033)	-4.765*** (1.053)	-4.652*** (1.053)	-4.729*** (1.057)
Sample mean of the outcome variable in provinces without Pica Law	34.429				
Number of observations	1,629				
Adjusted R-squared	0.054	0.096	0.099	0.102	0.099
<i>Regression Model Specifications:</i>					
Linear polynomial in longitude–latitude	✓	✓	✓	✓	✓
Province-level controls		✓	✓	✓	✓
Municipality-level geographical controls			✓	✓	✓
Municipality-level demographic controls				✓	✓
Municipality-level economic controls					✓

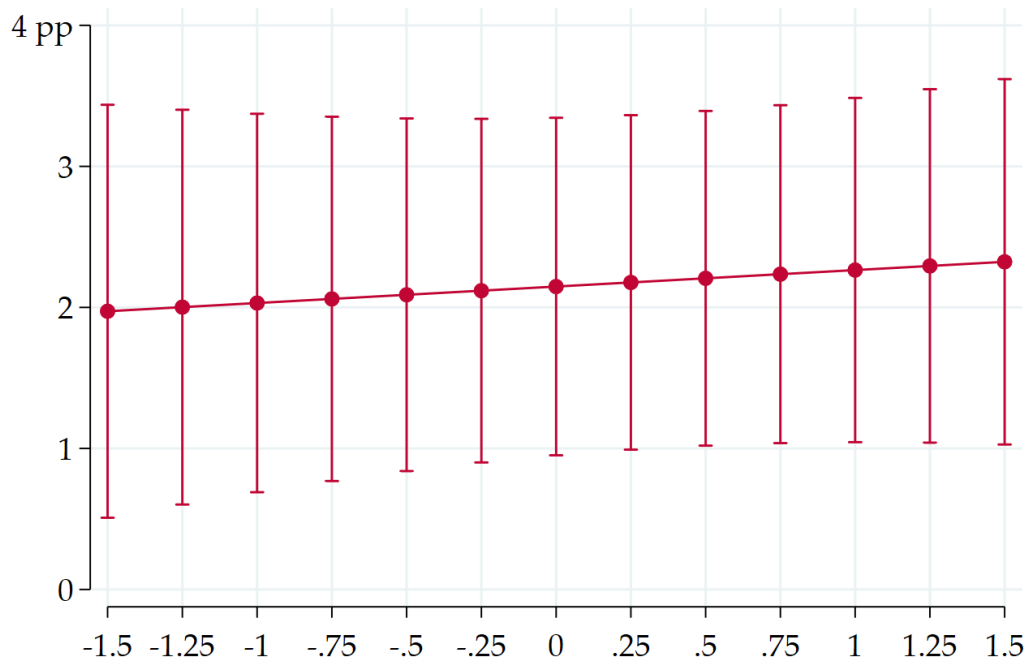
Notes: \*Significant at 10%. \*\*Significant at 5%. \*\*\*Significant at 1%. Unit of observation: municipality. The outcome variables refer to the Institutional Referendum, held in Italy on 2 June 1946, are specified in the bold panel header, and range from 0 to 100. The explanatory variable is a binary variable equal to 1 if the municipality is in a province with Pica Law and to 0 otherwise (online Appendix Figure E1). Province controls include number of men aged 19-25 eligible for military draft, real estate owners, liberal arts professional workers, farmers, artisans and house servants, fishermen and sailors in 1834-35, as well as the average amount of duties on milled grain, revenues, and public expenditures between 1850 and 1851. Geographic controls include altitude, ruggedness, latitude and longitude of the municipality. Demographic controls include population in 1861 and population growth since 1821. Economic controls include the presence of an archbishop, a bishop, a civil court, a criminal court, a commercial court, a high school, a middle school, a manufacture, or a hospital in the municipality in 1839. All regressions are least squares with border fixed effects and robust standard errors (in parentheses). Coefficients are expressed in percentage points.

Figure E4: Marginal Effects of Pica Law on Referendum Voting Outcomes by Repression Intensity

(a) **Votes for Monarchy**



(b) **Turnout**



Log-distance to the border (km) centered at the mean

Notes: estimates are obtained by estimating Equation 3 and predicting the marginal (or partial) effect at each value of the covariate  $\log(\text{Distance})$  on the x-axis. 90 percent confidence interval are based on least squares regressions with robust standard errors. The outcome variables (in bold in the sub-figure caption) refer to the Institutional Referendum, held in Italy on 2 June 1946.

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