

# Resistance to Institutions and Cultural Distance Brigandage in Post-Unification Italy\*

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## Abstract

This work studies the impact of cultural distance on *institutional rejection*, a short-run response to institutional transplantations which may nonetheless display long-lasting repercussions on social and economic outcomes. We investigate this in the context of the Italian unification, a typical instance of modern state-building which began with the Piedmontese occupation of Southern Italy. We construct a digitized database of all the reported episodes of *brigandage*, a form of anti-unitary violent uprising. This data allows us to precisely assess the intensity of the short-run rejection of transplanted institutions at the municipal level. We use geographic distances from settlements of Piedmontese descent to build a metric of cultural distance between each municipality and the new rulers. Our results document that cultural distance was significantly associated with a higher intensity of institutional rejection. This result is robust to the inclusion of several geographic and historical controls and is not replicated when using other ethnolinguistic enclaves as placebo reference points. Additionally, exploiting historical data on turnout in national elections, we provide suggestive evidence supporting the correlation between institutional rejection and lower levels of social capital until the turn of the twentieth century.

**Keywords:** Institutions, Institutional Transplantations, Culture, Social Unrest, Social Capital

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# 1 Introduction

The emergence of contemporary European states during the nineteenth century has often coincided with the occurrence of nation building processes. In the case of Italy and France, for instance, the rulers introduced uniform institutions across acquired territories. They also implemented a range of policies aimed at creating a unified legal environment and, possibly, a unified national identity<sup>1</sup>. However, phenomena such as the rise of secessionist movements and the lack of cultural convergence between regions of the same country (Alesina et al., 2017) seem to suggest that the process of nation building was not always successful.

In this paper, we investigate whether cultural differences play a relevant role in the short-run rejection of new institutions. Such rejection may hinder state formation processes in the short run. It can also have long-lasting effects on important aspects of the nation building process, such as convergence of social capital. We address this question by analyzing the consequences of the imposition of Piedmontese institutional features on the territories of continental Southern Italy during Italian unification. Three features of the Italian unification make it an ideal setting for studying our question. First, the institutional rejection took on the very visible form of violent unrest by the local population known as *brigandage*. Secondly, historical migrations provide us with local variation in cultural distance from Piedmont across southern municipalities. Finally, the incompleteness of Italy's nation building process is reflected by persistent large differences in social capital, whose intensity may be partially evaluated in the light of that instance of institutional rejection.

The main contributions of our paper are threefold: first, we construct a novel dataset of all episodes of brigandage at the municipality level; secondly, we exploit our data to quantify the intensity of institutional rejection across southern Italy; finally, we find strong evidence that rejection is closely linked to cultural distance from Piedmont. We measure cultural distance by the geographical distance from communities descending from near-Piedmontese<sup>2</sup> settlers, whose persistent cultural similarity with their ancestors is well documented by historians. A prolonged interaction with Piedmontese descendants, occasional intermarriages and protracted exposure to Piedmontese social norms will increase the cultural proximity of communities close to near-Piedmontese settlements to the latter and, therefore, to Piedmont itself. By exploiting the number of brigandage episodes, we directly test whether these historical interactions affect the likelihood that communities accept new institutions. Our results show that doubling the distance from Piedmontese enclaves increases by 0.4 the number of uprisings per 1,000 inhabitants. This corresponds to a sizable 20% increase given that the average number of uprisings is around 1.9 per

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<sup>1</sup>See Alesina and Reich (2015) for historical examples of nation building in Europe.

<sup>2</sup>See Section 2.

1,000 inhabitants.

Our results are robust to a wide range of alternative specifications and the inclusion of controls. For example, we include alternative measures of distance using the ancient Roman road network, in light of the consideration that social interactions depend on communications through accessible roads. Aside from measurement issues, one major threat to identification is that ethno-linguistic enclaves may display features (i.e., secludedness) that drive our results. For example, near-Piedmontese communities could display higher social cohesion or have developed internal social structures which reduce their propensity to reject violently the transplanted institutions. To address this concern, we perform several placebo tests. In particular, we replicate our analysis with different cultural enclaves (e.g. Greek, Croatian and Albanian), for which we do not find any significant correlation with the number of brigandage episodes. Our evidence thus supports the claim that cultural proximity between the environment where the institutions originated and the one where they are applied plays a crucial role in determining these institutions' ability to function.

After establishing the link between cultural proximity and institutional rejection, we tie our measure of institutional rejection to electoral turnout, a typical indicator of social capital. Specifically, we show the change in electoral turnout between the 1861 and 1865 national elections to be strongly negatively correlated with the intensity of brigandage episodes occurring between 1862 and 1865. Institutional rejection thus induces lower social capital. We also explore the relationship between episodes of brigandage and electoral turnout in subsequent elections. We find suggestive evidence that municipalities with a large number of uprisings had depressed turnout well into the early 20th century. This 40 year long effect of brigandage suggests that the short-term rejection of the Piedmontese institutions had an impact on the nation-building process through its long-lasting influence on social capital accumulation.

Our findings add new evidence to the literature focusing on institutions and culture. The positive impact of both well-functioning institutions and favorable cultural traits on economic growth has been widely documented in the recent economic literature<sup>3</sup>. However, these drivers of economic prosperity will, in general, evolve jointly (Bisin and Verdier, 2015) and interact with each other (Tabellini, 2010; Alesina and Giuliano, 2015; Lowes et al., 2017). The economic analysis of institutions and institutional change often implicitly assumes cultural homogeneity (or downplays the role of cultural differences) in the underlying environment (Acemoglu et al., 2011), but empirical evidence suggests that the same institution can have different effects when local norms and social capital are different (Putnam, 1993). In particular, the way legal and administrative institutions work and their effectiveness in terms of

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<sup>3</sup>See Acemoglu et al., 2005, and Guiso et al., 2006, for general introductions.

economic outcomes are deeply affected by the cultural traits of the environment to which they are applied<sup>4</sup>.

The main empirical challenge in identifying the effect of cultural traits on institutional effectiveness is that institutional variation closely tracks cultural variation<sup>5</sup>. Institutional transplantations – the deliberate, rapid and forced exportations of institutions from one location (the *donor environment*) to another (the *recipient environment*) – can provide variation in institutions uncorrelated with underlying cultural traits. Transplantations involving several recipients simultaneously are particularly useful, as they often lead to the imposition of a uniform set of institutions on culturally diverse groups. This allows one to overcome the potential endogeneity issue related to the process by which institutions arise from a given cultural environment, as the transplanted institutions are almost never designed to be transplanted. Finally, as we shall see shortly, if one is interested not so much in the role of specific traits as in that of the recipient’s culture relative to the donor’s, the problem of measuring the cultural traits is reduced to that of defining and assessing a *cultural distance* between donor and recipient.

Our findings complement and extend the results of Berkowitz et al. (2003a), who argue that what matters for a transplanted institution to work well is its degree of adaptation to local legal norms and pre-existing formal and informal institutions, rather than the legal family to which the transplanted institution belongs (see also Guinnane, 1994; Berkowitz et al., 2003b; Pistor et al., 2003). While Berkowitz et al. (2003a) relied on cross-country variation over long horizons, we exploit a single episode and use finer municipality-level variation. This avoids issues of undercontrolling for various economic factors, and allows us to isolate the importance of cultural proximity. In the same spirit, Lecce and Ogliari (2017) show that the key to long-run success of institutional transplantations is not the set of underlying cultural traits, but cultural proximity between donor and recipient. They hypothesize that, as institutions are borne out of a particular cultural environment, transplants would be more easily accepted by similar cultures. They test their hypothesis by studying the imposition of French institutions on Germanic states during the Napoleonic oc-

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<sup>4</sup>See, among others, Guinnane (1994), Acemoglu and Jackson (2017), Guiso et al. (2016).

<sup>5</sup>Some examples of the difficulties arising when studying the interplay between cultural traits and institutions: it is hard for identical institutions to arise endogenously from different cultural milieus (Tabellini and Greif, 2010); the same institution may display different degrees of effectiveness when applied to different environments because of the institutional, not the cultural, background of such environments (Ma, 2013); culture itself may be influenced by institutional arrangements, implying an obvious endogeneity issue (Aldashev et al., 2012); besides, cultural traits are hard to pin down and measure in absolute terms: ‘culture’ is made of preferences and beliefs and, although several ingenious quantifications have been proposed (e.g. Guiso et al., 2004), all inevitably capture only some aspects of a more general, yet unfathomable picture.

cupation and their long-run effectiveness, assessing the effect of cultural proximity on what we may call the degree of *institutional sedimentation*. But, in the short run, transplanted institutions face the possibility of immediate rejection by the recipient: this may come in different forms, ranging from violent uprising against the donor (as in our case) to the local bureaucracy preventing the application of the foreign law or using the transplanted institutions to different ends than those they were originally meant to achieve (as in Kurkchyan, 2009). In this paper, we build a measure to quantitatively assess the degree of *institutional acceptance* by recipient communities and investigate whether cultural proximity to the donor, by decreasing the intensity of rejection, facilitates the possibility for the transplanted institutions to take hold in the first place. In a different context, Fisman et al. (2017) stress the importance of cultural proximity in mitigating informational asymmetries in the Indian lending market.

We also connect with other works in the economic literature that focus on Italian post-unitary brigandage. Most notably, Accetturo et al. (2016) make use of a “side effect” of brigandage, i.e. the passing of the draconian Pica Law in 1863, to study the effects of divisive policies on voter turnout in the aftermath of the unification<sup>6</sup>. Additionally, Bracco et al. (2015) show that communities of Albanian ancestry, still residing in Southern Italy, have retained specific cultural traits and they also display different levels of civic capital and attitudes towards political participation. To the best of our knowledge, though, our paper is the first to link near-Piedmontese (and, more in general, non-indigenous) ancestry in Southern Italy with the intensity of brigandage.

The rest of the paper is organized as follows. Section 2 reviews the historical background, discussing the political situation of the Italian peninsula before the military invasion and in the aftermath of the unification, the guerrilla episodes following the creation of the new state, and the history of the Northern cultural enclaves settled in Southern Italy. Section 3 illustrates our data and provides some descriptive statistics. Section 4 presents our identification strategy, illustrates the main results and discusses their robustness. Section 5 investigates the relationships between brigandage and social capital in the long-run. Finally, Section 6 concludes.

## 2 Historical context

### 2.1 Italian unification and brigandage

Our analysis is allowed by the peculiar historical circumstances that arose within the Italian unification process of the 1860s. Between the spring and the summer

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<sup>6</sup>Amodio (2012) show that three selected and notable brigandage episodes generate social capital destruction and also have long-lasting effects on voter turnout.

of 1860, after landing in Sicily, general Garibaldi had occupied the territory of the former Kingdom of the Two Sicilies, which included Sicily and continental Southern Italy (henceforth ‘cSI’) and had hitherto been ruled by the Bourbon dynasty<sup>7</sup>. The degree to which the Piedmontese king (Victor Emmanuel of Savoy) and prime minister (Camillo Cavour) supported Garibaldi’s initiative is still an object of debate among historians. Be that as it may, by the late summer of 1860 Garibaldi was ruling as *pro tempore* dictator in the name of the Savoy, after having ousted the legitimate king from Naples, the capital city, and forced him and the remnants of the Bourbon army to retreat within the walls of the city-fortress of Gaeta, near the border with the Papal States<sup>8</sup>. Unable to further delay an official military intervention, the Piedmontese army descended into continental Southern Italy and, by October 1860, the former Bourbon territories had been integrated within the Piedmontese kingdom. The intention of the Piedmontese to extend their law and administration to the invaded areas was common knowledge even before the territorial occupation was completed. After all, the explicit intention of the Savoy king was to unify all Italian-speaking territories under his rule. Nor was there any signal that Victor Emmanuel and Cavour would adopt any form of federalism: following the post-Napoleonic French tradition, Savoy rule was not authoritarian but heavily centralized. The first months of Piedmontese rule, when Bourbon resistance was still thriving within the military strongholds, were characterized by unorganized popular uprisings in rural towns, most of which were sparked by instigators affiliated with either the former king or the Church. This first phase of reaction against the Piedmontese invasion faded as quick as the authorities which supported it: Gaeta surrendered in February 1861 and the Church, already deprived of more than half of its former territories, decreased the intensity of hostilities around that time. Still, it soon became clear that insurgencies, albeit instigated by loyalist agents, were founded upon deeper roots.

Between the last months of 1860 and the early months of 1861, the Piedmontese lieutenants began issuing decrees involving both the extension of Savoy administration and special measures directed to the appeasement of Southern Italy. Three aspects of this legislation had a direct impact on the everyday social and economic life of the masses. First, in line with its 19th-century liberal ideology, the Piedmontese government was unambiguously anti-clerical, and its civil and penal law contained hardline provisions against the Church’s temporal power and economic stance. Religious orders were either abolished or deprived of land and other possessions. This constituted a shock to the rural communities of cSI, not only on cultural or ideological grounds, but also because ecclesiastical organizations would often intervene

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<sup>7</sup>For a pre-unitary administrative map of cSI, see Figure 1. Most of what followed is based on historical research by Molfese (1964).

<sup>8</sup>Other Southern troops gathered in the strongholds at Messina (Sicily) and Civitella del Tronto (at the north-eastern extremity of the kingdom).

in favor of the poorest and weakest during times of economic downturn. A similar mechanism underlies the reasons behind the negative reception of Piedmontese land reforms by the lower classes. Southern Italy was organized as a post-feudal economy, with a tiny class of landlords owning large estates (the so-called *latifondi*), an equally small but increasingly wealthy and powerful urban middle class, and a large mass of landless and mostly propertyless peasants<sup>9</sup>. The possessive capacity of those few landlords was limited by the presence of state-owned lands (*terre demaniali*). These plots<sup>10</sup> were directly owned by the Crown and could be used as pasture or farming land by peasants, guaranteeing subsistence in times of poor harvest and/or low employment (Liberati, 1988). Retrieving an old plan drafted by the Napoleonic government at the beginning of the century (and which had already sparked an insurgency at the time: see Pappalardo, 2014), the new government decided to partition and auction off these lands. The reorganization of land usage benefited the urban bourgeoisie (which supported national unification) and some pro-Piedmont landowners, but was perceived as a tragedy by the peasants, reinforcing their connection with the former king and the Church, who were thought of as friendly authorities, as opposed to local nobility and the foreign invaders. Finally, the Savoy decrees contained provisions for the inclusion within the newly-formed national army of both ex-Bourbon and new recruits: to this end, compulsory military draft was programmed for 1861 and the subsequent years<sup>11</sup>.

Thus by 1861 several communities of the rural areas, concentrated within the inland provinces of cSI, began witnessing the demise of their reference authorities of the past centuries (the Bourbon king and the Church); the associated waning of emergency subsistence mechanisms, based on ecclesiastic aid and the use of the *terre demaniali*; the risk and, ultimately, the insult of young and old men being drafted away from the fields and being forced to serve under the occupation army whose very presence was the cause of all those unwelcome innovations. All this sparked a new wave of popular unrest which turned, in some communities, into the organization of guerrilla groups of so-called *brigands*. Brigands came almost invariably from the peasant class, being joined in some case by disbanded Bourbon soldiers who refused to integrate within the new army's ranks. Their bands varied in dimension, ranging from few individuals to hundreds: one of the best-known

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<sup>9</sup>In the first decades of the 19th century, Cerignola, in northern Apulia, was a wealthier-than-average agricultural town, whose development is certified by sizable immigration. Yet only 40.5% of its inhabitants lived on a larger-than-subsistence income and 68% of households were headed by landless peasants (Russo, 1988).

<sup>10</sup>To appreciate their extension, consider that, a few decades before national unification, state-owned land constituted 54.4% of the agricultural land in the flat countryside of Cerignola (Russo, 1988) and 39% of the mountainous municipality of Morcone (De Francesco, 1988).

<sup>11</sup>The unraveling of Piedmontese plans for the re-organization of the Southern army epitomizes the popular opposition to the regime change: a decree was issued on December 20th, 1860, to reintegrate 70,000 Bourbon soldiers into serving under Piedmontese command. The deadline was delayed several times, but by June 1861 only 20,000 had turned up.

brigand leaders, Carmine Crocco, claimed to have once led an army of more than 2,000 (Ciocca, 2013). Bands existed almost exclusively in rural areas and, due to their need to escape regular troops, concentrated where control over the territory by the non-indigenous was more difficult, i.e. around the mountain range of the Apennines and the hillside areas to the north and east of Naples (Figure 3). Scholars partition the brief history of brigandage into three phases. The first coincides with the formation of brigand bands throughout the year 1861. The influence of the Church and the king and the hope that the latter would return – and old institutions thus be restored – remained the main drivers of brigand activity in this period. This amounted to instigating and leading episodic revolts in rural municipalities; attacking non-loyalist landowners and, especially, the urban élite who had acquired lands thanks to the Piedmontese reforms; and, occasionally, clashing with regular troops. Between incursions, brigands would retreat to secluded areas which they left only to obtain supplies, an activity that was constantly supported by the local peasantry. The second phase saw (known as ‘*grande brigantaggio*’) brigand groups organizing into para-military fashion, with commander-in-chiefs and a more stable structure, and focusing their attention to recapturing villages and town from the newly-formed Italian army’s control. Despite the Piedmontese governors sending increasingly larger contingents to the inland provinces of cSI<sup>12</sup>, intense guerrilla lasted until 1864. Unable to cope with the political instability of half of the national territory and facing a seemingly endless drainage of resources, the government introduced a form of martial law (the so-called Pica law) in August 1863. The hardening of legal provisions and the near-absolute power given to the military over 11 out of 16 provinces in cSI (going as far as allowing the execution of suspects without a trial) were effective, and the intensity of brigand activity began fading in the second half of 1863. By 1865, brigandage was almost completely confined within the bounds of common criminality and had lost any connotation of anti-Piedmontese resistance. According to official data reported by Molfese (1964), between 1861 and 1865, out of a total number of brigands estimated at around 80,000, more than 5,000 had been killed (during military operations or by execution), a similar number had been arrested and around 3,600 had turned themselves in. According to Ciocca (2013), around 6,500 brigands and more than 1,600 regular soldiers were killed in the more extended period 1861-1869.

Despite the occasional claims of their will to restore the Bourbon monarchy and the ‘legitimate order’ of the *ancien regime*, especially since the onset of the second phase, brigand chiefs did not hide the economic and social motives that animated their revolt, with a particular emphasis on land usage and military draft (Dickie, 1992). Even though the original, post-feudal landed nobility had been the traditional

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<sup>12</sup>Apparently, at the height of the anti-brigandage operations in early 1864, the Italian army was deploying more than 110,000 soldiers against the brigands, amounting to around two-thirds of the available units (Ciocca, 2013).

enemy of peasant masses, most of brigand violence against civilians was directed to the wealthy middle class, whose land possessions were small in absolute terms, but who had shown support towards the Piedmontese invasion and had, in relative terms, gained from it more than any other social group, especially from the restriction to ownership by the Church and from the reallocation of the *terre demaniali*, the two safeguards of peasant subsistence. Brigandage was an explicit, violent form of reaction against the institutions transplanted by the Piedmontese and, in particular, of those provisions of law that directly interfered with the life of common peasants, such as those concerning land redistribution and military draft. In this paper, we use the number of brigandage episodes in each municipality of cSI as a measure of the intensity of the rejection of the institutional transplantation occurring during the Piedmontese invasion of Southern Italy and the consequent process of national unification.

## 2.2 Near-Piedmontese communities in cSI

The aim of the paper is to test the hypothesis that cultural traits matter for institutional acceptance. We focus on a specific aspect of the cultural identity of the receiving environment, namely its cultural proximity to the donor. Our task is therefore to test whether cultural proximity has a (positive) impact on institutional acceptance. To this purpose, we rely on the existence of communities of near-Piedmontese (henceforth ‘nP’) descent laying in areas where brigandage was, on average, intense. There is substantial agreement among historians that such communities were established in the late Middle Ages (with earliest mentions dating back to between the 13th and 15th centuries). We named them ‘near-Piedmontese’ because not all the places of origin of the immigrants who first settled these communities belong within the current borders of Piedmont (some of them trace their origin back to today’s region of Liguria; see Toso, 2002), nor within the 1861 borders of the Savoy kingdom (other communities are thought to be descendant of soldiers coming from the Alpine valleys of what is now south-eastern France; see De Salvio, 1908). What matters for this paper is that all of them originated within the Provence-Savoy-Piedmont area, which is also the cradle of the Savoy kingdom and the macro-region where its cultural traits developed. Ten nP communities are easily identifiable (and so were at the time of the Italian unification) because they retain Gallo-Romance dialects<sup>13</sup>. For most of such municipalities, the Gallo-Romance dialect was the only language spoken by peasants at the time of the events we are studying, although it is believed that most could communicate, at least at a basic level, in the language of the surrounding provinces, and many would understand standard Italian because of partial mutual intelligibility (De Mauro, 1963). Linguistics helps us in identifying the places of origins and, consequently, in clarifying the reason underlying the

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<sup>13</sup>We use an extensive definition of ‘Gallo-Romance languages’ which leads to the inclusion of Franco-Provençal, Occitan and the Gallo-Italic languages of Piedmont and Liguria.

migratory phenomena that led to the formation of these communities. The ten nP ‘islands’ constitute four geographically distinct clusters: the municipalities of Celle di San Vito and Faeto in northern Apulia; seven municipalities in Basilicata, divided into two clusters (Picerno, Pignola, Tito and Vaglio; Nemoli, Rivello and Trecchina); and the isolate municipality of Guardia Piemontese in northern Calabria. Despite the scarcity of documents, contemporary historians tend to exclude the fact that the main motive behind these communities settling in Southern Italy was an attempt to escape religious persecution. The origin of the Apulian Franco-Provençal settlement has been traced back to soldier relocation and land assignment by Charles of Anjou in the 1260-1270s (see, for instance, De Salvio, 1908 and Melillo, 1959). Based on linguistic evidence, Pfister (1991) and Toso (2002) have suggested that most of the Gallo-Italic speakers from Basilicata descend from southern Piedmontese and/or Ligurian colonizers, who are not believed to have been interested by religious strifes. The Calabrian settlement of Guardia was, indeed, created by a Waldensian community and it is possible that southward migration was sparked by fear of persecution following the Albigensian Crusade (early 13th century). There is no evidence, though, that the religious motive affected the choice of the precise location of the colony (which might have been otherwise explicitly selected for its secludedness or defensibility). In fact, the Waldensians were positively received by the Calabrian nobility and faced no trouble until after the Reformation when, because of their adherence to Protestantism, they suffered harsh persecutions (Vegezzi Ruscalla, 1862). Besides their linguistic traits, these communities have retained other aspects of their ancestral culture: writing around the time of our events of interest, Vegezzi Ruscalla (1862) reports that the inhabitants of Guardia Piemontese maintained very similar customs to their Piedmontese ancestors in terms of clothing, agricultural practices and, more importantly to our analysis, attitudes towards property and work. We thus exploit these linguistic and cultural enclaves to proxy cultural distance of cSI communities from the donor environment assuming that, in particular, larger geographical distance from nP islands were reflected in lower exposition to customs and social norms similar to those prevailing in Piedmont.

### 3 Data and variables

As anticipated in Section 2, the main dependent variable in our analysis is the intensity of brigandage, which we measure either as the number of brigandage-related episodes in each municipality or as the incidence of brigandage (i.e. the previous figure divided by the municipality’s population, measured in thousands of units). We use these measures of brigand activity in order to quantify the intensity of rejection to the institutional transplantation in each of the 1,855 post-unitary municipalities of cSI (see Figure 2). We digitized the information collected in three volumes<sup>14</sup>

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<sup>14</sup>Ministero per i Beni e le Attività Culturali (1999-2001).

including all the reported episodes of brigandage by the Italian Ministry of Culture from the State Archives of cSI provinces (for an example of some entries in the State Archives, see Figure 4). This led to a total of 12,154 brigandage episodes for which we know the geographical location, the type of offense, the authority that report it and the year offense is recorded. On average, the municipalities in our population experienced around 6.55 episodes each (corresponding to around 1.92 episodes per thousand inhabitants), with about 68.5% of them experiencing at least one episode and the most intensely brigand-stricken municipality reaching 64 episodes per thousand inhabitants. The total number of episodes exceeds the one indicated by most historians who focus on major brigandage events<sup>15</sup>. Based on information contained in the original records we are able to classify episodes into four broad categories of offense: violent crimes (19.5%); instances of connivance or support given to brigands (17.6%); open guerrilla, clashes with authorities and armed insurrections (16.8%); and, finally, a residual category including theft, jailbreaks and, most importantly, all episodes reported as notifications of the presence of brigand bands, reports by citizens or arrests (46.1%). Furthermore, little less than half of our episodes (45.5%) were recorded by courts of any level; most of the other half were recorded by public safety institutions such as the police or the *Prefettura*, the local representatives of the Ministry of Interior (45.4%)<sup>16</sup>. About one in four (24.2%) occurrences belong to the early phase of brigandage (1860-1861), characterized by the immediate reaction to Piedmontese occupation; about half of our episodes (50.2%) are associated with the most intense phase of brigand guerrilla (1862-1864); the remaining 25.6% were recorded between 1865 and 1870<sup>17</sup>.

The main explanatory variable, which we use to proxy cultural distance from Piedmont, the donor of the institutional transplant, in the short-term analysis is the (geographic) distance of each municipality from the nearest nP community, which we measure in two different ways. In baseline specifications, we use linear distances between municipal seats. One might argue that, since culture typically spreads through frequent contacts such as marriage and trade, a measure of actual traveling distance between two places may be more appropriate than linear distance for the matter at hand. For this reason, in a subsequent robustness check we compute distances using the ancient Roman road network as reconstructed by McCormick et al.

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<sup>15</sup>Using a different data source, i.e. the clashes reported by Molfese (1964), which should be a right-tail selection of our observations in terms of degree of violence, one can isolate around 400 major episodes, concentrated in around 16% of the municipalities.

<sup>16</sup>Since the records are from different sources there could be overreporting of some episodes. We address this issue in Section 4.2.2 by considering only episodes reported by the Police.

<sup>17</sup>When considering the temporal distribution of brigandage, though, one has to keep in mind that different institutions might have recorded episodes with varying delay: for instance, courts may have recorded some episodes at the beginning of the relative trials, which may have occurred months or even years after the suspected crime had taken place. In particular, some episode located in the last phase might in fact refer to brigandage activities taking place before 1865.

(2013). In most of our specifications, we use log-transformed versions of these distances<sup>18</sup>: over the whole population, the two transformed measures display a highly positive, but not perfect, degree of correlation.

Finally, in addition to geographic characteristics, we control for socio-demographic and economic features of cSI municipalities and provinces before the unification. To this purpose, we collect and digitize novel data from several statistical sources dating back to the last decades of the Kingdom of Two Sicilies<sup>19</sup>, and population data concerning the years immediately following the Italian unification, obtained from the Italian Census of 1861 and the additional statistical reports of the following decade. In order to capture differentials in economic growth across municipalities prior to the onset of the events we study, we compute the population growth rate between 1824 and 1861 (both values are reported in the Italian 1861 Census). Other variables which were recorded before the national unification (most of which between 1830 and 1850) at the municipal level include indicators for the presence in each municipality of civil, criminal or commercial courts; of the local episcopal or archiepiscopal seat; of secondary education institutes<sup>20</sup>; of hospitals; and of relevant manufactures or proto-industrial plants. We also digitize information reported by Corona (1995) to construct an indicator of popular attitude towards innovation and the privatization/distribution of common-use lands<sup>21</sup>. We further collect information on provincial level pre-unitary characteristics: the number of individuals subject to military draft in 1834; the total number of landowners, farmers and fishermen; the total number of professionals, artists and servants. We also digitize provincial data on tax revenues, municipal revenues and total expenditure for public works in 1850-51. Moreover, using data collected by (Villani, 1964), we are able to obtain some provincial measure of the intensity and patterns of the diffusion of monasteries and of the sale of their land during the Napoleonic period.

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<sup>18</sup>This choice is in line with our interpretation of physical distance as an inverse proxy for cultural proximity: the diffusion of culture from a point of origin suggests that equal increases in physical distance should be deemed less important the farther they are from the origin.

<sup>19</sup>Our main data sources are the *Annali Civili*; an official statistical publication by the Ministry of the Interior of the Kingdom of Two Sicilies, published in several volumes between 1833 and 1860; the statistical collection (*Statistica dell'Italia*) by Count L. Serristori published in 1842; and historical works on the distribution of lands belonging to monasteries during the Napoleonic period (Villani, 1964) and on the reaction to provisions of land redistribution during the 19th century (Corona, 1995).

<sup>20</sup>These are divided into *licei*, *collegi* and other secondary schools.

<sup>21</sup>The information provided by Corona (1995) refer to the last decades of the 18th century and therefore predate the period under analysis by 70-80 years. Such information consists of reports of behaviors by local communities in response to innovations in land property under the Bourbon regime. This allows us to construct a (censored) index of attitude to such innovations. More specifically, we assign a score of  $-1$  to communities who enacted behaviors explicitly opposed to innovations and a score of  $+1$  for municipalities with episodes of cooperation with innovative legislation.

As it emerges visually from Figure 3, the majority of brigand activities were concentrated along the Apennine range and, in general, in inland municipalities rather than in coastal towns. Table 1 reports the average of our main geographic and socio-economic controls for municipalities with a brigandage incidence inferior to the median (column 1); for the complementary set of municipalities with incidence above the median (column 2); and, finally, for the municipalities most affected by brigandage (those whose incidence lies in the last quartile, column 3). The patterns are as expected: communities with higher level of brigandage tend to be larger in area but smaller in population, which is consistent with their location at the center of the peninsula, in mountainous areas, relatively far from the coast and major towns. The distance from Naples, the kingdom’s capital city, appears to be negatively correlated with brigandage intensity: this is due to both areas near Naples being attractive to brigands because of their wealth (the province of Naples shows, for instance, a larger population growth rate than the rest of cSI over the period 1824-1861) and to the fact that brigandage was almost absent from the southernmost extremities of cSI, i.e. the tips of Apulia and Calabria, which are the areas located farthest from Naples. The same geographic disposition explains part of the evidence concerning the distance from the Papal States (lying beyond the northernmost border of the kingdom), to which the explicit support given to brigands by the Church in the earliest phases may also have contributed.

Table 2 reports the mean values of several geographic controls and our dependent variable for nP communities (column 1) and all other municipalities in cSI (column 2). Differences of such values (column 3) are statistically significant only in the case of altitude, raggedness (quantified by the difference in altitude between the highest and the lowest point in the municipality’s territory), soil quality and, at a lesser degree, distance from Naples. One should keep in mind that the differences in the first three dimensions are all due to the mountainous location of nP communities: municipalities along the Apennine range typically include mountain tops as well as valleys in their territory (which explains raggedness) and areas with potentially large crop yield. This evidence helps us in overcoming the concern that – once altitude is taken into account – the location and physical characteristics of nP communities were non-randomly chosen by nP colonizers, and that the drivers of such choice might also be the drivers of our findings on the relationship between distance from these locations and the intensity of brigandage.

## 4 Brigandage: an institutional rejection

In this section we show that, after controlling for a number of geographic and socio-economic observables, the intensity of brigandage is positively correlated with the distance from the near-Piedmontese communities in the first decade after the unification. Our main contribution to the aforementioned literature on the interaction

between culture and institutions and, more specifically, to existing work on institutional transplantation, is the conclusion that follows from such evidence: cultural traits do matter in affecting the degree to which institutions are accepted and, therefore, allowed to potentially function; moreover, although we remain agnostic on which traits have the largest impact, we show that cultural proximity with the origin of the institutional arrangement is crucial in making these institutions more palatable and, consequently, more likely to work well.

## 4.1 Identification strategy

In order to test our central hypothesis, namely that, *ceteris paribus*, Piedmontese institutions were more harshly rejected in regions farther from nP communities and, therefore, being less exposed to the influence of a nP culture, we estimate several generalized linear models of the form

$$g(\mathbb{E}(Y_{i,j} | \mathbf{X}_{i,j})) = \beta_1 \text{Dist}_i + \beta_2 \text{Pop}_i + \beta'_3 \mathbf{G}_i + \beta'_4 \mathbf{C}_i + \beta'_5 \text{Prov}_j, \quad (1)$$

where  $Y_{i,j}$  is the number of brigandage episodes recorded in town  $i$  of province  $j$  or, in some specifications, the incidence of brigandage in town  $i$  of province  $j$ ;  $\mathbf{X}_{i,j}$  is shorthand notation for all regressors relative to town  $i$  of province  $j$ , which include:  $\text{Dist}_i$ , a measure of distance of municipality  $i$  from the closest nP community, our main independent variable;  $\text{Pop}_i$ , (a suitable transformation of the) population of town  $i$ <sup>22</sup>;  $\mathbf{G}_i$  and  $\mathbf{C}_i$ , vectors of, respectively, geographical and pre-unitary socio-economic controls measured at the municipality level;  $\text{Prov}_j$ , a set of pre-unitary controls measured at the province level, possibly reducing to a set of province indicators. The key coefficient is  $\beta_1$ , the effect of the distance from the closest nP community on the number of brigandage episodes or the incidence of brigandage. We expect  $\beta_1$  to be positive and significantly different from zero, indicating that, conditional on our control, closeness to some nP community reduces a municipality's propensity to experience brigand activity on its territory.

Our identification relies on the absence of correlation between our measure of distance and the error terms, conditional on all controls. Taking settlement locations as fixed, this amounts to claiming that the location of nP communities must be randomly determined. Among other factors, we control for time-invariant observables, such as altitude and linear distances from the coastline and the capital city, which, as presented in the previous subsection, make the assignment to being a nP community approximately random. Moreover, while nP communities are the result of migratory movements, historical evidence presented in Section 2 suggests that

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<sup>22</sup>When  $g$  is not linear and the specification requires the dependent variable to take on integer values, the impact of regressors on the incidence of brigandage, which in linear models is measured as the number of episodes per 1,000 inhabitants, is found by keeping the number of episodes as dependent variable and forcing  $\beta_2 = 1$ , using log-transformed population as  $\text{Pop}_i$ .

the first colonizers did not autonomously decide where to settle, having been either invited (by landowners) or ordered (by political and military authorities) to take possession of those areas. Thus the location and characteristics of nP communities were not chosen according to criteria which might, through other channels, influenced the presence and/or intensity of brigand activity.

Our interpretation of the results relies on the dual assumption that culture displays long-run persistence and that, at the same time, cultural traits spread by frequent contact: in the language of Cavalli Sforza and Feldman (1981), both vertical and horizontal transmission mechanisms are assumed to co-exist<sup>23</sup>. In particular, we work under the assumption that nP communities preserved many of their ancestors' cultural traits, besides language: anecdotal evidence, such as the one by Veggezzi Ruscalla (1862) presented in Section 2, suggests that our claim is quite realistic for some traits, such as preferences in clothing, architecture and the organization of land property. Moreover, since we use distances from nP communities as inverse measures of cultural proximity of cSI municipalities to Piedmont, it is important for the cSI communities we focus on – despite being isolated enough for their ancestral culture to be preserved within a rather homogeneous and culturally distant surrounding environment – to have interacted with their neighbors<sup>24</sup>.

## 4.2 Cultural proximity and brigandage: empirical evidence

### 4.2.1 Main results

Table 3 reports estimates of OLS models (columns 1-4) and Negative Binomial models (columns 5-8) relating the intensity of brigandage to the *linear* distance of each municipality from the nearest nP communities and a varying set of controls. The relevant distances are log-transformed (and we set their value to 0 on  $[0, 1)$ ). All specifications include province fixed effects. Columns (1) and (5) do not include any further control. While the linear model displays some correlation between distance and brigandage intensity, the more reliable count model yields a non-significant estimate. In column (2) and (6) we add the most basic demographic controls: population growth in the period 1824-1861 (which may also work as an indicator of economic growth in this pre-industrial setting) and, for the linear model only (see the footnote in the previous subsection) the log-transformed level of population reported in the 1861 Census. Consistent with the average trends shown in Table 1, the coefficient on population is negative and stable throughout specifications (2)-(4), indicating that brigandage was relatively more likely to occur in smaller communities. Columns (3) and (7) add our main geographical controls (coordinates, surface,

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<sup>23</sup>For a review of the economic analysis of cultural transmission mechanisms see Bisin and Verdier (2011).

<sup>24</sup>For instance, after the Reform, Guardia's citizens were at times forced to marry beyond their own community Veggezzi Ruscalla (1862).

altitude and raggedness), while columns (4) and (8) complete the specifications by adding pre-unification variables measured at the municipal level. The most complete specifications (namely, models (3),(4),(7) and (8)) all display a positive and significant correlation between the intensity of brigandage and the distance from the nearest nP community. Clearly, we do not claim such distance to be the main driver of brigandage intensity, but its effect is sizable: according to the estimates in (4), doubling the distance from the nearest nP community is associated with a municipality experiencing 0.41 additional episodes per 1,000 inhabitants (amounting to an increase of 21% on an average of 1.92 episodes p.m.); the more reliable model (8) suggests that doubling the distance is associated with a 14.7% increase in the expected incidence. Using the non-normalized count of episodes and controlling for population (which is done in model 4 of Table 4), we find that doubling the distance is associated with a 9.9% increase in the expected count of episodes.

An inspection of the other coefficients shows the resilient relevance of the municipality’s distance from Naples, which is associated with a decrease in brigandage. Population and area, which are trivially positively correlated with the number of episodes, nonetheless appear to influence the incidence of brigandage in opposite ways: geographically larger municipalities tend to display a larger brigandage incidence, but – as we noticed before – the latter decreases with the municipality’s population. As anticipated before, brigandage is associated with larger altitudes and larger distance from the nearest coast.

#### 4.2.2 Robustness checks

While they allow us to draw some robust preliminary considerations, legitimate doubts may be cast concerning the results reported in Table 3. In order to assess the stability of our result and to clarify our interpretation of the estimates, we performed several robustness checks using alternative forms of the dependent variable or of the main independent variable, as well as different specifications, both in terms of model and in terms of controls. The estimates of the main coefficient of interest for several of these alternative specifications are reported in Table 4.

The first four specifications whose estimates we present in Table 4 refer to variations in the dependent variable, i.e. the intensity of brigandage. As we explained in our description of the data, observed brigandage episodes were recorded from several sources. Typically, police and other public safety forces would record episodes as soon as they were reported to them by officers or citizens. We deem these sources more reliable both in terms of geographical localization and in terms of temporal positioning. We therefore estimated our main specification (model (8) of Table 3) using episodes recorded by police forces only. The result is only slightly smaller in magnitude and similarly slightly less significant than in the main specification. A positive effect is, anyway, present even if the less reliable (in terms of time and place

specificity) data from courts are used. The strongest effect is the one concerning data from other sources, which include ecclesiastical authorities, the Italian Ministry of Justice and other miscellaneous sources, including the military.

In specifications (5) and (6) of Table 4 we propose two alternative measures for the geographical distance between municipalities. In model (5) we use linear distance without taking the logarithm. As explained before, the use of the log-transformed version of this distance was *a priori* motivated by the fact that cultural similarity decreases more than linearly once one moves farther away from the center of cultural diffusion and by our desire to use geographical distance as a proxy for cultural distance. For the sake of robustness, we show that our result holds even when the simpler kilometeric distance is used. Moreover, as culture spreads across suitable ways of communication, we found it appropriate to check whether our result held when computing road distances rather than linear distances. This might be particularly relevant given the complex orographic features of the areas we study. Unfortunately, a map of land communications detailed enough to be fed to a geographical software is – to the best of our knowledge – unavailable for the time under study. Given historical evidence on the high degree of coincidence between 19th century roads and the ancient network of Roman roads, we chose to use the latter (McCormick et al., 2013) to compute our approximate road distances. Indeed, the ancient Roman road network had been the main communication system throughout the Middle and Modern Ages, i.e. the centuries in which cultural traits from the nP islands might have spread, through socio-economic contact, to the neighboring communities (see Figure 5). Even though other minor roads not included in our network are likely to have been in use in these centuries, there is evidence that, well into the 19th century, many of the roadways in use in Southern Italy still exploited the ancient Roman tracks. Moreover, using the Roman road network guarantees the exogeneity of our distance measure. The effect we obtain is similar to the one we had with linear distances.

Lines (7), (8) and (9) present model alternatives to the Negative Binomial regression of model (8) in Table 3. As Poisson regression is probably the most widely used count model, we repeated our analysis estimating a Poisson model for our brigandage episodes. Moreover, we used the zero-inflated versions of both Poisson and Negative Binomial regressions to account for the large number of zeros in our dependent variable (a little less than one third of cSI municipalities experienced no brigandage at all). The following specifications refine our baseline model by adding further controls or by imposing less stringent assumptions. Lines (10) and (11) show that our result holds when substituting provincial indicators with more disaggregated indicators (at the district level) or more aggregate ones (at the regional level)<sup>25</sup>. In line (12) we add our province-level controls, while keeping region indi-

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<sup>25</sup>Both in the pre-unification kingdom and in post-unification Italy, the 16 provinces of cSI were

cators. Similarly, line (13) adds soil quality indicators and (14) adds our attitude index derived from Corona (1995). These variables may be of help in assessing the validity of our interpretation. One may in fact suppose that reaction was weaker around near-Piedmontese areas not because of cultural factors, as we claim, but because these communities had characteristics which made them less sensitive to reform imposed by the Piedmontese, such as the sensible reduction in common-use lands. We do not have a complete mapping of cSI municipalities in terms of land use and property. Still, lines (13) and (14) show that our results are insensitive to the addition of municipal-level controls referring to crop types, agricultural yields and, in particular, to a measure of past propensity to accept or oppose similar reforms. Finally, in lines (16) and (17) we show that our results are only slightly weakened if we allow for clustering at the district or at the province level.

Table 5 presents the results of further analysis which may clarify the mechanisms behind our result. In Panel A, we estimate our main specification using municipalities within each quartile of the distribution of (linear) distances to the nearest nP community. Consistently with our ideas that geographical distance serves to approximate cultural distance and that the diffusion of cultural and social norms in non-linear (being much more intense at shorter distances), our estimates show that our global effect is mainly driven by municipalities within the first quartile of the distribution of distance. This means that the cultural effect by which institutional rejection became weaker the farther one went away from the nearest nP community is strong only within a range of about 45 kilometers from the latter. Notice that, given the kind of social interactions one may expect to have taken place in the Middle and Modern Ages in the areas under study (intermarriage, small-scale trade, participation to local market and fairs), it seems plausible that the diffusion of near-Piedmontese cultural values from nP communities did not proceed beyond the limit of a day's walking distance, which we may reasonably locate at a maximum 30-40 kilometers.

In the first two columns of Panel B, we repeat our analysis using versions of the dependent variable which we deem particularly significant. In column (1) we restrict our analysis to episodes which are reported as having explicit political content (e.g. the organization of popular insurrection or clashes with regular police or army forces). The coefficient is similar in magnitude to that found in our previous results and the partial loss in significance might be explained by the relatively small number of episodes which we may safely trace back to these kinds of actions. We consider column (2) a better indication that our result is driven by brigand activities which

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the main administrative units. The main local government units were the municipalities which constitute our reference population. The 57 districts were intermediate administrative subdivisions determined by the domains of jurisdiction of ordinary courts. Unlike today, regions were purely geographic groupings of provinces with no administrative functions.

were deeply linked with the reaction against the institutional transplant. As we explained before, brigandage had the most reactionary and insurrectional features in the early phases of its existence, before transforming into a less politically motivated, albeit widespread, criminal movement. Here, we repeat our estimation using only episodes from the years 1860 and 1861. As one can see, the estimate of our coefficient retains all its statistical significance and increases in size. We consider this a clear indication that cultural distance affected the intensity of brigandage the most in the period in which brigandage was mostly motivated by institutional rejection.

Finally, columns (3) and (4) show the impact of nP communities themselves on our result. In column (3) we use as our main dependent variable the most discrete measure of distance, namely the indicator for nP communities. As one might expect, being an nP community has a strong negative effect on brigandage incidence. Still, our effect is not only driven by the centers of highest cultural proximity with the donor: in column (4) we use our main specification dropping nP communities from our sample. While the absence of the units for which the effect is strongest reduces the magnitude of our coefficient, we still observe a sizable effect. This appears to provide empirical ground for our hypothesis that cultural and social norms may have spread from nP enclaves to cSI municipalities and that the degree of cultural similarity may then have determined, *ceteris paribus*, the intensity of institutional rejection in the form of brigandage. This evidence thus also justifies *ex-post* our choice of using a continuous rather than discrete measure of proximity.

### 4.2.3 Placebo tests

The results so far presented provide evidence that geographical proximity to a nP community was *ceteris paribus* associated with a smaller intensity of brigandage. The robustness of such result to changes in the model's specification and the addition of several geographical and socio-economic controls suggests that this was not due to some specific peculiarity of nP communities, such as particular geographic characteristic or exceptional economic performances. As formal institutions were homogeneous across cSI and given the absence of historical accounts of informal institutions distinguishing nP communities from neighboring settlements, the attribution of our result to cultural differences between nP and non-nP communities looks sound. This, though, is not enough to conclude that the driving cultural feature lay in the cultural proximity of these nP communities with respect to the donor environment. In a recent paper, for instance, Bracco et al. (2015) show that Albanian linguistic islands in cSI display larger degrees of civiness than the average cSI municipality. This finding is attributed to the more intense *social cohesion* that emerges within ethno-linguistic enclaves, within which bonds and relationships are formed because of its cultural dissimilarity with respect to the surrounding environment. One might then suspect that a similar mechanism lies behind our results,

i.e. that nP communities had developed internal social structures which, possibly through the channel of social cohesion, had led them to display a smaller propensity to violently rejecting the institutional transplant than their non-nP neighbors. To assess the plausibility of this channel, we repeat our analysis using non-nP linguistic enclaves as reference points, instead of nP communities. Today as well as in 1861, cSI hosts 60 non-nP linguistic islands, the majority of which (45) are of Albanian descent, the remaining 25 being of Greek (23) or Croatian (2) origin. Column (1) of Table 6 reports the result of the estimation of our main specification when the distance to nearest non-nP linguistic island is used as the main independent variable. In column (2) we restrict the dependent variable to political episodes only while, in column (3), we only use episodes from the earliest years (1860-61), paralleling the analysis of Table 5. Because Greek islands have a very particular geographic location (see Figure 2) and are considerably far away from the areas where the nP communities lie, and also taking into account the result on communities of Albanian descent by Bracco et al. (2015), we repeat the analysis considering Arbereshe and Greek linguistic islands separately. All these specifications yield non-significant estimates for the coefficient of interest. Thus, our attenuation effect of the proximity to a linguistic islands on the intensity of brigandage only appears when the enclaves with respect to which such proximity is evaluated are the nP communities. This excludes the fact that the channel of social cohesion due to the status of ethno-linguistic enclave lies behind our results.

## 5 Brigandage and social capital

In this section, we turn to examine the impact of the institutional rejection on social capital in the aftermath of the Italian unification. The imposition of the new institutions, the following unrest in response to the political regime change and the subsequent hard-handed repression by the national army are natural vehicles for the creation of a culture of mistrust and the reinforcement of negative attitudes towards the new political structure. Such an environment can lead to a decrease in cooperation among individuals and a reduction of the trust in national institutions, resulting in lower social capital<sup>26</sup>. Indeed, as shown by Tabellini (2010), a bad social and political climate can induce worse cultural traits, which may in turn lead to socio-economic backwardness. Reminiscent of Banfield (1958) and Putnam (1993), we investigate whether there is a link between the persistent differences in social capital across Italian territories and the different degrees of institutional rejection, quantified by the intensity of brigandage. In this respect, we follow the existing literature and we proxy social capital by electoral turnout, the only available measure since 1861 at local level. We expect a lower political participation in the areas characterized by a higher incidence of brigandage.

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<sup>26</sup>See Guiso et al. (2011) for a thorough discussion on social and civic capital.

A potential concern with this analysis is that lack of trust in the transplanted institutions may have caused brigandage in the first place, so that lower turnout in areas characterized by more intense brigand activity may simply reflect their propensity to reject the transplanted institutions, in one way (violent guerrilla) or another (desertion of elections). It is also possible that direct differential exposure to the military invasion generated the distrust in the new regime, causing both lower levels of social capital and a higher intensity of unrest. To address these and other related concerns, before analyzing the long-run relationship between brigandage and social capital, we show that episodes from the “*grande brigantaggio*” (i.e. the major wave of essentially still politically motivated brigandage, taking place between 1862-1865) are associated with a reduction in electoral turnout immediately following the Italian unification. Our strategy is to compare the first Italian national electoral round, which took place in January 1861 (two months before the formal unification), and the first post-unification electoral round, held in October 1865. As documented by our previous analyses, the patterns of local variations in brigandage were already clear in the early phases (1860-1861) of the reactionary movement. We thus assume, in this context, that turnout in the 1861 electoral round already incorporates the effect of local variations in the propensity towards institutional rejection and the reaction to military invasion. By taking into account the relationship between differences in turnout between 1861 and 1865 and brigandage episodes occurring between 1862 and 1865, we are thus able to isolate the direct relationship between the latter and political participation, on top of the underlying local differences in social capital and trust towards the new institutions.

To this end, we exploit an additional data source: the *Atlante Storico Elettorale d'Italia*, a dataset collected by the Istituto Carlo Cattaneo containing detailed information on Italian national elections since 1861. During the period we analyze, municipalities were grouped into roughly equally-sized (in terms of voters) constituencies; each constituency elected one member of Parliament. Electoral data on turnout of elections in the period 1861-1919 are available at the constituency level. All municipalities in which there was at least one eligible voter were reported. We use historical sources to identify the formal constituency to which each municipality belonged, in order to have a precise assessment of the number of brigandage episodes by constituency. One also needs to consider that our outcome variable only reflects the political participation of the élites, which were less involved than popular masses in the rebellion against the Piedmontese<sup>27</sup>.

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<sup>27</sup>Indeed, according to the 1859 electoral law, eligible voters had to meet some requirements in terms of age (older than 25), minimum literacy and income (at least 40 *lire* per year). The combination of these criteria reduced the number of potential voters in the country to 400,000, corresponding to about 2 per cent of total population.

We estimate the following linear model:

$$\Delta T_{i,j} = \alpha + \beta_1 Y_i + \beta_2' \mathbf{X}_i + \beta_3' \mathbf{H}_i + \gamma_j + \varepsilon_i \quad (2)$$

where  $\Delta T_{i,j}$  is the difference of turnout between 1865 and 1861 in constituency  $i$  and province  $j$ ;  $Y_i$  is the total number of episodes (per thousand inhabitants) occurred between 1862 and 1865 in constituency  $i$ ;  $\mathbf{X}_i$  and  $\mathbf{H}_i$  are, respectively, vectors of geographical and constituency controls, the former being measured for the main municipality of the constituency, while the latter are aggregated from municipal controls (see Section 3);  $\gamma_j$  is a province indicator<sup>28</sup>; and  $\varepsilon_i$ , finally, is an error term satisfying the usual assumptions. We expect the estimate of  $\beta_1$  to be significantly different from zero; specifically, we conjecture that higher incidence of brigandage should be negatively related to changes in turnout.

The estimated coefficients are reported in Table 7. In columns (1)-(3) we regress the change in turnout over the brigandage episodes reported in the period between the two elections (1862-1865). In column (1) we control for province fixed effects, while in column (2) we add the geographical controls. Finally in column (3) we implement the baseline specification (2). According to our estimates, 1 episode per thousand inhabitants is associated with a decrease of 2.7% in turnout between the two election. A sizable effect if we consider that the average change in turnout (in absolute value) at constituency-level was 11% , supporting the assumption that brigandage had a significant effect on electoral participation. In columns (4) and (5) we use, respectively, the total number of episodes of brigandage (per thousand inhabitants) in the period 1860-1870 and the episodes of brigandage reported in 1860-1861. The estimated coefficients are not statistically significant, which suggests that the change in turnout observed between the two elections may be related to the episodes of brigandage reported in the inter-electoral period rather than with other features generically related to overall brigandage incidence.

In the context of a state formation, it would be interesting to know whether the impact of brigandage vanished with the end of the violent unrests or outlived them. Unfortunately, changes in electoral rules do not allow a meaningful direct comparison of turnout between the 1861 and later elections. In what follows, we provide suggestive evidence that the negative relation between the intensity of brigandage and electoral turnout does not disappear before the turn of the twentieth century. Here, we estimate a set of linear models, one for each electoral round in the period

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<sup>28</sup>Province fixed effects are particularly relevant in our specification since they capture the correlation between the Pica law (implemented at the provincial level) and electoral turnout, as underlined by Accetturo et al. (2016).

1892-1913<sup>29</sup>:

$$T_{i,j} = \alpha + \beta_1 Y_i + \beta_2' \mathbf{X}_i + \gamma_j + \varepsilon_i \quad (3)$$

where  $T_{i,j}$  is turnout in constituency  $i$  and province  $j$ ;  $Y_i$  is the total number of episodes (per thousand inhabitants) in the municipality where constituency  $i$  is established, designated simply as municipality  $i$ <sup>30</sup>;  $\mathbf{X}_i$  is a vector of geographical and historical controls measured for municipality  $i$ ;  $\gamma_j$  and  $\varepsilon_i$  are as in model (2).

Table 8 reports estimates of  $\beta_1$  when all episodes of brigandage are used as the main independent variable. In column (1) we regress the average turnout in the period 1892-1913 over the number of brigandage episodes per thousand inhabitants. We use the same set of controls as in the regression implemented in section 4.2.1<sup>31</sup>. The estimated coefficient suggests an overall negative correlation between brigandage and our measure of social capital. We then decompose the effect of brigandage exploiting the same specification on each singular election. Columns (2)-(8) report the results: overall, the estimated coefficients remain highly robust across the various specifications, the estimated coefficient is always negative, fairly stable and, up to 1904, statistically significant. Our findings suggest that brigandage-intensive areas display significantly lower turnouts until the turn of the twentieth century. These results hint that immediate institutional rejection has a long-lasting impact – up to half a century after its occurrence – on social capital as it undermines the trust in institutions of the newborn state.

## 6 Conclusions

This work analyzes the outcomes following the institutional transplantation which took place in 1860-1865, in the context of the Italian unification process. The imposition of Piedmontese administrative and legal framework over Southern Italy sparked an armed reaction by the peasant classes in continental Southern Italy,

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<sup>29</sup>We restrict our attention to the period 1882-1913 because it provides us with homogeneous electoral rules as well as a substantial expansion of the electorate in comparison to previous elections (and thus with a better validity of our estimates): since the requirements on age, literacy and income were weakened, the new electoral rule more than doubled the number of people with the right to vote. Furthermore, we do not include contemporary controls (referring to the years in which we measure turnout), as they could themselves be outcomes of the unification process. We do not consider the three electoral rounds in 1882, 1886 and 1890 because we have very few constituencies (less than 40) due to the electoral reform.

<sup>30</sup>For these electoral rounds it is not possible to map municipalities into constituencies, so we restrict our analysis to the main municipality of each constituency, which usually corresponds with the most populated settlement.

<sup>31</sup>With respect to the main specification: we add the number of registered voters, since this measure captures socio-economic conditions, and we do not control for the distance to the closest nP island and the closest city: both distances become meaningless when we use constituency level data.

which is known as *brigandage*. We use historical sources and build a dataset that allows us to evaluate the intensity of this phenomenon at the municipal level. Next we relate this measure to the distance of each municipality from the nearest of 10 communities descending from near-Piedmontese settlers. Across several model specifications and using a variety of controls, we find robust evidence that distance from the nearest near-Piedmontese community (which we use to proxy cultural distance) is *ceteris paribus* associated with a smaller intensity and incidence of brigandage. We interpret this result as evidence in favor of the hypothesis that, in the context of an institutional transplantation, cultural proximity with the donor environment reduces the propensity of the recipient environment towards institutional rejection in the short-term. Short-run rejection may have a direct impact on important social outcomes: here, we document a significant decline of the electoral turnout in the aftermath of the unification where more brigandage episodes were reported. Further suggestive evidence outlines a negative relationship between the intensity of institutional rejection and turnout which does not disappear until the turn of the twentieth century. These results are able to shed some light on the complex relationship between cultural distance, institutional innovation and institutional effectiveness.

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# Figures and Tables

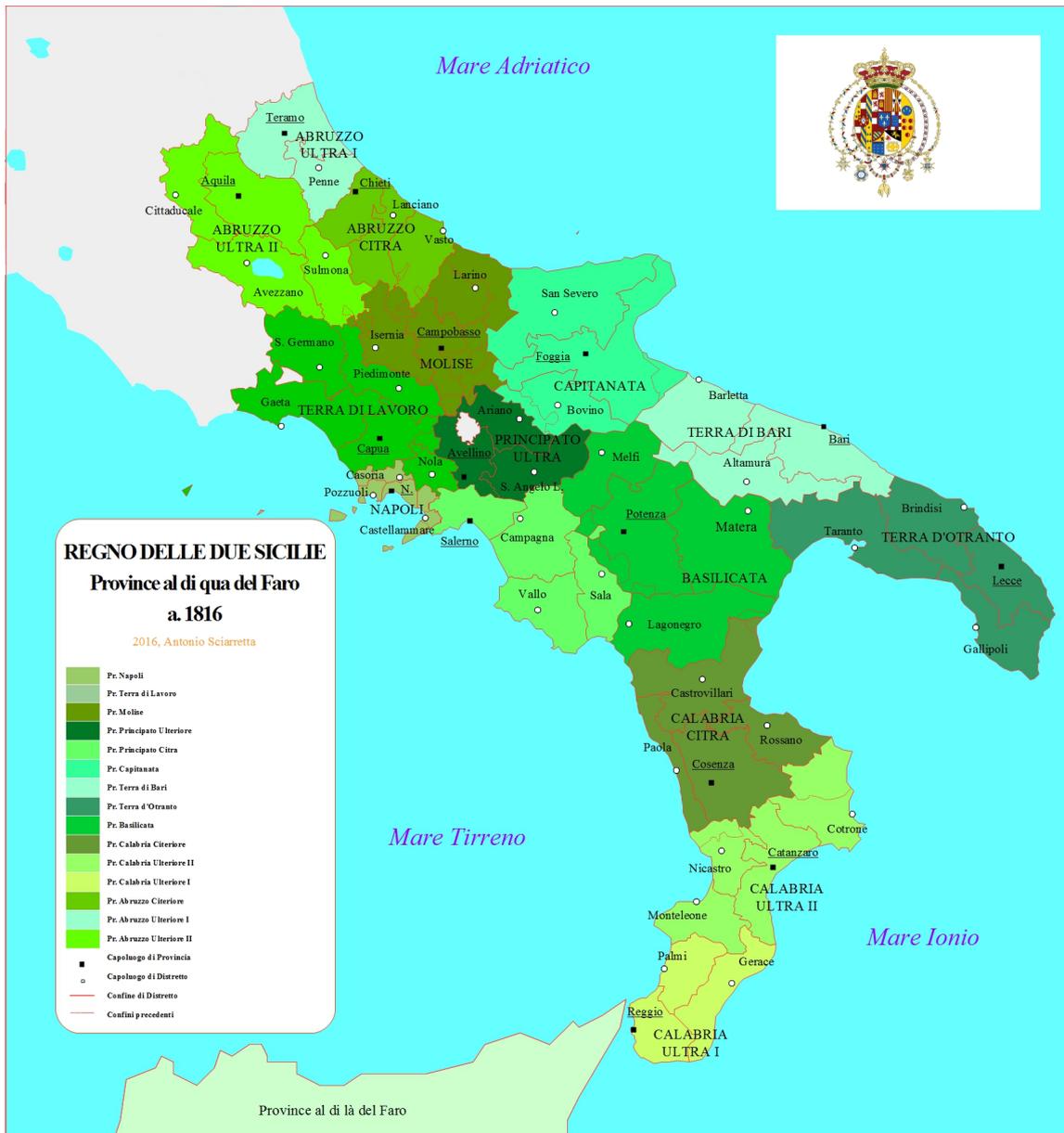


Figure 1: Administrative map of continental Southern Italy before unification (1816).

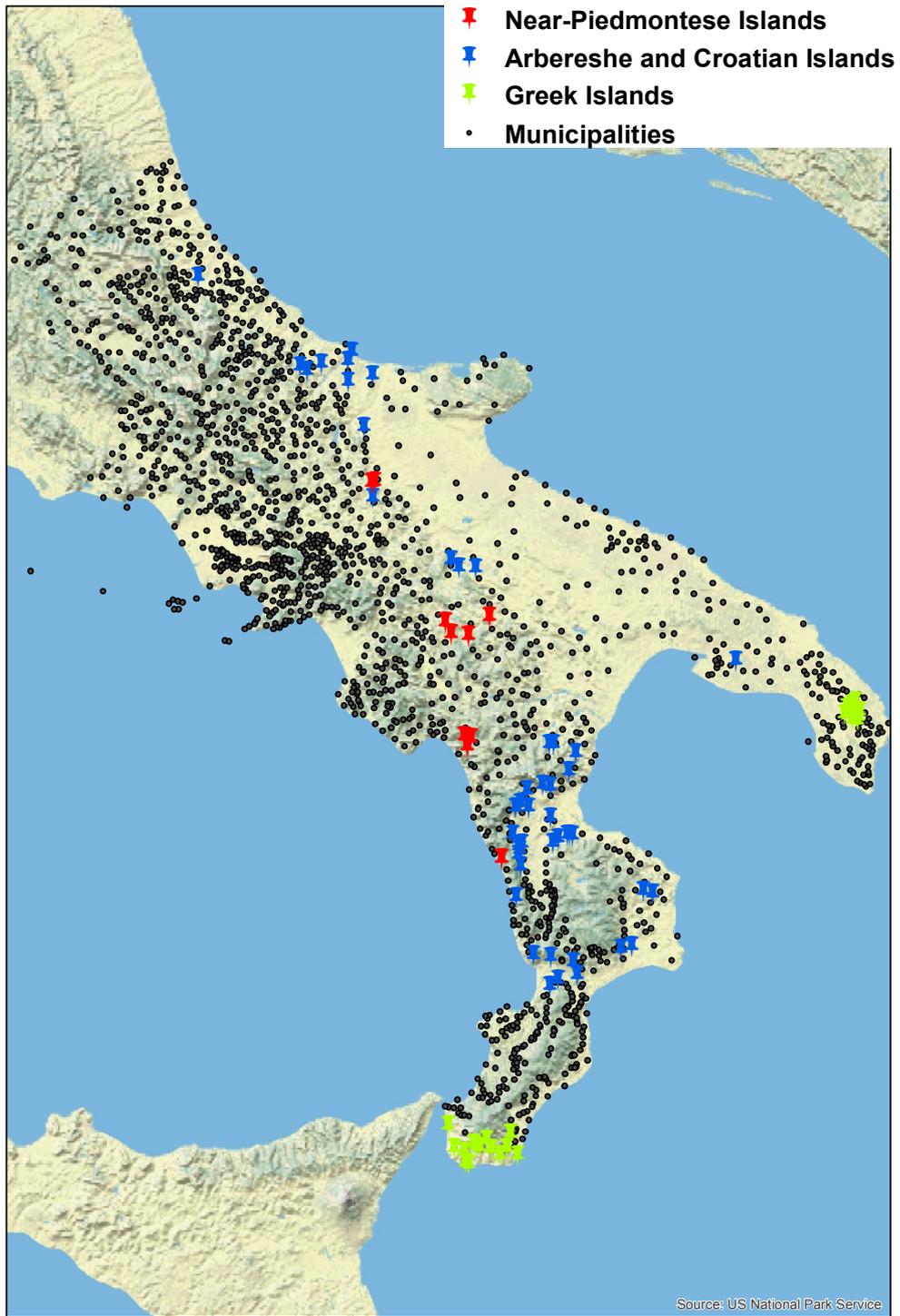


Figure 2: Continental Southern Italy municipalities as of 1861 (dots), with near-Piedmontese linguistic islands (red pinpoints) and other linguistic islands (blue and green pinpoints).

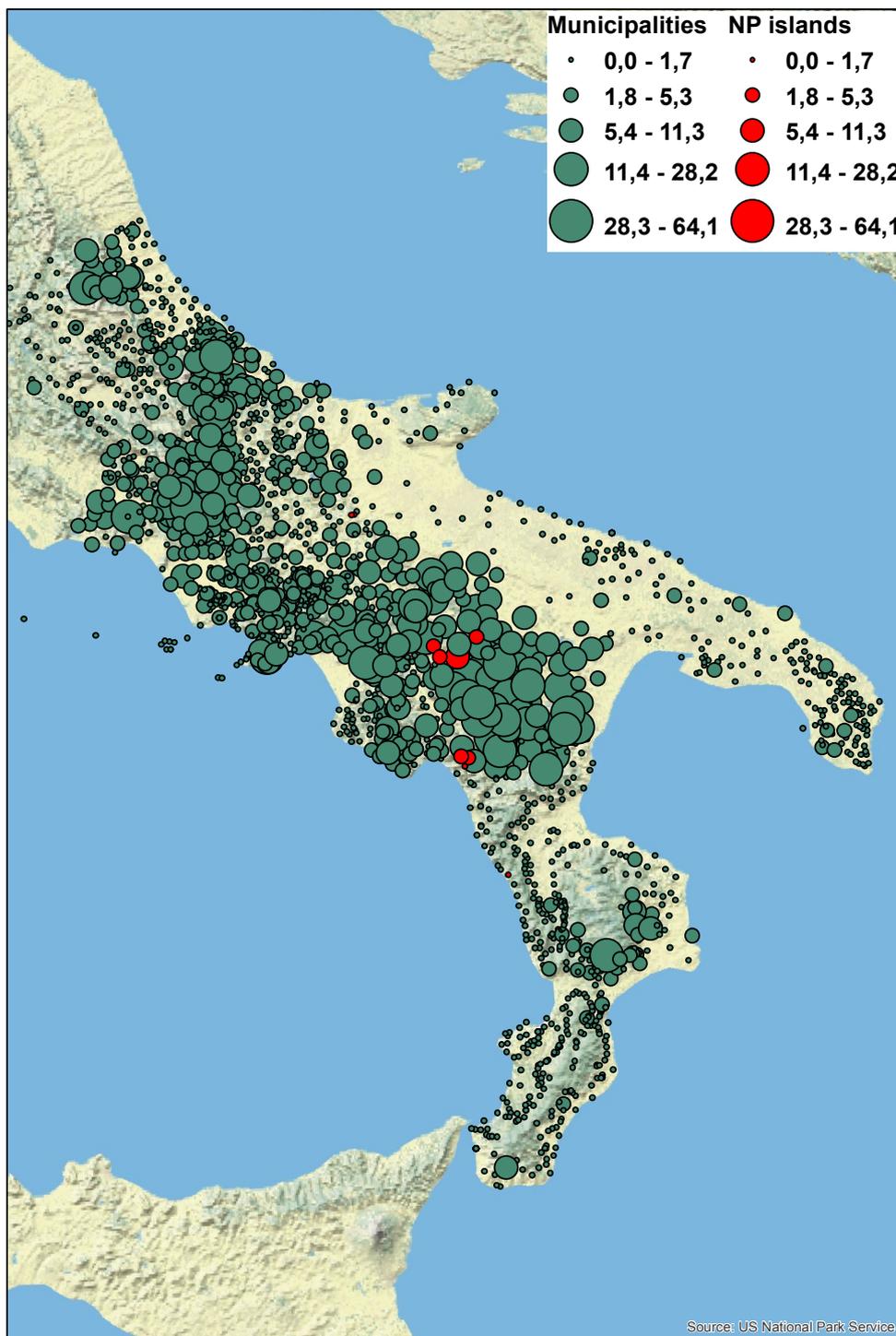


Figure 3: Intensity of brigandage (in episodes per 1,000 inhabitants) in cSI municipalities. Near-Piedmontese linguistic islands are denoted by the red dots.

1677.122.2.22. Provincia di Calabria Ulteriore II. Cotrone. Banda di 160 «briganti ed accaniti reazionari», «con bandiera bianca spiegata ed al suono del tamburo, andavano gridando viva Francesco II, morte ai Piemontesi». Scontro con un reggimento di fanteria. Rapporto dell'ispettore generale del corpo dei carabinieri di Napoli. 13 luglio 1861.

Cenza, nel Comune di Bianchi, presso Cosenza. Arresto e fucilazione dei briganti Giovanni Sacco e Angelo Cristiano, poi decapitati dalla Guardia Nazionale. Spinello, presso Cotrone. Un tenente di dogana, insieme con le guardie doganali, passa dalla parte dei briganti. 1861

**A gang of 160 reactionary brigands , waving a white flag and playing a drum shouted “long live Francis II and death to Piedmontese”. Conflict with a military regiment.**

**Agostino Sacchitiello, Carmine Crocco and others charged with cattle rustling to the detriment of Benedetto and Francesco Tartaglia and others.**

145.11. Gran corte criminale di Capitanata. Gioacchino Buonomo è accusato di essere associato ai briganti; Casalnuovo. 1861

146.1. Giudicatura di mandamento di Castelbaronia. Adempimenti di rito su Antonio Cardinale, Pasquale Travisano, Giovanni Cornacchia e altri; Castelbaronia. 1861 - 1862

146.2. Giudicatura di mandamento di Carbonara. Agostino Sacchitiello, Carmine Crocco e altri sono accusati di abigeato a danno di Benedetto e Francesco Tartaglia e altri; Carbonara. 1861 - 1862

Figure 4: Excerpts from the State Archives used to construct the dependent variable of the dataset.



Figure 5: The Ancient Roman road network from (McCormick et al., 2013) used to compute road distances. Municipalities (here denoted by the yellow dots) which do not lie on any roads are projected onto the nearest point belonging to the network.

Table 1: Descriptive statistics by brigandage intensity

	(1)	(2)	(3)
	Occasional brig.	Frequent brig.	Highly freq. brig.
Area 1861 (ha)	3772.467	4637.478	5075.177
Pop. 1861 (ths.)	3.723	3.595	3.473
Pop. growth 1824-61	-0.059	-0.031	-0.000
Altit. (100ms)	5.464	5.760	5.949
Raggedness (100ms)	6.084	6.336	6.520
Dist. Naples	192.065	128.045	115.909
Dist. prov. seat	31.456	32.825	35.379
Dist. town	18.027	20.125	22.323
Dist. coast	19.200	25.165	27.759
Dist. Papal States	227.314	156.073	144.286
Dist. nP community	98.959	78.569	70.113
Roads nP community	128.349	102.996	92.841
Observations	928	927	463

All distances are expressed in kilometers.

Table 2: Descriptive statistics and means comparison

	(1)	(2)	(3)
	nP communities	Other municip.	Difference
Area 1861 (ha)	4361.30	4213.19	-148.11
Pop. 1861 (ths.)	3.01	3.66	0.65
Pop. growth 1824-61	-0.11	-0.04	0.06
Altit. (100ms)	6.47	5.61	-0.86***
Raggedness (100ms)	6.83	6.21	-0.62***
Dist. Naples	138.98	160.19	21.20*
Dist. prov. seat	33.64	32.13	-1.51
Dist. town	30.59	19.01	-11.58
Dist. coast	35.17	22.11	-13.06
Dist. Papal States	218.56	191.57	-26.99
Dist. nP community	0.00	89.25	89.25***
Roads nP community	0.00	116.31	116.31***
Observations	10	1845	1855

Tests for the difference in means allow for unequal variances in the sub-samples (\* p<0.1, \*\* p<0.05, \*\*\* p<0.01).

Table 3: Baseline Results

MODEL	OLS				Negative Binomial			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Ep. p.m.	Ep. p.m.	Ep. p.m.	Ep. p.m.	Ep. p.m.	Ep. p.m.	Ep. p.m.	Ep. p.m.
(log) Dist. Piedm.	0.383** (0.165)	0.509*** (0.165)	0.604*** (0.165)	0.586*** (0.166)	0.0164 (0.0665)	0.145** (0.0599)	0.191*** (0.0605)	0.198*** (0.0596)
(log) Pop. 1861		-0.548*** (0.125)	-0.557*** (0.137)	-0.635*** (0.144)				
Pop. growth 1824-61		0.0517 (0.0653)	0.0502 (0.0630)	-0.00972 (0.0789)		0.0227* (0.0118)	0.0201* (0.0110)	-0.0403** (0.0188)
(log) Dist. Naples			-0.601*** (0.181)	-0.648*** (0.182)			-0.422*** (0.123)	-0.502*** (0.120)
(log) Dist. seat			0.0590 (0.0795)	0.112 (0.0843)			-0.0258 (0.0497)	0.0512 (0.0525)
(log) Dist. town			0.0413 (0.0840)	0.0653 (0.0852)			0.0254 (0.0419)	0.0506 (0.0398)
(log) Dist. coast			0.244*** (0.0635)	0.249*** (0.0641)			0.125*** (0.0401)	0.139*** (0.0397)
(log) Dist. Papal States			-0.0418 (0.154)	-0.0315 (0.155)			-0.147* (0.0804)	-0.150* (0.0783)
(log) Area 1861		0.759*** (0.113)	0.793*** (0.115)	0.770*** (0.117)		0.318*** (0.0403)	0.349*** (0.0423)	0.318*** (0.0447)
Altit. (100ms)		0.248*** (0.0607)	0.123 (0.0771)	0.147* (0.0829)		0.197*** (0.0399)	0.156*** (0.0524)	0.174*** (0.0539)
Geographical Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Municipal controls	No	No	No	Yes	No	No	No	Yes
R <sup>2</sup>	0.323	0.367	0.373	0.376	0.0903	0.113	0.117	0.122
Obs.	1855	1855	1855	1855	1855	1855	1855	1855

Province FEs are included in all specifications. Robust standard errors in parentheses  
(\* p<0.1, \*\* p<0.05, \*\*\* p<0.01).

Table 4: Robustness Checks

	$\beta_1$	s.e.	Obs.
<b>a) Dependent Variable</b>			
1) Source: Police	0.177**	(0.0743)	1,855
2) Source: Courts	0.162*	(0.0844)	1,855
3) Source: Others	0.425**	(0.194)	1,855
4) Number of episodes	0.142**	(0.0584)	1,855
<b>b) Proximity Variable</b>			
5) Distances in kilometers	0.00712***	(0.0019)	1,855
6) Log distance with Roman roads	0.207***	(0.0496)	1,855
<b>c) Specification</b>			
7) Poisson	0.219***	(0.0530)	1,855
8) Zero Inflated Poisson	0.214***	(0.0539)	1,855
9) Zero Inflated Negative Binomial	0.186***	(0.0600)	1,855
10) District FEs (57)	0.177**	(0.0712)	1,855
11) Region FEs (5)	0.176***	(0.0533)	1,855
12) Region FEs + Province-level controls	0.296***	(0.0560)	1,855
13) Soil quality	0.190***	(0.0607)	1,826
14) Attitudes	0.197***	(0.0595)	1,855
15) Clustering at District level	0.198**	(0.0866)	1,855
16) Clustering at Province level	0.198**	(0.0776)	1,855

The reported coefficient is the one on the log distance from the closest nP community unless differently specified. Robust standard errors in parentheses (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ).

Table 5: Further Results

<b>Panel A: Quartiles of distance from nP community</b>				
	(1)	(2)	(3)	(4)
VARIABLES	Ep. p.m. Neg. B.	Ep. p.m. Neg. B.	Ep. p.m. Neg. B.	Ep. p.m. Neg. B.
(log) Dist. Piedm.	0.397*** (0.0652)	0.300 (0.485)	-0.272 (0.697)	2.006 (1.359)
Quartile	1st	2nd	3rd	4th
Obs.	464	464	464	463

<b>Panel B: Types of Episodes and Timing</b>				
	(1)	(2)	(3)	(4)
VARIABLES	Political Episodes	Early Episodes	NP dummy	Without NP islands
(log) Dist. Piedm.	0.152* (0.0824)	0.282*** (0.103)		0.158** (0.0768)
Piedm. isl.			-0.905*** (0.244)	
Obs.	1855	1855	1855	1845

The same additional regressors as in Table 3 appear in all specifications. Robust standard errors in parentheses (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ).

Table 6: Placebo Regressions

VARIABLES	(1) All Episodes	(2) Political Episodes	(3) Early Episodes	(4) Arbereshe Island	(5) Greek Island
(log) Dist. non-Piedm.	0.0292 (0.0444)	-0.0285 (0.0487)	-0.0392 (0.0502)		
(log) Dist. Arbereshe				0.0376 (0.0586)	
(log) Dist. Greek					-0.157 (0.109)
Pop. growth 1824-61	-0.0375** (0.0186)	-0.0343 (0.0210)	-0.0750*** (0.0217)	-0.0750*** (0.0217)	-0.0736*** (0.0217)
(log) Dist. Naples	-0.502*** (0.122)	-0.185 (0.127)	-0.656*** (0.139)	-0.646*** (0.137)	-0.693*** (0.145)
(log) Dist. seat	0.0571 (0.0526)	0.0160 (0.0631)	-0.0271 (0.0692)	-0.0243 (0.0690)	-0.00378 (0.0717)
(log) Dist. town	0.0423 (0.0402)	0.0583 (0.0486)	0.00826 (0.0542)	0.00418 (0.0544)	0.00835 (0.0542)
(log) Dist. coast	0.118*** (0.0397)	0.205*** (0.0447)	0.239*** (0.0465)	0.240*** (0.0468)	0.242*** (0.0469)
(log) Dist. Papal States	-0.191** (0.0781)	-0.0837 (0.105)	-0.175* (0.0928)	-0.141 (0.0932)	-0.153* (0.0919)
(log) Area 1861	0.306*** (0.0450)	0.176*** (0.0573)	0.164*** (0.0612)	0.158*** (0.0613)	0.162*** (0.0611)
Altit. (100ms)	0.167*** (0.0541)	-0.0258 (0.0639)	0.0287 (0.0628)	0.0322 (0.0628)	0.0338 (0.0628)
Geographical Controls	Yes	Yes	Yes	Yes	Yes
Municipal controls	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.121	0.112	0.0930	0.0929	0.0932
Obs.	1855	1855	1855	1855	1855

Province FEs are included in all specifications. Robust standard errors in parentheses (\* p<0.1, \*\* p<0.05, \*\*\* p<0.01).

Table 7: Electoral Turnout 1861-1865

VARIABLES	(1) $\Delta$ Turnout	(2) $\Delta$ Turnout	(3) $\Delta$ Turnout	(4) $\Delta$ Turnout	(5) $\Delta$ Turnout
Ep. p.m. 1862-1865	-0.022* (0.011)	-0.026* (0.015)	-0.027* (0.013)		
All Ep. p.m.				-0.021 (0.013)	
Ep. p.m. 1860-1861					-0.021 (0.047)
Geographical Controls	No	Yes	Yes	Yes	Yes
Constituency Controls	No	No	Yes	Yes	Yes
R <sup>2</sup>	0.185	0.229	0.301	0.301	0.289
Obs.	124	124	124	124	124

Geographical Controls include: (log) Area 1861 (ha), (log) Pop. 1861 (ths.), Altitude (100ms), Raggedness (100ms), (log) Dist. Naples, (log) Dist. prov. seat, (log) Dist. coast, (log ) Dist. Papal States Dist. and a dummy for nP communities in the constituency. Constituency Controls include dummy variables for the presence in each constituency of: civil, criminal or commercial courts; of the local episcopal or archiepiscopal seat; of secondary education institutes; of hospitals; and of relevant manufactures or proto-industrial plants. Province FEs are included in all specifications. Robust standard errors are clustered at province level. (\* p<0.1, \*\* p<0.05, \*\*\* p<0.01).

Table 8: Electoral Turnout 1892-1913: Long Term effects

VARIABLES	(1) 1892-1913	(2) 1892	(3) 1895	(4) 1897	(5) 1900	(6) 1904	(7) 1909	(8) 1913
All Episodes p.m.	-0.003*	-0.004*	-0.006*	-0.001	-0.005*	-0.005**	0.002	0.000
	0.002	0.002	0.003	0.003	0.003	0.002	0.004	0.004
Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Municipal Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.622	0.564	0.470	0.489	0.501	0.488	0.512	0.561
Obs.	123	120	121	121	121	122	122	122

Geographical Controls include: (log) Area 1861 (ha), (log) Pop. 1861 (ths.), Altitude (100ms), Raggedness (100ms), (log) Dist. Naples, (log) Dist. prov. seat, (log) Dist. coast, (log) Dist. Papal States Dist. Municipal Controls include dummy variables for the presence in each constituency of: civil, criminal or commercial courts; of the local episcopal or archiepiscopal seat; of secondary education institutes; of hospitals; and of relevant manufactures or proto-industrial plants. Province FEs, (log) Pop.1861, Pop.growth 1824-61, number of registered voters (cumulated, in col.1) and dummy variables for the winning party are included in all specifications. Robust standard errors are clustered at province level. (\* p<0.1, \*\* p<0.05, \*\*\* p<0.01).