

Historical Legacy and Policy Effectiveness: the Long-Term Influence of pre-Unification Borders in Italy[•]

Giovanna D'Adda[♦]

Guido de Blasio[♥]

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Abstract

This paper investigates the interplay between cultural traditions and policy effectiveness. It explores the differential impact of a large development program (*Cassa per il Mezzogiorno*), implemented for four decades, starting in the 1950s, to stimulate convergence between Italy's South and the more developed North, on municipalities with different histories. Namely, we consider a sample of municipalities located on either side of the historical border of the *Kingdom of Sicily*, whose legacy is considered, from Putnam (1993) onwards, to be a prime-facie cause of Southern Italy's underdevelopment. Having been part of the *Kingdom of Sicily* is associated with a negative impact of development policies, but only when the allocation of development funds through the Cassa per il Mezzogiorno suffered from low quality of governance and was driven by political considerations rather than by efficiency ones.

Keywords: Economic development, History, Social capital, Italy.

JEL Classifications: N4, O2.

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[♦] Corresponding author. Department of Economics, University of Birmingham. Email: g.dadda@bham.ac.uk.

[♥] Bank of Italy. Email: guido.deblasio@bancaditalia.it.

1. Introduction

A large literature regards history as one of the main determinants of current economic development. This literature suggests that the slow-changing nature of cultural norms might explain the long-lasting effects of historical events.¹ Historical institutions shape cultural beliefs and norms, which in turn are transmitted across generations and influence the selection, design and performance of current institutions (Guiso et al., 2008; Tabellini, 2008). A rather unexplored territory is the relation between current policy effectiveness and cultural norms. Do inherited cultural traits account for differences in the effectiveness of development policies? What affects the influence of historical legacies? In particular, are certain policies less vulnerable to the cultural environment? This paper aims at addressing these questions.

Italy is an extraordinary laboratory to test the importance of cultural heritage: over the centuries different areas of the country experienced different political dominations, with related significant cultural diversities. Since 1861, however, there has been a unique State, with a single legal and political framework. Thus, economic agents with different cultural traditions might be observed in a similar environment. It is not surprising, then, that a large literature has developed, exploiting the Italian context to study the interplay between cultural norms and policy change. Investigating the introduction of regional governments in Italy, Putnam et al. (1993) make the point that local traditions of civicness are the single most important determinant of the different performance of the newly designed institutions across regions. In the same vein, Giordano and Tommasino (2011) provide empirical evidence that Putnam et al.'s (1993) theory might be able to explain local public sector efficiency during the 2000s. On the other hand, policy interventions can in turn induce changes in norms and perceptions. This view is also supported by empirical evidence. Barone and Mocetti (2012) show that taxpayers are less prone to cheat on taxes, if they live in places where public services are efficiently provided. Barone and de Blasio (2013) document that a key civic virtue, voter participation, is spurred by transparent and accountable electoral systems. Accetturo et al. (2013) provide evidence that EU transfers, namely structural funds targeted to underdeveloped regions, might have impacted negatively on the endowments of trust and cooperation of the receiving areas.²

This paper contributes to the debate on the interplay between cultural norms and policy effectiveness, by presenting evidence from Italy on the differential effect of a development program depending on its main characteristics and recipient areas' history. Two features of the location-based program studied here are critical for our analysis. First, the program covered a vast area that includes municipalities formerly belonging to different historical systems of government. Second, dramatic changes in the quality of governance and accountability occurred during the four decades of the program's duration. We can thus analyze whether inherited cultural traits affected the effectiveness of the program, depending on its key features.

The policy we consider is the *Cassa per il Mezzogiorno* (henceforth *CasMez*), a transfer program set up in 1950 by the Italian Government, and born under the auspices of the World Bank, to foster the growth of the south. The program aimed to endow the Mezzogiorno with

¹ See Nunn (2009) for a review.

² For other relevant contributions on the impact of policy reform on social norms, see also Banerjee et al. (2012), and Beaman et al. (2009, 2012).

an adequate stock of infrastructure and promote the industrialization process, by directing private and public investment to the southern territories. On the implementation side, the program had two main phases (Battilani and Fauri, 2008): throughout the 1950s and the 1960s, it was managed by a steering committee of experts, whose decisions were characterized by great autonomy from the political agenda. Legislative changes, fostering a more prominent influence of national and local politicians over the Casmez's decisions,³ resulted in deteriorating levels of governance and increasing rates of rent-seeking in funding allocation over the 1970s and 1980s (Cafiero, 2000). The distinction between these two phases is reflected also in the total cost of the program, which jumped from 44 billion Euros disbursed during the first phase to 116 billion Euros during the second one.

In terms of historical legacies, we consider, following Putnam et al. (1993), the systems of government prevailing at the beginning of the fourteenth century as the most relevant in explaining contemporary differences in civiness. Putnam identifies four regimes prevailing at that time, corresponding to differing degrees of republicanism and autocracy: the *Kingdom of Sicily* (henceforth *Kingdom*) marked by the highest degree of autocracy, the *Papal State*, characterized by a mixture of feudalism, tyranny, and republicanism; the *Signorie*, former communal republics fallen prey to *signorial* rule by the beginning of the fourteenth century; and the *Communes*, the heartland of republicanism. This and other key contributions in the literature on history's influence on social capital levels in Italy (Guiso et al., 2008) lead us to view historical legacies as differences in cultural traits and norms of civiness.

The importance of inherited cultural traits for the effectiveness of a policy could be ideally measured through an experiment. The sample would include areas that are similar in terms of potential correlates of policy effectiveness - such as economic development, population size, geography, access to markets and infrastructures - but that differ in terms of inherited cultural traits and exposure to the policy. The analysis would then compare economic development in the aftermath of the policy across these different areas. Although based on observational data, the empirical strategy adopted in this study follows this logic. We compare the growth performance of municipalities similar on the basis of socio-demographic characteristics, but different in terms of cultural endowments - some were part of the *Kingdom* while others were not - and exposure to the policy - some received funds from *CasMez* while others did not. This empirical strategy allows us to address a series of questions: did the policy have any effect on development, regardless of inherited cultural traits? Do cultural endowments matter for growth, regardless of the policy implemented? And did the interplay between policy and culture influence these outcomes? The fact that the *CasMez* experienced two different implementation phases will also allow us to measure the impact of cultural heritage under the different governance structures that characterized each phase.

The regions that were part of the *Kingdom* and the area under the influence of the *Casmez* overlap to a great extent. This represents a major obstacle for our empirical investigation. However, along the historical and policy borders, we are able to find both municipalities that were part of the *Kingdom* without being targeted by the development scheme, and municipalities that received *Casmez*'s funding without having belonged to the *Kingdom*. Our identification strategy relies on these cities. This choice has *pros* and *cons*. Geographically close municipalities are likely to be homogeneous in terms of local characteristics, such as access to markets, infrastructures, geography, that might confound identification. Moreover,

³ Law 717/1965.

restricting the sample to such municipalities is bound to minimize the risk of unobservable characteristics biasing our results. On the other hand, the proximity between the municipalities in our sample is likely to generate spillovers between cities located on opposite sides of the historical and policy borders, and therefore be a source of attenuation bias in our estimates. Such spillovers may occur, for instance, through socialization between individuals living in cities on opposite sides of the *Kingdom's* border, to the extent that social interactions modify individuals' set of values. By the same token, spatial externalities from the aid scheme may prevent us from finding an effect of the *CasMez*. For instance, the funding can be used to build infrastructures (i.e., a road) that spur economic development also in neighboring places. Even more importantly, by focusing on the areas around the historical *Kingdom* and *Casmez's* borders, we can only compare municipalities formerly under the *Kingdom* with places formerly under the *Papal State*. Therefore, we can only contrast the two areas that in Putnam's (1993) taxonomy rank, respectively, last and second to last in terms of endowments of civicness. These considerations imply that our results are likely to represent a lower-threshold of the effects we aim to capture in this study.

The main result of the paper is that cultural norms of uncivic behavior inherited from the past negatively affect policy effectiveness only in the second phase (1971-1991) of the *CasMez*. Over the first two decades (1951-1971), when the policy was characterized by centralism, autonomy and technical leadership, we fail to find any impact of *Kingdom's* legacy. Our estimates suggest that, during the second phase of the *CasMez*, municipalities receiving public money experienced a larger increase in the number plants and employed workers than their unfunded counterparts. However, these gains were null or even reversed among municipalities formerly belonging to the *Kingdom*. We also provide evidence in support of the idea that the effect we find is likely to be a lower bound estimate of the overall influence of cultural traditions on policy effectiveness. Our results bear important implications for the design of policies aimed at promoting local development. They suggest that only *certain types of policies* interact negatively with historical traditions of uncivic behavior. As for the role of history as determinant of the current local economic performance, our findings confirm its importance and long-lasting influence: after two decades (1951-1971), during which the effect of culturally-inherited norms of cooperation were muted, it re-emerged in the presence of bad policies (1971-1991).

The paper is structured as follows. Section 2 reviews the literature on the effect of historical institutions on current development, with a particular focus on studies about Italy. Section 3 documents the role of the *CasMez* over its four decades of activity. Section 4 presents the dataset and the empirical strategy. Section 5 documents the findings. Section 6 concludes.

2. Historical legacy, cultural norms and current development

The literature on the impact of historical institutions on current development, through their influence on cultural norms and social capital, is vast. In a seminal contribution, already mentioned above, Putnam et al. (1993) offer evidence that historical legacy, through its impact on local culture, matters for the quality of institutions and current local development. By examining the introduction of regional governments and their widely different performance across Italy, Putnam et al. show how, in areas that experienced free city states in the Middle Ages, higher levels of civicness are found and local institutions perform better. On the contrary, areas where the presence of the authoritarian *Kingdom* of Sicily prevented the formation of civic associations and norms of cooperation still display lower social capital and

worse institutional performance today. Guiso et al. (2008) confirm Putnam et al.'s argument, and find that city-state experience in the Middle Ages is associated with higher levels of social capital today, also within Northern Italy. Similarly, Di Liberto and Sideri (2011) find a significant correlation between historical institutions and current public administration efficiency.

Theoretical models have been proposed to explain the persistence of historical institutions, through their effect on cultural norms. In the model of Guiso et al. (2008), social norms of cooperation and trust are based on culturally transmitted beliefs about others' trustworthiness and on real experiences of cooperation. Institutions influence social norms by determining the net benefits from cooperation. Tabellini (2008) considers a model in which culturally transmitted values enhance the probability of cooperation. Improvements in formal institutions, especially those concerned with law enforcement, are capable of crowding in generalized trust. This suggests a complementarity between the quality of formal institutions and societal norms of generalized trust and trustworthiness. The effect of institutional differences can persist over time, thanks to the transmission of social norms across generations. Our results confirm these arguments, as we observe how bad policies can cause historical norms of unciviness to re-emerge, even after long periods of dormancy.

Related to the literature on the effect of institutions on trust are studies demonstrating how pre-existing trust, or more generally culture, affects the functioning of institutions. Not all policies and institutions are equally affected by historically inherited cultural traits. Crucially, the quality of implemented policies appears to affect their vulnerability to cultural biases. Fisman and Miguel (2007), in a study on parking violations committed by diplomats stationed in New York, finds that cultural origins matter in determining behavior in the absence of formal enforcement, but such an effect disappears very rapidly once enforcement is imposed. With immunity, diplomats from countries with high corruption committed more parking infractions than those from less corrupt countries, but infractions were reduced dramatically once immunity was removed. Similarly, Grosjean (2011) finds that the persistence of a culture of violence is negatively correlated with the quality of formal institutions. Cassar et al. (2013), in an experimental study conducted in different regions of Italy, show that individual norms of trust and cultural origin influence cooperation when the quality of enforcement institution is low, but not in the presence of strong and impartial institutions. Such heterogeneity is observed in the present study as well: when policies are of good quality, inherited social norms and culture do not affect their effectiveness. However, their influence emerges when the quality of governance is low.

3. The *Cassa per il Mezzogiorno* and its two phases

The *CasMez* was a public body created by De Gasperi's government in 1950, to fund the industrialization of Southern Italy and reduce the gap in economic development existing between the North and South of the country. The *CasMez* was founded under the impulse of a series of Italian economists, public managers and of proponents of big push theories within the IBRD, with the goal of reproducing the experience of local development agencies, such as the Tennessee Valley Authority, promoted in the USA during the New Deal (Lepore, 2012). The *CasMez* service area included eight regions - Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia e Sardegna-, the provinces of Latina e Frosinone in Lazio, the valley of the Tronto river and a few minor islands off the coast of Tuscany. With the exception of the territories in Lazio and Northern Abruzzo, this area largely coincides with the former

Kingdom of Sicily. Figure 1 shows the former Kingdom's territory with respect to today's Italian provinces.

The *CasMez*, initially established for ten years, was subsequently renewed multiple times, until it was suppressed in 1992. Over these four decades, the *CasMez* directed to Southern regions approximately 280 billion Lire, equal to roughly 140 billion Euros in total and to average yearly disbursements of about 3.2 billion Euros (Stella, 1999). The transfers ranged between 0.5, in the final years of the program, and 0.9, in the Seventies, per cent of the country's GDP. The value of tax subsidies must be added to that of the transfers. Tax subsidies to firms and households located in the South were introduced in the late Sixties, and were worth up to 1.3 per cent of the GDP between 1976-80. Figure 2 reports the trend in transfers and subsidies over the four decades of the *CasMez*.

In terms of use of the funds, the *CasMez* activity can be articulated into two stages (Felice, 2007). During the first two decades of operations, at first pre-industrialization investments were targeted to the establishment of key infrastructure – roads, communication, water supplies – to the requalification of vast swampy areas in Southern Lazio, mainly favouring the agricultural sector (IBRD, 1953). Then this phase saw in the second decade saw an increasing role of projects aimed at fostering the development of industry in the South (Carlyle, 1962). The second stage, starting in the Seventies, coincided with the inclusion of regional administrations in the decision process of funds' allocation. The Regions favoured a substitution away from investments for infrastructure and productive activities, and towards tax subsidies to support private consumption (SVIMEZ, 2001). The operations of the *CasMez* were increasingly characterised by a more volatile and fragmented allocation of the funds available to the agency during this phase (Felice, 2007; Viesti, 2003; Bevilaqua, 1993).

The distinction between these two stages of *CasMez*'s operations also concerns the process with which the *CasMez* decided the funds' allocation, and the effectiveness of its action (Lepore, 2012). The first two decades of the agency were characterised by the strong independence of the agency, led by a group of skilled administrators, from the political context. Indeed, the IBRD imposed as a condition for its support of the program that its implementation were delegated to a dedicated administrative body under the control of the IBRD itself, and independent from bureaucratic and political pressures (Felice, 2007). Starting from the Seventies, project selection and funds' allocation were increasingly captured by political interests and agents. The increasing influence of political actors on the *CasMez*'s activity is captured by a law, requiring the *CasMez*'s budgets to undergo scrutiny by the Government and giving the Government the power to dismantle the agency (Felice, 2007), introduced in the mid-Sixties. These different actors and decision processes affected the effectiveness of the *CasMez*'s action. The GDP gap between North and South declined between 1953 and 1973, proving the success of the policies promoted in the first phase, but the convergence process was reversed in the following decades (Daniele and Malanima, 2007).

4. The empirical strategy and the data

In this paper we compare development outcomes, measured in terms of growth rates of plants, employment, and population, of similar municipalities, grouped on the basis of their exposure to the policy – municipalities that received funding from *CasMez* versus those that did not- and of their historically inherited cultural traits – municipalities that were part of the *Kingdom* versus those that were not. We consider only municipalities lying within a certain

distance (50 or 100 km, depending on the specification, see below) from the *Kingdom's* border, in order to limit the heterogeneity of municipalities in our sample. The fact that the areas targeted by the *CasMez* largely overlap with the former *Kingdom's* territories implies that these four groups of municipalities cover a limited portion of Italy's central and Southern regions. However, we can exploit two sources of misalignment between the *Kingdom* and *CasMez's* areas of influence in our identification strategy.

The first one derives from the re-definition of administrative boundaries carried out during the Fascist regime (1922-1943). Figure 1 shows a map of the *Kingdom's* territory, with respect to today's provinces. Note that the border of the *Kingdom* cuts across five provinces of central Italy: Ascoli Piceno, Perugia, Rieti, Frosinone and Latina,⁴ as some of the territories formerly part of the *Kingdom* were re-allocated to these provinces under the Fascist regime. The fact that the *CasMez's* area of influence was not strictly limited to the administrative provinces of the South of Italy provides a second source of misalignment. Besides the Southern regions, the *CasMez* was targeted to a few additional underdeveloped areas: the provinces of Latina and Frosinone within the Lazio region, some municipalities in the provinces of Rome and Rieti, also within Lazio, of Ascoli Piceno, within Marche, and some Tuscan islands - Elba, Giglio e Capraia.

Figure 3 shows in greater detail our sample of municipalities, grouping them on the basis of whether they fell within the boundaries of the *CasMez* and the *Kingdom*. The colored area represents the 639 municipalities lying within 50 km from the *Kingdom's* historical border on which our study focuses on.⁵ Among them, 252 used to be part of the *Kingdom* and received financial support from *CasMez* (dark grey, white borders), 304 lie at the North of the *Kingdom's* boundary and were not eligible for the financing (grey, black borders), 72 received funds from the *CasMez* without belonging to the *Kingdom's* former territory (light grey, black borders), and 11 did not receive any funds and were part of the *Kingdom* (black, white borders).

In terms of our identification strategy, we define two dummy variables, one equal to 1 if a municipality was targeted by the program, and the other equal to 1 if a municipality falls within the historical borders of the *Kingdom*. The four groups of municipalities in Figure 3 can thus be defined by the possible values taken by this pair of variables, (x,y). Type (1,1) municipalities received *CasMez's* funding and formerly belonged to the *Kingdom* (dark grey, white borders in Figure 3). Type (0,0) municipalities did not receive *CasMez's* funding and didn't belong to the *Kingdom* (grey, black borders in Figure 3). Type (1,0) municipalities received funds from the *CasMez* without belonging to the *Kingdom's* former territory (light grey, black borders in Figure 3). Finally, type (0,1) municipalities weren't targeted by the program and used to be part of the *Kingdom* (black, white borders in Figure 3).

The data for this study comes from a number of sources. Population, industry and services sectors census data, collected by the Italian Institute of Statistics (ISTAT) at the beginning of each decade, provide information at the municipal level on residing population, number of plants and related employment figures. Data on municipalities' geographic characteristics, such as altitude, size of the territory in squared kilometers, altitude range within the municipal territory, indicators for coastal cities or provincial capitals, are found in Italy's

⁴ The map refers to the province borders as they were before the reform of the size of the provinces that were implemented in 2012.

⁵ The list of the municipalities is provided in Appendix 1.

Association of Municipalities' (ANCI) archives. Italy's Association for the Development of the South (SVIMEZ) keeps administrative records with the list of municipalities receiving *CasMez's* support. Finally, we use GIS data to identify the municipalities belonging to the *Kingdom*, by overlaying the historical map of the *Kingdom's* borders (Figure 1) to contemporary maps of Italy.⁶ Appendix 1 presents the list of municipalities in our sample, and for each shows whether it received *Casmez's* support and was identified as lying within the *Kingdom's* border.

In the empirical analysis, we compare municipalities' growth performance, in terms of population, number of plants and employment, as a function of whether they received funding from *CasMez*, were formerly part of the *Kingdom* and of the interaction between policy and historical legacy. We perform this analysis for each of the two implementation phases of *CasMez*, to evaluate how the interplay between policy and inherited values plays out, depending on the quality of leadership and governance over funds' allocation. We run the following specification:

$$Y_{ijt} = \alpha_0 + \alpha_1 \text{CASMEZ}_i + \alpha_2 \text{KINGDOM}_i + \alpha_3 (\text{CASMEZ}_i * \text{KINGDOM}_i) + \alpha_4 X_{ijt} + \alpha_5 Z_{ij} + \gamma_t + \chi_i + \varepsilon_{ijt} \quad (1)$$

where Y_{ijt} represents, depending on the regression, the growth rate, over each 20-years *CasMez's* phase, in number of plants, employment or population in municipality i belonging to province j . CASMEZ_i is the dummy variable taking value of 1 if the municipality receives funds from the program, while KINGDOM_i takes value of 1 if the municipality falls within the historical borders of the *Kingdom*. Our variable of interest is the interaction between these two indicators. X_{ijt} are time-variant controls, capturing municipal population, number of plants and employment at the start of decade,⁷ while Z_{ij} are time-invariant controls, such as altitude, slope, location along the coast and surface of the municipality. Finally, we include province⁸ fixed effects, χ_i , and time fixed effects, γ_t , since we estimate equation (1) for two consecutive census periods.

In the empirical analysis, we will present results using two samples of municipalities. The first sample comprises all 607 municipalities falling within 50 km from the *Kingdom's* border, for which data are available for the four decades covered by our analysis.⁹ Within this sample, municipalities receiving *CasMez's* support are quite similar to those that did not get funded along many dimensions, as documented in Table 1. The table also shows, however, that some observable characteristics, such as the number of plants and the fact of being located on the coast, are significantly different across the two groups ($p = 0.05$ and $p = 0.08$ respectively). To make sure that our results are not driven by differences in observables, we test the robustness of our results to the use of a second sample, obtained using propensity score (PS) matching. We construct this sample using a routine that estimates the probability of a municipality being included in the *CasMez* area, given the following observable characteristics: being a coastal town, altitude, slope, surface, and pre-treatment (1951) values

⁶ Municipalities lying across the historical borders were assigned to the Kingdom if the majority of the municipal territory belonged to it.

⁷ These variables are included both as logs and as logs of their squared values.

⁸ This local jurisdiction corresponds to NUTS3 level.

⁹ Out of the 639 municipalities lying within 50 km of the Kingdom's border (Figure 3), we drop 31 municipalities for which we have missing data over the 4 decades of our analysis. We also drop Rome from the sample, because of its size and role as national capital.

of population, number of plants and employment.¹⁰ Using kernel matching, the PS routine retains only observations that share a common support. Within the resulting sample, which includes 514 observations, municipalities targeted by the program are similar along all pre-treatment observable traits to those that were not targeted, according to standard t-tests shown in Table 1. Although we use all data available to construct this matched sample, we are aware of the scarcity of existing municipal level data for the post-WWII period, and know that similarity along the available pre-treatment observables does not guarantee our results are free from selection bias. To address the concern that selection may drive our findings, in what follows we perform an extensive series of robustness checks.

5. The results

Table 2 reports results from equation (1), using the full sample of municipalities within 50 km from the *Kingdom's* border.

The effect of historical legacy (*KINGDOM*), of being targeted by the policy (*CASMEZ*) and of their interaction (*CASMEZ*KINGDOM*) is estimated for three different outcomes: the growth rates of plants, employment, and population. For each outcome, the table reports coefficients for the three regressors of interest under three specifications: in the first one, no additional controls, apart from a time dummy for the second census decade, are included; in the second specification we add all time-varying and time-invariant municipal level controls used for deriving the PS sample; in the third one, we also include province fixed effects. This latter specification captures variations in outcomes variables among municipalities within the same province. Thus, adding local fixed effects allows us to control for province-specific confounders, such as wage zones implemented up to 1971 (de Blasio and Poy, 2013), and, trivially, for potential confounders at the level of larger administrative jurisdictions, such as the regional governments introduced in 1975 (Putnam, 1993).

Panel A shows the results from estimating equation (1) for the period from 1951 to 1971. This period represents the first phase of the program, when the financing was centrally administered by a high-level steering committee shield from vested-interests. The results document that municipalities targeted by the *CasMez* program experienced better economic performance, captured by higher levels of growth in the number of plants and employment. While municipalities in the control group, that is those within 50 km from the *Kingdom's* border that didn't receive *CasMez's* support nor were formerly part of the *Kingdom*, experienced a cumulative growth rate of 15% in the number of plants and 42% in employment between 1951 and 1971, those targeted by the program grew approximately 2% and 5% faster in terms of these two outcomes, respectively. For both dependent variables the effect is smaller in the specification without controls (Columns 1 and 4, respectively). This illustrates the importance of controlling for pre-treatment municipal characteristics. We fail to find any positive effect of the *CasMez* on the population growth rate. Crucially, the effect of the *KINGDOM* variable is never significant, nor is that of the interaction term *CASMEZ*KINGDOM*. These findings suggest that the historical legacy of the *Kingdom* legacy had no influence on municipalities' economic performance during the first implementation phase of the program .

¹⁰ As in the main regressions, the latter three variables are expressed both as logs and as logs of their squared values.

Panel B presents the results for the period from 1971 to 1991. This period corresponds to the second implementation phase of the *CasMez*, when national and local politicians gained a leading role in the management of the funds and disbursement levels soared. In terms of growth rate of plants and employment, the effect of the *CasMez* is still positive, though smaller than that in the previous phase and sometimes not significantly different from zero at the conventional levels. The dummy *KINGDOM* never enters significantly in the regressions, while, interestingly, the interaction between *CasMez* and *Kingdom* presents a negative and very significant correlation with growth rates in number of plants and employment. These results suggest that the weak governance of the program caused the social norms of un-civicness inherited from the past to re-emerge. Compared to municipalities outside both the *CasMez* and the *Kingdom* borders, which experienced a cumulative growth rate of 22% for plants and 31% for employment between 1971 and 1991, those targeted by the program grew by an additional 1% in terms of both outcomes. Among municipalities formerly belonging to the *Kingdom*, however, the impact of the public funding was negative, with growth rates 4% and 5% lower, respectively. We still fail to find any impact for population growth.

Table 3 provides a first robustness exercise. Panel A and B show results from equation (1), ran using the sample of 514 municipalities selected through the PS routine, for the period 1951-71 and 1971-91 respectively. Overall, the sign and significance level of coefficients are confirmed. The point estimates differ to some extent though: the effect of CASMEZ in the first implementation phase is smaller, while that of the interaction between CASMEZ and *KINGDOM* in the second phase of the program is larger. Differences between conditional and unconditional estimates are much reduced in these regressions, as a result of the PS matching routine implemented to select the sample. Panel C of Table 3 addresses the concern that matching on the value of observable municipal traits in 1951 may not guarantee the homogeneity between treatment and control groups in the 1971-91 regression. Municipalities similar in terms of observables in 1951 may have become significantly different by the time the second implementation phase began. Namely, the faster growth experienced by municipalities targeted by the *CasMez* between 1951 and 1971 might have weakened their comparability with respect to non-*CasMez* territories. To test whether the results obtained for the second implementation phase are due to lack of comparability between treatment and control groups, we run equation (1) using a sample selected by matching municipalities on the basis of their observable characteristics in 1971. This sample includes 594 municipalities. The results of this exercise, presented in Panel C of Table 3, are very similar to those shown in Panel B: the point-estimates on the variable CASMEZ**KINGDOM* are now slightly larger.

Table 4 runs equation (1) on a larger sample of municipalities, including all cities located within 100 km of the *Kingdom's* border. We expand the sample to additional type (0,0) and type (1,1) municipalities. More precise estimates could result from such doubling in the size of our sample. However, the presence of potential confounders and the heterogeneity of sample municipalities are likely to increase the further away they are located from the *Kingdom's* border. To address this concern, we only present results for a sample of municipalities within the 100 km bandwidth selected through the PS routine. The results of this exercise, reported in Table 4, confirm those of Table 3. The expected gains in terms of precision and explanatory power fail to materialize, suggesting that the sample of 50 km is well suited for our investigation.

The robustness checks implemented so far do not guarantee that our results are free from omitted variables bias. Given the scarcity of municipal-level data referring to the period post WWII, this is a serious concern. As a more direct test of the influence of omitted variables on

our results, Table 5 presents results from a placebo experiment. The logic behind this exercise is the following. So far, we have identified the effect of cultural legacy on policy effectiveness by comparing neighboring (and similar) municipalities with different exposure to the program and history. To the extent that we are mistakenly attributing to our variables of interest something specific to the area, but unrelated to the *CasMez* and cultural legacy, an arbitrary variation in the policy and historical boundaries will only marginally affect our results. If the historical and policy boundaries are not driving our estimates, moving away from them should not influence our findings. In Table 5 we report results obtained by moving the *CasMez* border 10 km to the south. In terms of treatment groups, this shift amounts to arbitrarily attributing some municipalities of type (1,0) to the false type (0,0) and some municipalities of type (1,1) to the false type (0,1). The results of the placebo test are reassuring, in that none of the regularities previously shown hold any longer.¹¹

A final issue addressed by our empirical analysis concerns the external validity of our results, derived from a sample of municipalities within close distance from the *Kingdom's* historical border. Can we draw from our findings conclusions relevant to areas further from this border within Italy? As explained in Section 4, we suspect that our results may underestimate the impact of the *Kingdom's* cultural legacy on the *CasMez's* effectiveness for two main reasons. First, the presence of spillover effects in terms of cultural traits and development between neighboring municipalities might attenuate treatment effects. Second, our identification strategy relies on the comparison between municipalities located within the *Kingdom* and the *Papal State*: according to Putnam et al. (1993), differences in civicness between these two areas are the least pronounced over the Italian territory. While we cannot apply our empirical strategy to areas away from the borders, we can compare the development performances of municipalities lying within and outside the territory from which we draw our main sample. An implication of the lower threshold argument is that our sample of municipalities of type (1,1) close to the *Kingdom's* border should perform relatively better than municipalities of the same type located further south. Similarly, municipalities of type (0,0) near the border should perform relatively worse than similar municipalities located further north, especially those within areas formerly belonging to *Communal Republics* and *Signorie*. To test these implications we implement two additional checks. We take all municipalities of type (1,1) lying within 50 km from the *Kingdom's* border and compare them with a sample of similar municipalities located further than 50 km away to the south and selected by PS matching on the basis of their 1951 characteristics. Similarly, we take all municipalities of type (0,0) in our sample and compare them with a sample of similar municipalities located further than 50 km away to the north from the border and selected by PS matching on the basis of their 1951 characteristics. In this latter case, control municipalities are drawn from territories not formerly belonging to the Papal State. Table 6 reports the main results from this exercise: the further north a municipality is located, the better its development trajectory is. The relationship between longitude and economic performance is significant both for type (1,1) and type (0,0) municipalities. Panel B of Table 6 also shows that during the second implementation phase, when the combined effect of the *CasMez* and the *Kingdom's* legacy led to negative growth rates in type (1,1) municipalities within our sample, the difference in economic performance between these municipalities and their counterparts outside our sample increased. Overall, these comparisons seem to confirm that the effects we estimate for the area close to the *Kingdom's* border may represent a lower bound of the actual influence of historical legacy on the *CasMez's* performance.

¹¹ We also conduct a different placebo test, by moving the Kingdom border 10 km to the north, and obtain similar null results.

6. Conclusions

Historical institutions are found to affect contemporary levels of development and institutional performance (Acemoglu et al., 2001; Putnam et al., 1993; Guiso et al., 2007). The long term persistence of historical legacies appears to work through their influence on social and cultural norms (Guiso et al., 2008; Nunn, 2009). Italy is a good setting to test the influence of history on current economic and policy performance, since it is a country where regions formerly belonging to a wide range of different regimes now coexist under a unique institutional and legal framework. Studies exploiting these features of the Italian setting show how historical institutions can explain the heterogeneous economic and institutional performance, cultural values and endowments of social norms observed in different areas of the country (Putnam et al., 1993; Guiso et al., 2007; Tommassino, 2011).

This paper makes two main contributions to the literature on history and development. First, it shows that the performance of local development policies can be affected by the cultural traits prevailing in targeted areas. Second, the results presented here demonstrate that not all policies are equally vulnerable to the influence of historical legacies. Namely, the quality and level of governance appear critical in insulating policy effects from local cultural factors. In the case of the *CasMez*, no differences in the level of local development it induced are observed, depending on historical legacy, when the program was free from political influences. However, such differences emerged as soon as the program was captured by local political interests, with territories formerly belonging to the *Kingdom* performing worse than those located outside the *Kingdom's* borders.

Our identification strategy exploits the imperfect overlap between the *CasMez's* and the *Kingdom's* borders. Our results are robust to the sample of municipalities used in the analysis. Our main specification considers all municipalities within 50 km of the *Kingdom's* historical borders. We address concerns that heterogeneity across municipalities might drive our results by selecting a second sample using PS matching based on local observable characteristics. We also run a placebo regression, to ensure the effect we find is not due to omitted variables. Finally, we provide evidence that our results may underestimate the real effect of historical legacy on policy effectiveness, given the likely attenuation bias caused by spillover effects and the prevalence of former Papal State municipalities within our control group.

Our results have profound policy implications. They confirm the persistence of historical legacies, whose effects may re-emerge after decades of dormancy. However, our findings also suggest that the influence of history on current development is not unavoidable, but that good policy designs and governance systems may be able to overcome the negative influence of low inherited levels of social capital.

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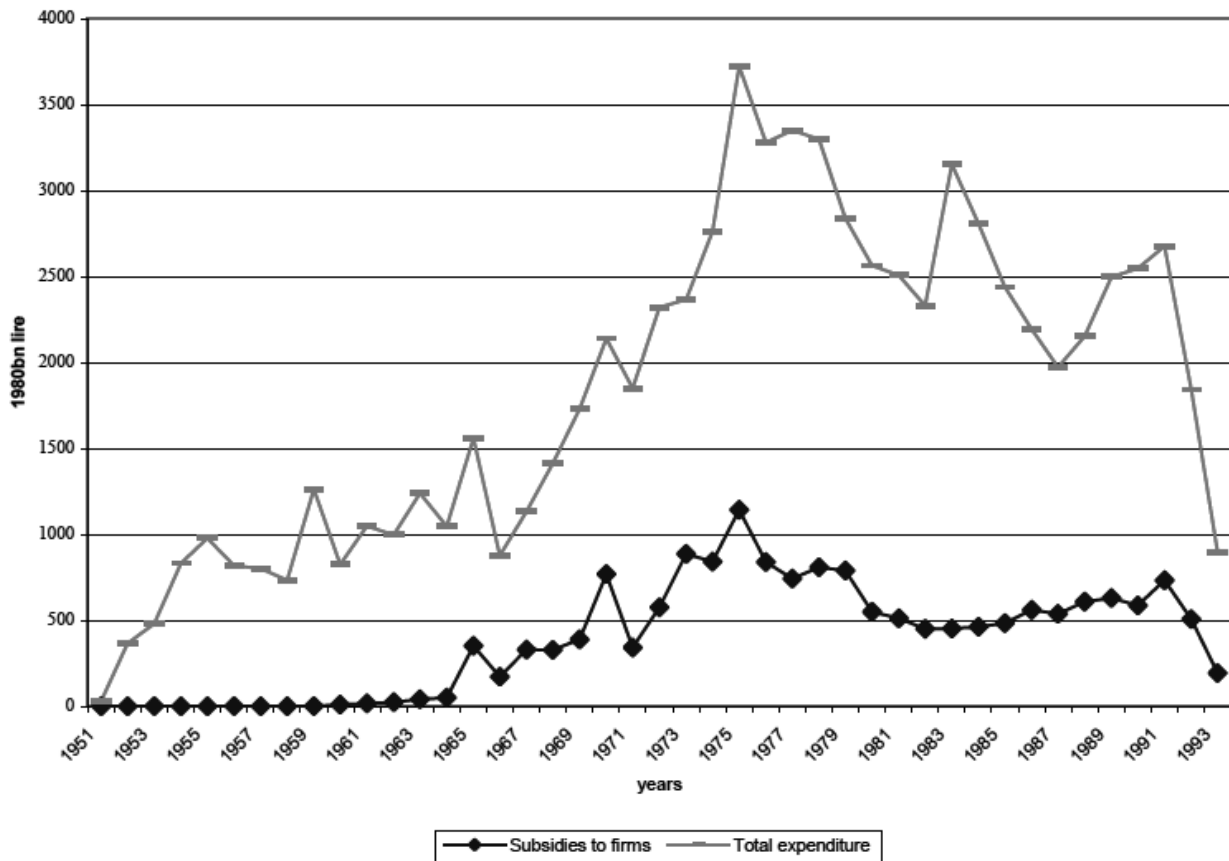
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Tables and Figures

Figure 1. Kingdom's border and current provinces' boundaries

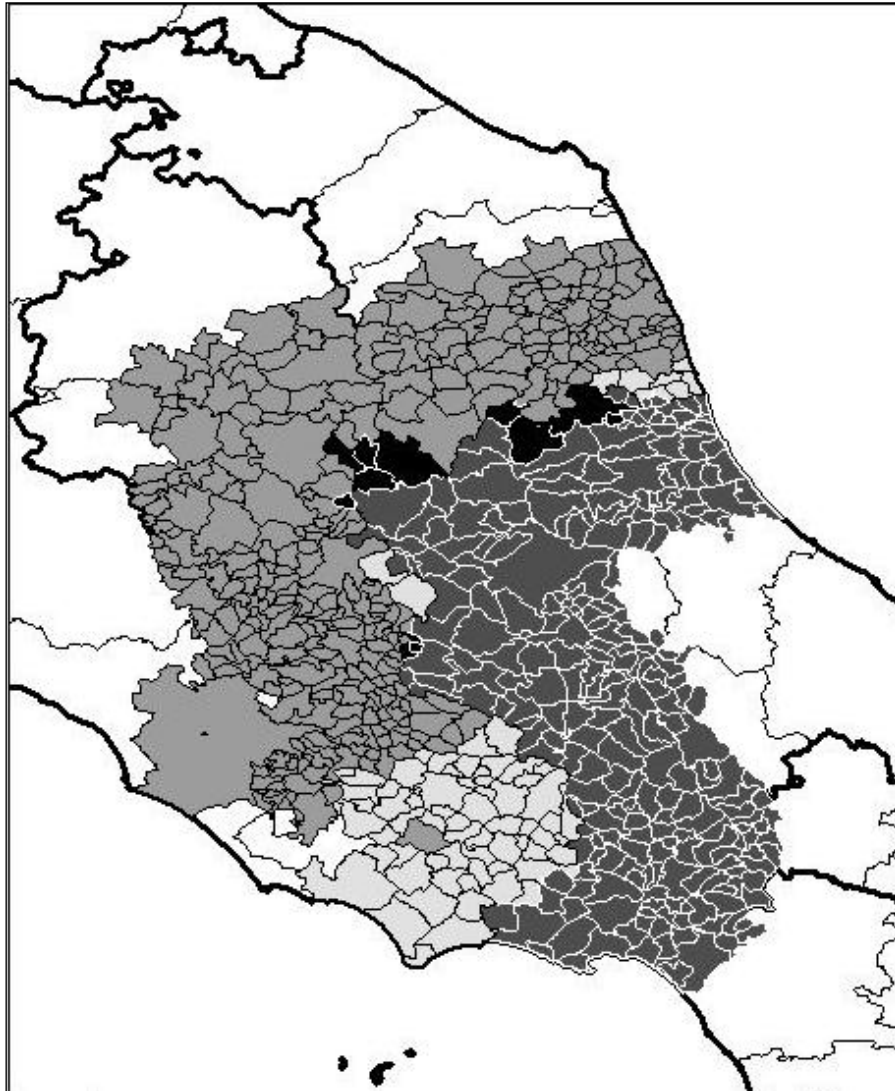


Figure 2. CasMez's disbursements in real terms (1951-1993)



Source: A. Spadavecchia, Regional and National Industrial Policies in Italy, 1950s-1993, Where Did the Subsidies Flow?, Reading, Henley Business School, University of Reading, 2007, p. 41; elaborated using CASMEZ – AGENSUD data (Bilanci della Cassa per il Mezzogiorno e dell’Agenzia per il Mezzogiorno, 1951-1993).

Figure 3. Classes of municipalities, depending on history and policy
(50 km from Kindgom's border)



Source: authors' elaborations. Legend: 1.Dark grey-white borders: CasMez=1, Kingdom=1;
2.Light grey-black borders: CasMez=1, Kingdom=0; 3.Dark grey-black borders: CasMez=0,
Kingdom=0; 4.Black-white borders: CasMez=0, Kingdom=1.

Table 1. Summary statistics for 1951 characteristics (50 km bandwidth)

	Full sample (607 municipalities)			PS sample (514 municipalities)		
	CASMEZ=1	CASMEZ=0	T test (P-value)	CASMEZ=1	CASMEZ=0	T test (P-value)
	(1)	(2)	(3)	(4)	(5)	(6)
Log Population	8.815	9.058	0.55	8.950	9.015	0.83
Log Employment	6.690	6.765	0.72	6.741	6.695	0.79
Log Plants	5.393	7.945	0.05	5.421	5.943	0.45
Dummy for costal location	0.75	0.42	0.08	0.63	0.59	0.61
Altitude	402.76	421.80	0.51	405.31	415.15	0.79
Slope	71.15	81.12	0.45	75.76	82.70	0.46
Surface (km2)	35.76	42.13	0.61	37.81	40.45	0.081

Notes: data are from the 1951 Population Census, the 1951 Census on Industry and Services and the ANCI archives. The PS sample is selected through a propensity score routine based on the following variables: coastal town dummy, altitude, slope within the municipality, surface in km², quadratic log of population in 1951, quadratic log of the number of plants in 1951, and quadratic log of employment in the 1951.

Table 2. The effects of CASMEZ and *KINGDOM* on the outcomes (full sample, 50 km bandwidth)

Dep. Variables:	Growth rate of Plants			Growth rate of Employment			Growth rate of Population		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. 1951-1971									
CASMEZ	0.006 (0.009)	0.019*** (0.005)	0.022*** (0.007)	0.024* (0.013)	0.052*** (0.007)	0.047*** (0.009)	0.005 (0.012)	0.004 (0.007)	0.002 (0.009)
<i>KINGDOM</i>	0.013 (0.015)	0.011 (0.012)	0.015 (0.013)	0.009 (0.018)	0.013 (0.013)	0.011 (0.010)	0.003 (0.025)	0.009 (0.016)	0.007 (0.019)
CASMEZ* <i>KINGDOM</i>	0.005 (0.022)	0.009 (0.015)	0.008 (0.016)	0.006 (0.020)	0.012 (0.015)	0.008 (0.012)	0.007 (0.031)	0.003 (0.017)	0.002 (0.020)
Number of Obs	607	607	607	607	607	607	607	607	607
R-squared	0.045	0.145	0.166	0.052	0.178	0.198	0.009	0.142	0.144
Panel B. 1971-1991									
CASMEZ	0.007 (0.007)	0.011* (0.005)	0.013** (0.005)	0.005 (0.012)	0.009 (0.006)	0.010* (0.005)	0.005 (0.023)	0.007 (0.009)	0.009 (0.009)
<i>KINGDOM</i>	0.001 (0.013)	-0.007 (0.010)	-0.008 (0.011)	-0.015 (0.012)	-0.011 (0.012)	-0.015 (0.012)	0.003 (0.015)	0.004 (0.011)	0.005 (0.015)
CASMEZ* <i>KINGDOM</i>	0.009 (0.025)	-0.039** (0.015)	-0.045*** (0.015)	-0.019 (0.022)	-0.052*** (0.014)	-0.051*** (0.016)	0.009 (0.025)	0.004 (0.013)	0.004 (0.015)
Number of Obs	607	607	607	607	607	607	607	607	607
R-squared	0.009	0.165	0.171	0.027	0.154	0.199	0.045	0.134	0.139
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Province fixed effects	No	No	Yes	No	No	Yes	No	No	Yes

Notes: OLS regressions, standard error in parentheses estimated based on Conley (1999), with a bandwidth of 50 km. Observations include municipalities within 50 km from the *KINGDOM* boundary. Controls include: coastal town dummy, altitude, slope within the municipality, surface in km², log of population and log of population squared in 1951, log of the number of plants and log of the number of plants squared in 1951, and log of employment and log of employment squared in 1951. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3. The effects of CASMEZ and *KINGDOM* on the outcomes (PS sample, 50 km bandwidth)

Dep. Variables:	Growth rate of Plants			Growth rate of Employment			Growth rate of Population		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. 1951-1971									
CASMEZ	0.012*** (0.004)	0.013*** (0.005)	0.012** (0.006)	0.026** (0.011)	0.022*** (0.009)	0.021** (0.010)	0.007 (0.010)	0.008 (0.011)	0.008 (0.009)
<i>KINGDOM</i>	0.021 (0.016)	0.021 (0.015)	0.014 (0.016)	0.011 (0.018)	0.016 (0.013)	0.012 (0.010)	0.005 (0.021)	0.005 (0.015)	0.009 (0.016)
CASMEZ* <i>KINGDOM</i>	0.007 (0.009)	0.007 (0.011)	0.013 (0.015)	0.006 (0.020)	0.012 (0.015)	0.008 (0.012)	0.005 (0.022)	0.009 (0.024)	0.012 (0.016)
Number of Obs	514	514	514	514	514	514	514	514	514
R-squared	0.165	0.167	0.186	0.152	0.178	0.198	0.091	0.124	0.131
Panel B. 1971-1991									
CASMEZ	0.014** (0.006)	0.012** (0.005)	0.015*** (0.005)	0.015*** (0.005)	0.014*** (0.005)	0.009 (0.006)	0.005 (0.021)	0.009 (0.011)	0.011 (0.010)
<i>KINGDOM</i>	-0.004 (0.016)	-0.007 (0.010)	-0.008 (0.011)	-0.016 (0.013)	-0.010 (0.011)	-0.015 (0.014)	0.006 (0.014)	0.007 (0.014)	0.009 (0.016)
CASMEZ* <i>KINGDOM</i>	-0.041*** (0.017)	-0.045*** (0.017)	-0.040** (0.019)	-0.062*** (0.022)	-0.072*** (0.019)	-0.069*** (0.019)	0.011 (0.021)	0.009 (0.016)	0.008 (0.016)
Number of Obs	514	514	514	514	514	514	514	514	514
R-squared	0.109	0.165	0.171	0.127	0.154	0.199	0.095	0.171	0.173
Panel C. 1971-1991 (matching with 1971 observables)									
CASMEZ	0.021** (0.009)	0.022** (0.010)	0.025*** (0.010)	0.012*** (0.005)	0.011*** (0.005)	0.009* (0.005)	0.007 (0.022)	0.010 (0.019)	0.010 (0.017)
<i>KINGDOM</i>	-0.007 (0.013)	-0.009 (0.013)	-0.009 (0.014)	-0.019** (0.009)	-0.015 (0.011)	-0.015 (0.012)	0.004 (0.011)	0.005 (0.011)	0.009 (0.019)
CASMEZ* <i>KINGDOM</i>	-0.055*** (0.016)	-0.055*** (0.017)	-0.050** (0.019)	-0.079*** (0.019)	-0.073*** (0.018)	-0.065*** (0.021)	0.015 (0.015)	0.011 (0.014)	0.007 (0.014)
Number of Obs	594	594	594	594	594	594	594	594	594
R-squared	0.110	0.175	0.181	0.157	0.174	0.231	0.085	0.140	0.164
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Province fixed effects	No	No	Yes	No	No	Yes	No	No	Yes

Notes: OLS regressions, standard error in parentheses estimated based on Conley (1999), with a bandwidth of 50 km. Observations include municipalities within 50 km from the *KINGDOM* boundary. Municipalities have been selected using a propensity score technique (kernel matching), which retains only observations that share common support, for the probability of being included in the CASMEZ area. Controls (as well as the vector of variables for the propensity score) include: coastal town dummy, altitude, slope within the municipality, surface in km², log of population and log of population squared in 1951, log of the number of plants and log of the number of plants squared in 1951, and log of employment and log of employment squared in 1951. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4. The effects of CASMEZ and *KINGDOM* on the outcomes (PS sample, 100 km bandwidth)

Dep. Variables:	Growth rate of Plants			Growth rate of Employment			Growth rate of Population		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. 1951-1971									
CASMEZ	0.016*	0.019***	0.022***	0.024*	0.027***	0.037***	0.005	0.004	0.002
	(0.009)	(0.007)	(0.007)	(0.013)	(0.007)	(0.009)	(0.012)	(0.007)	(0.009)
<i>KINGDOM</i>	0.013	0.011	0.015	0.009	0.013	0.011	0.003	0.009	0.007
	(0.015)	(0.012)	(0.013)	(0.018)	(0.013)	(0.010)	(0.025)	(0.016)	(0.019)
CASMEZ* <i>KINGDOM</i>	0.005	0.009	0.008	0.006	0.012	0.008	0.007	0.003	0.002
	(0.022)	(0.015)	(0.016)	(0.020)	(0.015)	(0.012)	(0.031)	(0.017)	(0.020)
Number of Obs	1189	1189	1189	1189	1189	1189	1189	1189	1189
R-squared	0.145	0.147	0.166	0.140	0.161	0.190	0.099	0.142	0.144
Panel B. 1971-1991									
CASMEZ	0.009	0.011*	0.013**	0.015	0.009	0.010*	0.005	0.007	0.009
	(0.007)	(0.005)	(0.005)	(0.012)	(0.006)	(0.005)	(0.023)	(0.009)	(0.009)
<i>KINGDOM</i>	0.001	-0.007	-0.008	-0.015	-0.011	-0.015	0.003	0.004	0.005
	(0.013)	(0.010)	(0.011)	(0.012)	(0.012)	(0.012)	(0.015)	(0.011)	(0.015)
CASMEZ* <i>KINGDOM</i>	0.029	-0.039**	-0.045***	-0.049*	-0.052***	-0.051***	0.009	0.004	0.004
	(0.025)	(0.015)	(0.015)	(0.022)	(0.014)	(0.016)	(0.025)	(0.013)	(0.015)
Number of Obs	1189	1189	1189	1189	1189	1189	1189	1189	1189
R-squared	0.110	0.155	0.161	0.125	0.144	0.180	0.045	0.134	0.139
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Province fixed effects	No	No	Yes	No	No	Yes	No	No	Yes

Notes: OLS regressions, standard error in parentheses estimated based on Conley (1999), with a bandwidth of 100 km. Observations include municipalities within 100 km from the *KINGDOM* boundary. Municipalities have been selected by using a propensity score technique (kernel matching), which retains only observations that share common support, for the probability of being included in the CASMEZ area. Controls (as well as the vector of variables for the propensity score) include: coastal town dummy, altitude, slope within the municipality, surface in km², log of population and log of population squared in 1951, log of the number of plants and log of the number of plants squared in 1951, and log of employment and log of employment squared in 1951. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5. Placebo experiment (PS sample, 50 km bandwidth)

Dep. Variables:	Growth rate of Plants			Growth rate of Employment			Growth rate of Population		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. 1951-1971									
CASMEZ	0.007 (0.009)	0.009 (0.007)	0.006 (0.007)	0.006 (0.019)	0.003 (0.019)	0.006 (0.022)	0.002 (0.014)	0.001 (0.017)	0.002 (0.019)
KINGDOM	0.003 (0.019)	0.006 (0.018)	0.007 (0.019)	0.006 (0.021)	0.009 (0.025)	0.002 (0.027)	0.004 (0.029)	0.003 (0.031)	0.003 (0.036)
CASMEZ*KINGDOM	0.005 (0.011)	0.004 (0.015)	0.001 (0.013)	0.004 (0.025)	0.005 (0.055)	0.007 (0.022)	0.001 (0.032)	0.002 (0.034)	0.002 (0.036)
Number of Obs	514	514	514	514	514	514	514	514	514
R-squared	0.007	0.013	0.023	0.003	0.022	0.024	0.010	0.014	0.018
Panel B. 1971-1991									
CASMEZ	0.004 (0.012)	0.003 (0.015)	0.002 (0.015)	0.006 (0.019)	0.008 (0.026)	0.006 (0.025)	0.005 (0.023)	0.004 (0.021)	0.004 (0.019)
KINGDOM	-0.001 (0.019)	-0.004 (0.020)	-0.004 (0.024)	-0.005 (0.031)	-0.001 (0.032)	-0.002 (0.032)	0.003 (0.035)	0.002 (0.031)	0.002 (0.035)
CASMEZ*KINGDOM	-0.004 (0.029)	-0.002 (0.025)	-0.004 (0.021)	-0.004 (0.028)	-0.001 (0.031)	-0.007 (0.016)	0.002 (0.025)	0.003 (0.033)	0.003 (0.035)
Number of Obs	514	514	514	514	514	514	514	514	514
R-squared	0.009	0.015	0.031	0.012	0.014	0.017	0.022	0.031	0.044
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Province fixed effects	No	No	Yes	No	No	Yes	No	No	Yes

Notes: OLS regressions, standard error in parentheses estimated based on Conley (1999), with a bandwidth of 100 km. Observations include municipalities within 100 km from the KINGDOM boundary. Municipalities have been selected using a propensity score technique (kernel matching), which retains only observations that share common support, for the probability of being included in the CASMEZ area. Controls (as well as the vector of variables for the propensity score) include: coastal town dummy, altitude, slope within the municipality, surface in km², log of population and log of population squared in 1951, log of the number of plants and log of the number of plants squared in 1951, and log of employment and log of employment squared in 1951. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6. Growth differences between types (1,1) and (0,0) municipalities, differently located (PS sample)

Dep. Variables:	Growth rate of Plants			Growth rate of Employment			Growth rate of Population		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. 1951-1971									
Types (1,1) ^a	0.033*** (0.010)	0.045*** (0.009)	0.042*** (0.009)	0.024 (0.015)	0.035** (0.014)	0.039*** (0.013)	0.042*** (0.013)	0.045*** (0.012)	0.047*** (0.012)
Number of Obs	312	312	312	312	312	312	312	312	312
R-squared	0.172	0.192	0.234	0.198	0.211	0.255	0.172	0.287	0.302
Types (0,0) ^b	-0.042*** (0.009)	-0.055*** (0.012)	-0.063*** (0.012)	-0.022** (0.012)	-0.031*** (0.013)	-0.033*** (0.011)	-0.031*** (0.013)	-0.028** (0.014)	-0.025 (0.016)
Number of Obs	297	297	297	297	297	297	297	297	297
R-squared	0.197	0.221	0.253	0.165	0.198	0.196	0.143	0.155	0.252
Panel B. 1971-1991									
Types (1,1) ^a	0.060*** (0.015)	0.066*** (0.015)	0.069*** (0.016)	0.048*** (0.016)	0.066*** (0.018)	0.069*** (0.018)	0.009 (0.022)	0.008 (0.025)	0.004 (0.019)
Number of Obs	312	312	312	312	312	312	312	312	312
R-squared	0.168	0.183	0.276	0.102	0.155	0.269	0.009	0.121	0.127
Types (0,0) ^b	-0.048*** (0.013)	-0.057*** (0.012)	-0.061*** (0.009)	-0.023 (0.013)	-0.036*** (0.015)	-0.034** (0.016)	0.005 (0.034)	0.007 (0.029)	0.003 (0.033)
Number of Obs	297	297	297	297	297	297	297	297	297
R-squared	0.179	0.205	0.231	0.172	0.204	0.267	0.022	0.031	0.044
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Province fixed effects	No	No	Yes	No	No	Yes	No	No	Yes

Notes: LS regressions, in parentheses standard error estimates based on Conley (1999), with a bandwidth of 100 km. Observations include municipalities within 100 km from the CASMEZ boundary. Municipalities have been selected by using a propensity score technique (kernel matching), which retains only observations that share the common support, for the probability of being included in the CASMEZ area. Controls (as well as the vector of variables for the propensity score) include: coastal town dummy, altitude, slope within the municipality, surface in km², log of population and log of population squared in 1951, log of the number of plants and log of the number of plants squared in 1951, and log of employment and log of employment squared in 1951. ^aIdentifies the differences in the outcomes between Type(1,1) municipalities within 50 km from Kingdom's border and a control group of PS-selected Type(1,1) municipalities located further South, beyond the 50km threshold. ^bIdentifies the differences in the outcomes between Type(0,0) municipalities within 50 km from Kingdom's border and a control group of PS-selected Type(0,0) municipalities located further North, beyond the 50km threshold and not formerly belonging to the Papal State. * significant at 10%; ** significant at 5%; *** significant at 1%.

Appendix 1

Table A1. List of municipalities within 50 km from Kingdom's border

Municipality	Region	Province	CasMez	Kingdom
ACQUACANINA	Marche	Macerata	0	0
BELFORTE DEL CHIANTI	Marche	Macerata	0	0
BOLOGNOLA	Marche	Macerata	0	0
CALDAROLA	Marche	Macerata	0	0
CAMERINO	Marche	Macerata	0	0
CAMPOROTONDO DI FIASTRONE	Marche	Macerata	0	0
CASTELRAIMONDO	Marche	Macerata	0	0
CASTELSANTANGELO SUL NERA	Marche	Macerata	0	0
CESSAPALOMBO	Marche	Macerata	0	0
CIVITANOVA MARCHE	Marche	Macerata	0	0
COLMURANO	Marche	Macerata	0	0
CORRIDONIA	Marche	Macerata	0	0
FIASTRA	Marche	Macerata	0	0
FIORDIMONTE	Marche	Macerata	0	0
GAGLIOLE	Marche	Macerata	0	0
GUALDO	Marche	Macerata	0	0
LORO PICENO	Marche	Macerata	0	0
MACERATA	Marche	Macerata	0	0
MOGLIANO	Marche	Macerata	0	0
MONTE CAVALLO	Marche	Macerata	0	0
MONTECOSARO	Marche	Macerata	0	0
MONTE SAN GIUSTO	Marche	Macerata	0	0
MONTE SAN MARTINO	Marche	Macerata	0	0
MORROVALLE	Marche	Macerata	0	0
MUCCIA	Marche	Macerata	0	0
PENNA SAN GIOVANNI	Marche	Macerata	0	0
PETRIOLO	Marche	Macerata	0	0
PIEVEBOVIGLIANA	Marche	Macerata	0	0
PIEVE TORINA	Marche	Macerata	0	0
PIORACO	Marche	Macerata	0	0
POLLENZA	Marche	Macerata	0	0
RIPE SAN GINESIO	Marche	Macerata	0	0
SAN GINESIO	Marche	Macerata	0	0
SAN SEVERINO MARCHE	Marche	Macerata	0	0
SANT'ANGELO IN PONTANO	Marche	Macerata	0	0
SARNANO	Marche	Macerata	0	0
SEFRO	Marche	Macerata	0	0
SERRAPETRONA	Marche	Macerata	0	0
SERRAVALLE DI CHIANTI	Marche	Macerata	0	0
TOLENTINO	Marche	Macerata	0	0
URBISAGLIA	Marche	Macerata	0	0
USSITA	Marche	Macerata	0	0
VISSO	Marche	Macerata	0	0
ACQUASANTA TERME	Marche	Ascoli Piceno	0	1
ACQUAVIVA PICENA	Marche	Ascoli Piceno	1	0
ALTIDONA	Marche	Ascoli Piceno	0	0
AMANDOLA	Marche	Ascoli Piceno	0	0
APPIGNANO DEL TRONTO	Marche	Ascoli Piceno	1	1
ARQUATA DEL TRONTO	Marche	Ascoli Piceno	1	1
ASCOLI PICENO	Marche	Ascoli Piceno	0	1
BELMONTE PICENO	Marche	Ascoli Piceno	0	0
CAMPOFILONE	Marche	Ascoli Piceno	0	0
CARASSAI	Marche	Ascoli Piceno	0	0
CASTEL DI LAMA	Marche	Ascoli Piceno	1	1
CASTIGNANO	Marche	Ascoli Piceno	1	0
CASTORANO	Marche	Ascoli Piceno	1	0
COLLI DEL TRONTO	Marche	Ascoli Piceno	1	1
COMUNANZA	Marche	Ascoli Piceno	0	0
COSSIGNANO	Marche	Ascoli Piceno	0	0
CUPRA MARITTIMA	Marche	Ascoli Piceno	0	0
FALERONE	Marche	Ascoli Piceno	0	0
FERMO	Marche	Ascoli Piceno	0	0

FOLIGNANO	Marche	Ascoli Piceno	0	1
FORCE	Marche	Ascoli Piceno	0	0
FRANCAVILLA D'ETE	Marche	Ascoli Piceno	0	0
GROTTAMMARE	Marche	Ascoli Piceno	1	0
GROTTAZZOLINA	Marche	Ascoli Piceno	0	0
LAPEDONA	Marche	Ascoli Piceno	0	0
MAGLIANO DI TENNA	Marche	Ascoli Piceno	0	0
MALTIGNANO	Marche	Ascoli Piceno	1	1
MASSA FERMANA	Marche	Ascoli Piceno	0	0
MASSIGNANO	Marche	Ascoli Piceno	0	0
MONSAMPIETRO MORICO	Marche	Ascoli Piceno	0	0
MONSAMPOLO DEL TRONTO	Marche	Ascoli Piceno	1	0
MONTALTO DELLE MARCHE	Marche	Ascoli Piceno	0	0
MONTAPPONE	Marche	Ascoli Piceno	0	0
MONTEDINOVE	Marche	Ascoli Piceno	0	0
MONTEFALCONE APPENNINO	Marche	Ascoli Piceno	0	0
MONTEFIORE DELL'ASO	Marche	Ascoli Piceno	0	0
MONTEFORTINO	Marche	Ascoli Piceno	0	0
MONTEGALLO	Marche	Ascoli Piceno	0	1
MONTE GIBERTO	Marche	Ascoli Piceno	0	0
MONTEGIORGIO	Marche	Ascoli Piceno	0	0
MONTEGRANARO	Marche	Ascoli Piceno	0	0
MONTELEONE DI FERMO	Marche	Ascoli Piceno	0	0
MONTELPARO	Marche	Ascoli Piceno	0	0
MONTEMONACO	Marche	Ascoli Piceno	0	0
MONTEPRANDONE	Marche	Ascoli Piceno	1	0
MONTE RINALDO	Marche	Ascoli Piceno	0	0
MONTERUBBIANO	Marche	Ascoli Piceno	0	0
MONTE SAN PIETRANGELI	Marche	Ascoli Piceno	0	0
MONTE URANO	Marche	Ascoli Piceno	0	0
MONTE VIDON COMBATTE	Marche	Ascoli Piceno	0	0
MONTE VIDON CORRADO	Marche	Ascoli Piceno	0	0
MONTOTTONE	Marche	Ascoli Piceno	0	0
MORESCO	Marche	Ascoli Piceno	0	0
OFFIDA	Marche	Ascoli Piceno	1	0
ORTEZZANO	Marche	Ascoli Piceno	0	0
PALMIANO	Marche	Ascoli Piceno	0	0
PEDASO	Marche	Ascoli Piceno	0	0
PETRITOLI	Marche	Ascoli Piceno	0	0
PONZANO DI FERMO	Marche	Ascoli Piceno	0	0
PORTO SAN GIORGIO	Marche	Ascoli Piceno	0	0
PORTO SANT'ELPIDIO	Marche	Ascoli Piceno	0	0
RAPAGNANO	Marche	Ascoli Piceno	0	0
RIPATRANSONE	Marche	Ascoli Piceno	0	0
ROCCAFLUVIONE	Marche	Ascoli Piceno	0	0
ROTELLA	Marche	Ascoli Piceno	0	0
SAN BENEDETTO DEL TRONTO	Marche	Ascoli Piceno	1	0
SANTA VITTORIA IN MATENANO	Marche	Ascoli Piceno	0	0
SANT'ELPIDIO A MARE	Marche	Ascoli Piceno	0	0
SERVIGLIANO	Marche	Ascoli Piceno	0	0
SMERILLO	Marche	Ascoli Piceno	0	0
SPINETOLI	Marche	Ascoli Piceno	1	1
TORRE SAN PATRIZIO	Marche	Ascoli Piceno	0	0
VENAROTTA	Marche	Ascoli Piceno	0	0
ASSISI	Umbria	Perugia	0	0
BETTONA	Umbria	Perugia	0	0
BEVAGNA	Umbria	Perugia	0	0
CAMPELLO SUL CLITUNNO	Umbria	Perugia	0	0
CANNARA	Umbria	Perugia	0	0
CASCIA	Umbria	Perugia	0	1
CASTEL RITALDI	Umbria	Perugia	0	0
CERRETO DI SPOLETO	Umbria	Perugia	0	0
COLLAZZONE	Umbria	Perugia	0	0
DERUTA	Umbria	Perugia	0	0
FOLIGNO	Umbria	Perugia	0	0
FRATTA TODINA	Umbria	Perugia	0	0
GIANO DELL'UMBRIA	Umbria	Perugia	0	0

GUALDO CATTANEO	Umbria	Perugia	0	0
MARSCIANO	Umbria	Perugia	0	0
MASSA MARTANA	Umbria	Perugia	0	0
MONTE CASTELLO DI VIBIO	Umbria	Perugia	0	0
MONTEFALCO	Umbria	Perugia	0	0
MONTELEONE DI SPOLETO	Umbria	Perugia	0	1
NOCERA UMBRA	Umbria	Perugia	0	0
NORCIA	Umbria	Perugia	0	0
POGGIODOMO	Umbria	Perugia	0	1
PRECI	Umbria	Perugia	0	0
SANT'ANATOLIA DI NARCO	Umbria	Perugia	0	1
SCHEGGINO	Umbria	Perugia	0	0
SELLANO	Umbria	Perugia	0	0
SPELLO	Umbria	Perugia	0	0
SPOLETO	Umbria	Perugia	0	0
TODI	Umbria	Perugia	0	0
TORGIANO	Umbria	Perugia	0	0
TREVI	Umbria	Perugia	0	0
VALLO DI NERA	Umbria	Perugia	0	0
VALTOPINA	Umbria	Perugia	0	0
ACQUASPARTA	Umbria	Terni	0	0
ALVIANO	Umbria	Terni	0	0
AMELIA	Umbria	Terni	0	0
ARRONE	Umbria	Terni	0	0
ATTIGLIANO	Umbria	Terni	0	0
CALVI DELL'UMBRIA	Umbria	Terni	0	0
FERENTILLO	Umbria	Terni	0	0
GIOVE	Umbria	Terni	0	0
GUARDEA	Umbria	Terni	0	0
LUGNANO IN TEVERINA	Umbria	Terni	0	0
MONTECASTRILLI	Umbria	Terni	0	0
MONTECCHIO	Umbria	Terni	0	0
MONTEFRANCO	Umbria	Terni	0	0
NARNI	Umbria	Terni	0	0
OTRICOLI	Umbria	Terni	0	0
PENNA IN TEVERINA	Umbria	Terni	0	0
POLINO	Umbria	Terni	0	1
SAN GEMINI	Umbria	Terni	0	0
SAN VENANZO	Umbria	Terni	0	0
STRONCONE	Umbria	Terni	0	0
TERNI	Umbria	Terni	0	0
AVIGLIANO UMBRO	Umbria	Terni	0	0
BASSANO IN TEVERINA	Lazio	Viterbo	0	0
CALCATA	Lazio	Viterbo	0	0
CASTEL SANT'ELIA	Lazio	Viterbo	0	0
CIVITA CASTELLANA	Lazio	Viterbo	0	0
CORCHIANO	Lazio	Viterbo	0	0
FALERIA	Lazio	Viterbo	0	0
GALLESE	Lazio	Viterbo	0	0
ORTE	Lazio	Viterbo	0	0
VASANELLO	Lazio	Viterbo	0	0
ACCUMOLI	Lazio	Rieti	1	1
AMATRICE	Lazio	Rieti	1	1
ANTRODOCO	Lazio	Rieti	1	1
ASCREA	Lazio	Rieti	0	0
BELMONTE IN SABINA	Lazio	Rieti	0	0
BORBONA	Lazio	Rieti	1	1
BORGOROSE	Lazio	Rieti	1	1
BORGO VELINO	Lazio	Rieti	1	1
CANTALICE	Lazio	Rieti	1	1
CANTALUPO IN SABINA	Lazio	Rieti	0	0
CASAPROTA	Lazio	Rieti	0	0
CASPERIA	Lazio	Rieti	0	0
CASTEL DI TORA	Lazio	Rieti	0	0
CASTELNUOVO DI FARFA	Lazio	Rieti	0	0
CASTEL SANT'ANGELO	Lazio	Rieti	1	1
CITTADUCALE	Lazio	Rieti	1	0

CITTAREALE	Lazio	Rieti	1	1
COLLALTO SABINO	Lazio	Rieti	0	1
COLLE DI TORA	Lazio	Rieti	0	0
COLLEGIOVE	Lazio	Rieti	0	0
COLLEVECCHIO	Lazio	Rieti	0	0
COLLI SUL VELINO	Lazio	Rieti	0	0
CONCERVIANO	Lazio	Rieti	0	0
CONFIGNI	Lazio	Rieti	0	0
CONTIGLIANO	Lazio	Rieti	0	0
COTTANELLO	Lazio	Rieti	0	0
FARA IN SABINA	Lazio	Rieti	0	0
FIAMIGNANO	Lazio	Rieti	1	1
FORANO	Lazio	Rieti	0	0
FRASSO SABINO	Lazio	Rieti	0	0
GRECCIO	Lazio	Rieti	0	0
LABRO	Lazio	Rieti	0	0
LEONESSA	Lazio	Rieti	1	1
LONGONE SABINO	Lazio	Rieti	0	0
MAGLIANO SABINA	Lazio	Rieti	0	0
MARCEPELLI	Lazio	Rieti	0	0
MICIGLIANO	Lazio	Rieti	1	1
MOMPEO	Lazio	Rieti	0	0
MONTASOLA	Lazio	Rieti	0	0
MONTEBUONO	Lazio	Rieti	0	0
MONTELEONE SABINO	Lazio	Rieti	0	0
MONTENERO SABINO	Lazio	Rieti	0	0
MONTE SAN GIOVANNI IN SABINA	Lazio	Rieti	0	0
MONTOPOLI DI SABINA	Lazio	Rieti	0	0
MORRO REATINO	Lazio	Rieti	0	0
NESPOLO	Lazio	Rieti	0	1
ORVINIO	Lazio	Rieti	0	0
PAGANICO SABINO	Lazio	Rieti	0	0
PESCOROCCHIANO	Lazio	Rieti	1	1
PETRELLA SALTO	Lazio	Rieti	1	0
POGGIO BUSTONE	Lazio	Rieti	0	0
POGGIO CATINO	Lazio	Rieti	0	0
POGGIO MIRTETO	Lazio	Rieti	0	0
POGGIO MOIANO	Lazio	Rieti	0	0
POGGIO NATIVO	Lazio	Rieti	0	0
POGGIO SAN LORENZO	Lazio	Rieti	0	0
POSTA	Lazio	Rieti	1	1
POZZAGLIA SABINA	Lazio	Rieti	0	0
RIETI	Lazio	Rieti	0	0
RIVODUTRI	Lazio	Rieti	0	0
ROCCANTICA	Lazio	Rieti	0	0
ROCCA SINIBALDA	Lazio	Rieti	0	0
SALISANO	Lazio	Rieti	0	0
SCANDRIGLIA	Lazio	Rieti	0	0
SELCI	Lazio	Rieti	0	0
STIMIGLIANO	Lazio	Rieti	0	0
TARANO	Lazio	Rieti	0	0
TOFFIA	Lazio	Rieti	0	0
TORRICELLA IN SABINA	Lazio	Rieti	0	0
TORRI IN SABINA	Lazio	Rieti	0	0
TURANIA	Lazio	Rieti	0	0
VACONE	Lazio	Rieti	0	0
VARCO SABINO	Lazio	Rieti	0	0
AFFILE	Lazio	Roma	0	0
AGOSTA	Lazio	Roma	0	0
ALBANO LAZIALE	Lazio	Roma	0	0
ANTICOLI CORRADO	Lazio	Roma	0	0
ARCINAZZO ROMANO	Lazio	Roma	0	0
ARICCIA	Lazio	Roma	0	0
ARSOLI	Lazio	Roma	0	0
ARTENA	Lazio	Roma	1	0
BELLEGRA	Lazio	Roma	0	0
CAMERATA NUOVA	Lazio	Roma	0	0

CANTERANO	Lazio	Roma	0	0
CAPENA	Lazio	Roma	0	0
CAPRANICA PRENESTINA	Lazio	Roma	0	0
CARPINETO ROMANO	Lazio	Roma	0	0
CASAPE	Lazio	Roma	0	0
CASTEL GANDOLFO	Lazio	Roma	0	0
CASTEL MADAMA	Lazio	Roma	0	0
CASTELNUOVO DI PORTO	Lazio	Roma	0	0
CASTEL SAN PIETRO ROMANO	Lazio	Roma	0	0
CAVE	Lazio	Roma	0	0
CERRETO LAZIALE	Lazio	Roma	0	0
CERVARA DI ROMA	Lazio	Roma	0	0
CICILIANO	Lazio	Roma	0	0
CINETO ROMANO	Lazio	Roma	0	0
CIVITELLA SAN PAOLO	Lazio	Roma	0	0
COLLEFERRO	Lazio	Roma	1	0
COLONNA	Lazio	Roma	0	0
FIANO ROMANO	Lazio	Roma	0	0
FILACCIANO	Lazio	Roma	0	0
FRASCATI	Lazio	Roma	0	0
GALLICANO NEL LAZIO	Lazio	Roma	0	0
GAVIGNANO	Lazio	Roma	1	0
GENAZZANO	Lazio	Roma	0	0
GENZANO DI ROMA	Lazio	Roma	0	0
GERANO	Lazio	Roma	0	0
GORGA	Lazio	Roma	1	0
GROTTAFERRATA	Lazio	Roma	0	0
GUIDONIA MONTECELIO	Lazio	Roma	0	0
JENNE	Lazio	Roma	0	0
LABICO	Lazio	Roma	1	0
LICENZA	Lazio	Roma	0	0
MANDELA	Lazio	Roma	0	0
MARANO EQUO	Lazio	Roma	0	0
MARCELLINA	Lazio	Roma	0	0
MARINO	Lazio	Roma	0	0
MENTANA	Lazio	Roma	0	0
MONTE COMPATRI	Lazio	Roma	0	0
MONTEFLAVIO	Lazio	Roma	0	0
MONTELANICO	Lazio	Roma	1	0
MONTELIBRETTI	Lazio	Roma	0	0
MONTE PORZIO CATONE	Lazio	Roma	0	0
MONTEROTONDO	Lazio	Roma	0	0
MONTORIO ROMANO	Lazio	Roma	0	0
MORICONE	Lazio	Roma	0	0
MORLUPO	Lazio	Roma	0	0
NAZZANO	Lazio	Roma	0	0
NEMI	Lazio	Roma	0	0
NEROLA	Lazio	Roma	0	0
OLEVANO ROMANO	Lazio	Roma	0	0
PALESTRINA	Lazio	Roma	0	0
PALOMBARA SABINA	Lazio	Roma	0	0
PERCILE	Lazio	Roma	0	0
PISONIANO	Lazio	Roma	0	0
POLI	Lazio	Roma	0	0
PONZANO ROMANO	Lazio	Roma	0	0
RIANO	Lazio	Roma	0	0
RIGNANO FLAMINIO	Lazio	Roma	0	0
RIOFREDDO	Lazio	Roma	0	0
ROCCA CANTERANO	Lazio	Roma	0	0
ROCCA DI CAVE	Lazio	Roma	0	0
ROCCA DI PAPA	Lazio	Roma	0	0
ROCCAGIOVINE	Lazio	Roma	0	0
ROCCA PRIORA	Lazio	Roma	0	0
ROCCA SANTO STEFANO	Lazio	Roma	0	0
ROIATE	Lazio	Roma	0	0
ROMA	Lazio	Roma	0	0
ROVIANO	Lazio	Roma	0	0

SACROFANO			0	0
SAMBUCI	Lazio	Roma	0	0
SAN GREGORIO DA SASSOLA	Lazio	Roma	0	0
SAN POLO DEI CAVALIERI	Lazio	Roma	0	0
SANT'ANGELO ROMANO	Lazio	Roma	0	0
SANT'ORESTE	Lazio	Roma	0	0
SAN VITO ROMANO	Lazio	Roma	0	0
SARACINESCO	Lazio	Roma	0	0
SEGNI	Lazio	Roma	1	0
SUBIACO	Lazio	Roma	0	0
TIVOLI	Lazio	Roma	0	0
TORRITA TIBERINA	Lazio	Roma	0	0
VALLEPIETRA	Lazio	Roma	0	0
VALLINFREDA	Lazio	Roma	0	0
VALMONTONE	Lazio	Roma	1	0
VELLETRI	Lazio	Roma	0	0
VICOVARO	Lazio	Roma	0	0
VIVARO ROMANO	Lazio	Roma	0	0
ZAGAROLO	Lazio	Roma	0	0
LARIANO	Lazio	Roma	0	0
CIAMPINO	Lazio	Roma	0	0
SAN CESAREO	Lazio	Roma	0	0
BASSIANO	Lazio	Latina	1	0
CAMPODIMELE	Lazio	Latina	1	1
CASTELFORTE	Lazio	Latina	1	1
CORI	Lazio	Latina	1	0
FONDI	Lazio	Latina	1	1
FORMIA	Lazio	Latina	1	1
GAETA	Lazio	Latina	1	1
ITRI	Lazio	Latina	1	1
LATINA	Lazio	Latina	1	0
LENOLA	Lazio	Latina	1	1
MAENZA	Lazio	Latina	1	0
MINTURNO	Lazio	Latina	1	1
MONTE SAN BIAGIO	Lazio	Latina	1	1
NORMA	Lazio	Latina	1	0
PONTINIA	Lazio	Latina	1	0
PRIVERNO	Lazio	Latina	1	0
PROSEDI	Lazio	Latina	1	0
ROCCAGORGA	Lazio	Latina	1	0
ROCCA MASSIMA	Lazio	Latina	1	0
ROCCASECCA DEI VOLSCI	Lazio	Latina	1	0
SABAUDIA	Lazio	Latina	1	0
SAN FELICE CIRCEO	Lazio	Latina	1	0
SANTI COSMA E DAMIANO	Lazio	Latina	1	1
SERMONETA	Lazio	Latina	1	0
SEZZE	Lazio	Latina	1	0
SONNINO	Lazio	Latina	1	0
SPERLONGA	Lazio	Latina	1	1
SPIGNO SATURNIA	Lazio	Latina	1	1
TERRACINA	Lazio	Latina	1	0
VENTOTENE	Lazio	Latina	0	0
ACQUAFONDATA	Lazio	Frosinone	1	1
ACUTO	Lazio	Frosinone	1	0
ALATRI	Lazio	Frosinone	1	0
ALVITO	Lazio	Frosinone	1	1
AMASENO	Lazio	Frosinone	1	0
ANAGNI	Lazio	Frosinone	1	0
AQUINO	Lazio	Frosinone	1	1
ARCE	Lazio	Frosinone	1	1
ARNARA	Lazio	Frosinone	1	0
ARPINO	Lazio	Frosinone	1	1
ATINA	Lazio	Frosinone	1	1
AUSONIA	Lazio	Frosinone	1	1
BELMONTE CASTELLO	Lazio	Frosinone	1	1
BOVILLE ERNICA	Lazio	Frosinone	1	0
BROCCOSTELLA	Lazio	Frosinone	1	1

CAMPOLI APPENNINO	Lazio	Frosinone	1	1
CASALATTICO	Lazio	Frosinone	1	1
CASALVIERI	Lazio	Frosinone	1	1
CASSINO	Lazio	Frosinone	1	1
CASTELLIRI	Lazio	Frosinone	1	1
CASTELNUOVO PARANO	Lazio	Frosinone	1	1
CASTROCIELO	Lazio	Frosinone	1	1
CASTRO DEI VOLSCI	Lazio	Frosinone	1	0
CECCANO	Lazio	Frosinone	1	0
CEPRANO	Lazio	Frosinone	1	0
CERVARO	Lazio	Frosinone	1	1
COLFELICE	Lazio	Frosinone	1	1
COLLEPARDO	Lazio	Frosinone	1	0
COLLE SAN MAGNO	Lazio	Frosinone	1	1
CORENO AUSONIO	Lazio	Frosinone	1	1
ESPERIA	Lazio	Frosinone	1	1
FALVATERRA	Lazio	Frosinone	1	0
FERENTINO	Lazio	Frosinone	1	0
FILETTINO	Lazio	Frosinone	1	0
FIUGGI	Lazio	Frosinone	1	0
FONTANA LIRI	Lazio	Frosinone	1	1
FORTE CHIARI	Lazio	Frosinone	1	1
FROSINONE	Lazio	Frosinone	1	0
FUMONE	Lazio	Frosinone	1	0
GALLINARO	Lazio	Frosinone	1	1
GIULIANO DI ROMA	Lazio	Frosinone	1	0
GUARCINO	Lazio	Frosinone	1	0
ISOLA DEL LIRI	Lazio	Frosinone	1	1
MONTE SAN GIOVANNI CAMPANO	Lazio	Frosinone	1	0
MOROLO	Lazio	Frosinone	1	0
PALIANO	Lazio	Frosinone	1	0
PASTENA	Lazio	Frosinone	1	1
PATRICA	Lazio	Frosinone	1	0
PESCOSOLIDO	Lazio	Frosinone	1	1
PICINISCO	Lazio	Frosinone	1	1
PICO	Lazio	Frosinone	1	1
PIEDIMONTE SAN GERMANO	Lazio	Frosinone	1	1
PIGLIO	Lazio	Frosinone	1	0
PIGNATARO INTERAMNA	Lazio	Frosinone	1	1
POFI	Lazio	Frosinone	1	0
PONTECORVO	Lazio	Frosinone	1	1
POSTA FIBRENO	Lazio	Frosinone	1	1
RIPI	Lazio	Frosinone	1	0
ROCCA D'ARCE	Lazio	Frosinone	1	1
ROCCASECCA	Lazio	Frosinone	1	1
SAN BIAGIO SARACINISCO	Lazio	Frosinone	1	1
SAN DONATO VAL DI COMINO	Lazio	Frosinone	1	1
SAN GIORGIO A LIRI	Lazio	Frosinone	1	1
SAN GIOVANNI INCARICO	Lazio	Frosinone	1	1
SANT'AMBROGIO SUL GARIGLIANO	Lazio	Frosinone	1	1
SANT'ANDREA DEL GARIGLIANO	Lazio	Frosinone	1	1
SANT'APOLLINARE	Lazio	Frosinone	1	1
SANT'ELIA FIUMERAPIDO	Lazio	Frosinone	1	1
SANTOPADRE	Lazio	Frosinone	1	1
SAN VITTORE DEL LAZIO	Lazio	Frosinone	1	1
SERRONE	Lazio	Frosinone	1	0
SETTEFRATI	Lazio	Frosinone	1	1
SGURGOLA	Lazio	Frosinone	1	0
SORA	Lazio	Frosinone	1	1
STRANGOLAGALLI	Lazio	Frosinone	1	0
SUPINO	Lazio	Frosinone	1	0
TERELLE	Lazio	Frosinone	1	1
TORRE CAJETANI	Lazio	Frosinone	1	0
TORRICE	Lazio	Frosinone	1	0
TREVI NEL LAZIO	Lazio	Frosinone	1	0
TRIVIGLIANO	Lazio	Frosinone	1	0
VALLECORSA	Lazio	Frosinone	1	0

VALLEMAIO	Lazio	Frosinone	1	1
VALLEROTONDA	Lazio	Frosinone	1	1
VEROLI	Lazio	Frosinone	1	0
VICALVI	Lazio	Frosinone	1	1
VICO NEL LAZIO	Lazio	Frosinone	1	0
VILLA LATINA	Lazio	Frosinone	1	1
VILLA SANTA LUCIA	Lazio	Frosinone	1	1
VILLA SANTO STEFANO	Lazio	Frosinone	1	0
VITICUSO	Lazio	Frosinone	1	1
CONCA DELLA CAMPANIA	Campania	Caserta	1	1
GALLUCCIO	Campania	Caserta	1	1
MARZANO APPIO	Campania	Caserta	1	1
MIGNANO MONTE LUNGO	Campania	Caserta	1	1
ROCCA D'EVANDRO	Campania	Caserta	1	1
ROCCAMONFINA	Campania	Caserta	1	1
SAN PIETRO INFINE	Campania	Caserta	1	1
SESSA AURUNCA	Campania	Caserta	1	1
TORA E PICCILLI	Campania	Caserta	1	1
CELLOLE	Campania	Caserta	1	1
BARANO D'ISCHIA	Campania	Napoli	1	1
CASAMICCIOLA TERME	Campania	Napoli	1	1
FORIO	Campania	Napoli	1	1
ISCHIA	Campania	Napoli	1	1
LACCO AMENO	Campania	Napoli	1	1
PROCIDA	Campania	Napoli	1	1
SERRARA FONTANA	Campania	Napoli	1	1
ACCIANO	Abruzzo	L'Aquila	1	1
AIELLI	Abruzzo	L'Aquila	1	1
ALFEDENA	Abruzzo	L'Aquila	1	1
ANVERSA DEGLI ABRUZZI	Abruzzo	L'Aquila	1	1
AVEZZANO	Abruzzo	L'Aquila	1	1
BALSORANO	Abruzzo	L'Aquila	1	1
BARETE	Abruzzo	L'Aquila	1	1
BARISCIANO	Abruzzo	L'Aquila	1	1
BARREA	Abruzzo	L'Aquila	1	1
BISEGNA	Abruzzo	L'Aquila	1	1
BUGNARA	Abruzzo	L'Aquila	1	1
CAGNANO AMITERNO	Abruzzo	L'Aquila	1	1
CAMPOTOSTO	Abruzzo	L'Aquila	1	1
CANISTRO	Abruzzo	L'Aquila	1	1
CAPISTRELLO	Abruzzo	L'Aquila	1	1
CAPITIGNANO	Abruzzo	L'Aquila	1	1
CAPORCIANO	Abruzzo	L'Aquila	1	1
CAPPADOCIA	Abruzzo	L'Aquila	1	1
CARSOLI	Abruzzo	L'Aquila	1	1
CASTEL DI IERI	Abruzzo	L'Aquila	1	1
CASTELLAFIUME	Abruzzo	L'Aquila	1	1
CASTELVECCHIO SUBEQUO	Abruzzo	L'Aquila	1	1
CELANO	Abruzzo	L'Aquila	1	1
CERCHIO	Abruzzo	L'Aquila	1	1
CIVITA D'ANTINO	Abruzzo	L'Aquila	1	1
CIVITELLA ALFEDENA	Abruzzo	L'Aquila	1	1
CIVITELLA ROVETO	Abruzzo	L'Aquila	1	1
COCULLO	Abruzzo	L'Aquila	1	1
COLLARMELE	Abruzzo	L'Aquila	1	1
COLLELONGO	Abruzzo	L'Aquila	1	1
CORFINIO	Abruzzo	L'Aquila	1	1
FAGNANO ALTO	Abruzzo	L'Aquila	1	1
FONTECCHIO	Abruzzo	L'Aquila	1	1
FOSSA	Abruzzo	L'Aquila	1	1
GAGLIANO ATERNO	Abruzzo	L'Aquila	1	1
GIOIA DEI MARSI	Abruzzo	L'Aquila	1	1
GORIANO SICOLI	Abruzzo	L'Aquila	1	1
INTRODACQUA	Abruzzo	L'Aquila	1	1
L'AQUILA	Abruzzo	L'Aquila	1	1
LECCE NEI MARSI	Abruzzo	L'Aquila	1	1
LUCO DEI MARSI	Abruzzo	L'Aquila	1	1

LUCOLI	Abruzzo	L'Aquila	1	1
MAGLIANO DE' MARSI	Abruzzo	L'Aquila	1	1
MASSA D'ALBE	Abruzzo	L'Aquila	1	1
MOLINA ATERNO	Abruzzo	L'Aquila	1	1
MONTEREALE	Abruzzo	L'Aquila	1	1
MORINO	Abruzzo	L'Aquila	1	1
OCRE	Abruzzo	L'Aquila	1	1
OPI	Abruzzo	L'Aquila	1	1
ORICOLA	Abruzzo	L'Aquila	1	1
ORTONA DEI MARSI	Abruzzo	L'Aquila	1	1
ORTUCCHIO	Abruzzo	L'Aquila	1	1
OVINDOLI	Abruzzo	L'Aquila	1	1
PERETO	Abruzzo	L'Aquila	1	1
PESCASSEROLI	Abruzzo	L'Aquila	1	1
PESCINA	Abruzzo	L'Aquila	1	1
PIZZOLI	Abruzzo	L'Aquila	1	1
POGGIO PICENZE	Abruzzo	L'Aquila	1	1
PRATA D'ANSIDONIA	Abruzzo	L'Aquila	1	1
PREZZA	Abruzzo	L'Aquila	1	1
RAIANO	Abruzzo	L'Aquila	1	1
ROCCA DI BOTTE	Abruzzo	L'Aquila	1	1
ROCCA DI CAMBIO	Abruzzo	L'Aquila	1	1
ROCCA DI MEZZO	Abruzzo	L'Aquila	1	1
SAN BENEDETTO DEI MARSI	Abruzzo	L'Aquila	1	1
SAN BENEDETTO IN PERILLIS	Abruzzo	L'Aquila	1	1
SAN DEMETRIO NE' VESTINI	Abruzzo	L'Aquila	1	1
SAN PIO DELLE CAMERE	Abruzzo	L'Aquila	1	1
SANTE MARIE	Abruzzo	L'Aquila	1	1
SANT'EUSANIO FORCONESE	Abruzzo	L'Aquila	1	1
SANTO STEFANO DI SESSANIO	Abruzzo	L'Aquila	1	1
SAN VINCENZO VALLE ROVETO	Abruzzo	L'Aquila	1	1
SCANNO	Abruzzo	L'Aquila	1	1
SCONTRONE	Abruzzo	L'Aquila	1	1
SCOPPITO	Abruzzo	L'Aquila	1	1
SCURCOLA MARSICANA	Abruzzo	L'Aquila	1	1
SECINARO	Abruzzo	L'Aquila	1	1
TAGLIACOZZO	Abruzzo	L'Aquila	1	1
TIONE DEGLI ABRUZZI	Abruzzo	L'Aquila	1	1
TORNIMPARTE	Abruzzo	L'Aquila	1	1
TRASACCO	Abruzzo	L'Aquila	1	1
VILLALAGO	Abruzzo	L'Aquila	1	1
VILLA SANT'ANGELO	Abruzzo	L'Aquila	1	1
VILVALLELONGA	Abruzzo	L'Aquila	1	1
VILLETTA BARREA	Abruzzo	L'Aquila	1	1
VITTORITO	Abruzzo	L'Aquila	1	1
ALBA ADRIATICA	Abruzzo	Teramo	1	1
ANCARANO	Abruzzo	Teramo	1	1
ARSITA	Abruzzo	Teramo	1	1
ATRI	Abruzzo	Teramo	1	1
BASCIANO	Abruzzo	Teramo	1	1
BELLANTE	Abruzzo	Teramo	1	1
BISENTI	Abruzzo	Teramo	1	1
CAMPLI	Abruzzo	Teramo	1	1
CANZANO	Abruzzo	Teramo	1	1
CASTEL CASTAGNA	Abruzzo	Teramo	1	1
CASTELLALTO	Abruzzo	Teramo	1	1
CASTELLI	Abruzzo	Teramo	1	1
CASTIGLIONE MESSER RAIMONDO	Abruzzo	Teramo	1	1
CASTILENTI	Abruzzo	Teramo	1	1
CELLINO ATTANASIO	Abruzzo	Teramo	1	1
CERMIGNANO	Abruzzo	Teramo	1	1
CIVITELLA DEL TRONTO	Abruzzo	Teramo	1	1
COLLEDARA	Abruzzo	Teramo	1	1
COLONNELLA	Abruzzo	Teramo	1	1
CONTROGUERRA	Abruzzo	Teramo	1	1
CORROPOLI	Abruzzo	Teramo	1	1
CORTINO	Abruzzo	Teramo	1	1

CROGNALETO	Abruzzo	Teramo	1	1
FANO ADRIANO	Abruzzo	Teramo	1	1
GIULIANOVA	Abruzzo	Teramo	1	1
ISOLA DEL GRAN SASSO D'ITALIA	Abruzzo	Teramo	1	1
MONTEFINO	Abruzzo	Teramo	1	1
MONTORIO AL VOMANO	Abruzzo	Teramo	1	1
MORRO D'ORO	Abruzzo	Teramo	1	1
MOSCIANO SANT'ANGELO	Abruzzo	Teramo	1	1
NERETO	Abruzzo	Teramo	1	1
NOTARESCO	Abruzzo	Teramo	1	1
PENNA SANT'ANDREA	Abruzzo	Teramo	1	1
PIETRACAMELA	Abruzzo	Teramo	1	1
PINETO	Abruzzo	Teramo	1	1
ROCCA SANTA MARIA	Abruzzo	Teramo	1	1
ROSETO DEGLI ABRUZZI	Abruzzo	Teramo	1	1
SANT'EGIDIO ALLA VIBRATA	Abruzzo	Teramo	1	1
SANT'OMERO	Abruzzo	Teramo	1	1
SILVI	Abruzzo	Teramo	1	1
TERAMO	Abruzzo	Teramo	1	1
TORANO NUOVO	Abruzzo	Teramo	1	1
TORRICELLA SICURA	Abruzzo	Teramo	1	1
TORTORETO	Abruzzo	Teramo	1	1
TOSSICIA	Abruzzo	Teramo	1	1
VALLE CASTELLANA	Abruzzo	Teramo	1	1
MARTINSICURO	Abruzzo	Teramo	1	1
CITTÀ SANT'ANGELO	Abruzzo	Teramo	1	1
ELICE	Abruzzo	Pescara	1	1
PICCIANO	Abruzzo	Pescara	1	1
CASTEL SAN VINCENZO	Molise	Isernia	1	1
CERRO AL VOLTURNO	Molise	Isernia	1	1
COLLI A VOLTURNO	Molise	Isernia	1	1
CONCA CASALE	Molise	Isernia	1	1
FILIGNANO	Molise	Isernia	1	1
MONTAQUILA	Molise	Isernia	1	1
MONTENERO VAL COCCHIARA	Molise	Isernia	1	1
PIZZONE	Molise	Isernia	1	1
POZZILLI	Molise	Isernia	1	1
ROCCHETTA A VOLTURNO	Molise	Isernia	1	1
SCAPOLI	Molise	Isernia	1	1
SESTO CAMPANO	Molise	Isernia	1	1
VENAFRO	Molise	Isernia	1	1