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The Size of Political Jurisdictions: A Model with some Evidence from a Fascist Consolidation

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Abstract

We present a model that shows how population movements reflect the welfare properties of local jurisdiction size. Then, we use the consolidation of municipalities brought about by the fascist dictatorship in Italy during the 1920s to provide some suggestive evidence on theory's predictions. Our empirical findings hint that the consolidation was associated with net welfare gains for the communities involved.

JEL classification: R12, H10, R11

Keywords: city size, local government, local economic development

1. Introduction

In this paper, we shed new light on the economic consequences of shocks to the size of administrative borders by considering the consolidation of Italian municipalities during the fascist regime.

We start with a simple theoretical model that explains how population movements reflect the welfare properties of local jurisdiction size. Path-breaking research by Alesina and other scholars (see, for instance, Alesina and Spolaore, 1997 and Alesina et al., 2004) argued that the optimal size of political jurisdictions depends on a *trade-off* between benefits and costs.¹ We propose a spatial economy where larger jurisdictions trade-off the benefits generated by scale economies in public goods and services provision, with the higher costs due to greater heterogeneity among residents' preferences. Indeed, large administrations provide services that have to mediate across a wide range of needs expressed by the communities they include. A crucial feature of the present framework, which neatly distinguishes it from the work of Alesina and co-authors, is that residents are mobile. Thus, as in Tiebout (1956), they can "vote with their feet". The model clarifies how the welfare of residents depends on the size of the jurisdiction. When fixed costs in the provision of local public goods are sufficiently high, consolidation brings welfare gains and inward migration. On the contrary, when the costs of increased heterogeneity dominate, some individuals will move away, and those who stay will make pressure to restore the pre-consolidation status.

We then use the historical episode to provide some suggestive evidence on theory's predictions and thus contribute to the existing, but limited, evidence about the economics of jurisdictions.² In particular, we analyze the consequences of a shock to the size distribution of Italy's municipalities (*comuni*) that occurred in the 1920s when - under the fascist dictatorship of Mussolini - 2,078 small municipalities were consolidated (over a total number of 9,195 *comuni* existent in 1921). The consolidation remained binding until the end of WWII, when municipalities were allowed to go back to the pre-consolidation boundaries (between 1945 and 1961, 778 *comuni* regained their original features). We use these events to gauge the impact of mandatory consolidations on local welfare. By using the model predictions, we look at local population dynamics, which refers to the period *after* WWII, as migration was prohibited under the fascist regime. We also take care of potential confounding sources of migration, as those related to South-to-North and rural-to-urban population movements, which might have nothing to do with changes in jurisdiction size.

Our empirical strategy uses information on municipalities as they were both before and after consolidation, and provides three types of exercises. We start by assessing the *net* welfare

¹ Theoretical contributions related to this fundamental trade-off include: Brueckner (1981), Cremer et al. (1985), Barro (1991), Gilbert and Picard (1996), Bolton and Roland (1997), Goyal and Staal (2004), Desmet et al. (2011) among others.

² Alesina et al. (2004) find that the tension between economies of scale and heterogeneity is an important force in the determination of the number and size of local jurisdictions. However, heterogeneity has almost no effect where population is so small to make economies of scale the predominant factor. Other papers make similar points: Cutler, Elmendorf and Zeckhauser (1993), Temple (1996), Poterba (1997), Goldin and Katz (1999), Alesina, Baqir and Easterly (1999, 2000).

variations (either positive or negative) of the fascist consolidation. Next, we try to say something on the respective roles of economies of scale and heterogeneity by comparing consolidated units with non-consolidated counterparts of the same size, so to differentiate out the role of economies of scale. Finally, we provide a placebo exercise, intended to check for the role of unobservables that might have determined selection into the fascist consolidation.

Our results suggest that consolidation was associated with net welfare gains for the communities involved. In particular, the economies of scale made possible by larger jurisdictions overwhelmed the costs brought in by higher heterogeneity. We also find evidence consistent with the argument that heterogeneity implies welfare costs.

The paper is structured as follows. Section 2 provides a simple model to inform the empirical strategy. Section 3 gives the details of the fascist consolidation and reports some suggested interpretations about its motivations. Section 4 discusses the empirical challenges and presents the findings. Section 5 concludes with a discussion of the results.

2. Theory: a model of political jurisdictions and mobility

Alesina and Spolaore (1997) and Alesina et al. (2004) have investigated the “optimal” size of a jurisdiction when residents are characterized by preferences related to the distance from the administrative centre. There, larger borders reduce utility from public goods for those who live far from the administrative centre but, at the same time, they dilute the burden of fixed costs associated with the provision of services. A crucial assumption of this approach is that people cannot migrate: indeed, it is borders that are endogenously determined over time, so to meet optimality in the size of jurisdiction (see, for instance, Alesina et al., 2004).³ Our approach is substantially different to this respect. We allow for mobility of people across geographical areas, and we do not necessarily consider the size of jurisdictions as an optimal outcome of history. In this perspective, we sketch a model where people migrate to respond optimally to changes in the size of local jurisdictions. We do so by building on a regional model with idiosyncratic location preferences.⁴ In the spirit of Alesina and co-authors, we postulate that larger administrative borders imply “heterogeneity” costs, that is, less “tailoring” of local public goods to the needs of residents (such as a primary school organization), or longer distances from public goods provision, as suggested by Cremer et al. (1985). But, at the same time, due to fixed costs, larger administrations make it easier to provide public goods.

To summarize, our model separates the issue of mobility of individuals, who will always have the option to leave, from the issue of the size of the borders. Thus, differently from Alesina and Spolaore (1997), there is not a one-to-one correspondence between size of jurisdictions and size

³ Interestingly, Alesina et al. (2004) acknowledge that ‘Readers may find it hard to envision how local jurisdictions respond to heterogeneity because they can recall few, if any, jurisdictions being created in their area’ (p. 350) and that ‘The assumption that each individual’s location is fixed is natural if location represents tastes or ideology. It is less natural if location represents geography because individuals can move in response to changes in jurisdictional boundaries’ (p. 352).

⁴ Roback (1982) postulates full mobility of residents, who arbitrage away utility gains across locations. By this respect, the Roback model is an extreme representation of Tiebout’s (1956) idea, related to the quality of local policies, that people will vote “with their feet”. However, Moretti (2013) has introduced idiosyncratic individual preference shocks for specific locations, implying that residents will face different mobility costs. Thus, when a local shock occurs, only a fringe of people will be willing to move across locations.

of resident populations. In short, we will consider a location, say c , characterized by a land endowment of surface \bar{L} , included in a jurisdiction of size $\bar{\ell}_c$. Suppose that, initially, $\bar{\ell}_c = \bar{L}$: if two identical municipalities do merge, the size of the new jurisdiction will be equal to $2\bar{L}$.⁵ As in Alesina and co-authors, the jurisdiction size is associated with costs and benefits. Depending both on satisfaction for local public good provision and an idiosyncratic preference shock, individuals will decide whether to dwell in location c , or move elsewhere.

The model has two stages. At the beginning of the first stage, the size of the local jurisdictions, $\bar{\ell}_c$, is fixed by the central government. Thus, over stage 1, the local administrator takes the size of the jurisdiction $\bar{\ell}_c$ as given, and manages public good provision by choosing $x \geq 0$, the amount of costly resources (be them funding⁶, organizational capabilities, or effort) to be used to maximize an objective function that promotes general interests. In location c , public good provision will potentially affect both: (i) the productivity of local firms through a TFP term $A_c^Y(x; \bar{\ell}_c)$, and, (ii) the utility of residents through the term $A_c^u(x; \bar{\ell}_c)$. The impact of local public goods provision on productivity and utility crucially depends on the size of the jurisdiction: larger administrations are less able to meet specific needs from the areas covered, but - at the same time - they may provide a larger amount, or variety, of public goods by exploiting scale economies.

In the second stage (stage 2), firms and individuals play. Firms are perfectly competitive and fully mobile across areas. On the other hand, there are \bar{N} individuals who have to decide whether to dwell and work in location c or elsewhere. Each individual makes this decision depending on: (i) local prices, (ii) the pre-determined utility value of local characteristics in c , $A_c^u(x; \bar{\ell}_c)$, (iii) the current realization of an idiosyncratic preference shock for location c and, (iv) the (exogenously given) level of utility \bar{v} which can be obtained by living elsewhere.

The model is solved by backward induction. Note that, in the perspective of our framework, the fascist consolidation might either increase or reduce the incentive to live in location c , depending on whether the net benefit generated by a larger jurisdiction has a positive or negative sign, respectively. As we show, in the former case we shall observe a rise in local population, in the latter a fall.

2.1 *The residence decision (stage 2)*

We define as “residents” the wage-earning individuals who decide to dwell and work in area c .⁷

Stage 2’s optimal behaviour of firms and wage-earners in location c , is characterized by taking the local TFP term $A_c^Y = A_c^Y(x; \bar{\ell}_c)$, and the local utility term $A_c^u = A_c^u(x; \bar{\ell}_c)$ as *pre-determined* from stage 1.

⁵ In other words, the merger does not affect the amount of land, \bar{L} , available in *each* location. A merger only affects the expanse where local administrators run public services, which will become $2\bar{L}$.

⁶ As was the case under the fascist regime, we postulate that local administrations are funded directly by central authorities, and not by local taxation as in Alesina and Spolaore (1997) or Alesina et al. (2004).

⁷ Landowners are absentee: they receive income from renting local land \bar{L} but live elsewhere. See, for instance, Glaeser (2008).

When located in area c , competitive firms produce a tradable good Y at an economy-wide price equal to one using labour N_c and “land” L_c . Under a Cobb-Douglas technology with constant returns of scale, it holds that:

$$(1) \quad Y_c = A_c^Y \cdot N_c^\alpha \cdot L_c^{1-\alpha}$$

where A_c^Y has been characterized above and $\alpha \in (0,1)$. Denote with (w_c, r_c) the local competitive wage and the local competitive price of “land” (rent), respectively. Profit maximization yields the following equilibrium condition:

$$(2) \quad \theta \cdot A_c^Y = w_c^\alpha \cdot r_c^{1-\alpha}$$

where θ is a positive constant.

For each wage-earning individual $i = 1, \dots, \bar{N}$ preferences are given by a Cobb-Douglas utility:

$$(3) \quad u_c^i = A_c^u \cdot Y^\mu \cdot L_c^{1-\mu} \cdot \varepsilon_c^i$$

where Y denotes the consumption of the tradable good and L_c is consumption of residential space, with $\mu \in (0,1)$. As anticipated, the term A_c^u captures the impact of locally-provided public goods on utility. Further, individuals have heterogeneous tastes about location c . Similarly to Moretti (2013), each individual i receives a shock ε_c^i , which is assumed to be uniformly distributed on the support $[1-\phi, 1+\phi]$. The parameter $\phi \in (0,1)$ is, thus, a measure of the dispersion of preferences over location c .⁸

Each wage-earner i supplies one unit of labour. If she lives in c , she gets a wage equal to w_c and maximizes utility (3) under the budget constraint $w_c = Y + r_c \cdot L_c$ (the price of the tradable consumption good is the *numeraire*). This yields the following indirect utility:

$$(4) \quad v_c^i = \eta \cdot A_c^u \cdot \frac{w_c}{r_c^{1-\mu}} \cdot \varepsilon_c^i$$

where η is a positive constant. Thus, the decision whether to live in c or not crucially depends on the realization of ε_c^i and the (exogenous) level of utility that can be obtained by living elsewhere, denoted by \bar{v} . There is a critical value of the shock, denoted by $\hat{\varepsilon}_c$, such that each individual i will attain the following level of utility:

⁸ When ϕ is close to zero, the decision about where to live becomes highly sensitive to the level of local prices and local amenities, as in Roback (1982).

$$(5) \quad v^i = \begin{cases} \bar{v}, & \text{if } \varepsilon_c^i \leq \hat{\varepsilon}_c \quad (\text{non-resident}) \\ v_c^i = \eta \cdot A_c^u \cdot \frac{W_c}{r_c^{1-\mu}} \cdot \varepsilon_c^i, & \text{if } \varepsilon_c^i > \hat{\varepsilon}_c \quad (\text{resident}) \end{cases}$$

Notice that (5) implies that $\bar{v} = \eta \cdot A_c^u \cdot \frac{W_c}{r_c^{1-\mu}} \cdot \hat{\varepsilon}_c$.⁹

When $\varepsilon_c^i > \hat{\varepsilon}_c$, the utility premium obtained by resident i in location c is given by:

$$(6) \quad \frac{v_c^i}{\bar{v}} = \frac{\varepsilon_c^i}{\hat{\varepsilon}_c} > 1$$

Thus, when it holds that $\varepsilon_c^i > \hat{\varepsilon}_c$, the utility of the resident will be higher, the lower the critical value $\hat{\varepsilon}_c$.

Figure 1 illustrates the choice between dwelling in c or not, for an individual i subject to the idiosyncratic preference shock ε_c^i .

[Figure 1]

As shown in Appendix A, the critical value $\hat{\varepsilon}_c$ can be written as an implicit function of local productivity and amenities (A_c^Y, A_c^u) . It holds that:

$$(7) \quad \frac{[1 + \phi - \hat{\varepsilon}_c] \cdot \bar{N}}{2\phi} = \left[\frac{\alpha \cdot \bar{L}}{1 - \alpha\mu} \right] \cdot \left[\frac{\eta \cdot \theta^\mu \cdot \Lambda_c \cdot \hat{\varepsilon}_c}{\bar{v}} \right]^{\frac{1}{1-\alpha\mu}}$$

where $\Lambda_c \equiv A_c^u \cdot (A_c^Y)^\mu$ aggregates both local amenities and the local productivity term. Since (A_c^Y, A_c^u) are set in stage 1, we can use comparative statics to assess how a change in local amenities affects stage 2 decision to live in c .

By differentiation of (7), the following holds:

Result 1. An increase in the level of the local amenity and productivity terms, A_c^u and A_c^Y , will reduce the critical value $\hat{\varepsilon}_c$ which discriminates residents from non-residents. A lower $\hat{\varepsilon}_c$ has the following consequences: i) the population in location c will increase, and ii) the utility of each resident in location c will increase.

The impact of an improvement in local amenities and productivity is illustrated in Figure 2.

[Figure 2]

⁹ By exploiting equations (2) and (5), we can find the expressions for local wage and rent, (w_c, r_c) , reported in the Appendix A.

Thus, a noticeable implication of Result 1 is the following:

Corollary. When, in stage 1, the local administrator maximizes the value of amenities in the location considered, the value of $\hat{\varepsilon}_c$ achieved in stage 2 will be reduced to the lowest attainable level.

We are now ready to analyse the local administration's problem (stage 1), given the initial size of the jurisdiction $\bar{\ell}_c$ and, then, consider the impact of the change in $\bar{\ell}_c$.

2.2 The choice of the local administration (stage 1)

Each local administration takes the size of the jurisdiction $\bar{\ell}_c$ as given. As from Result 1, a policy able to raise $\Lambda_c \equiv A_c^u \cdot (A_c^Y)^u$, will both raise local population and increase utility of infra-marginal residents. We postulate that Λ_c depends on local use of costly resources x according to the following functional form:

$$(8) \quad \Lambda_c(x; \bar{\ell}_c) = A + \left(\frac{x}{\bar{\ell}_c}\right) - \left(\frac{\Phi}{\bar{\ell}_c} + x\right)^\sigma$$

with $\Phi > 0$, $\sigma > 1$ and, $A - \left(\frac{\Phi}{\bar{\ell}_c}\right)^\sigma > 0$.

Expression (8) has several desirable properties that are identified as crucial for the optimality of boundaries: see, e.g., Alesina, Spolaore and Wacziarg (2000), and Cremer et al. (1985). In particular, the term $\left(\frac{x}{\bar{\ell}_c}\right)$ postulates that a greater use of resources x (be them organizational effort by administrators, or collection of funds) will increase public services provision but, at the same time, larger jurisdictions, as measured by $\bar{\ell}_c$, reduce the effectiveness of the local administration's action. Indeed, larger jurisdictions generate higher "heterogeneity", or "distance" costs: when public goods are provided, the larger the jurisdiction, the lower the ability of administrations to tailor such goods to fit local needs at best. On the other hand, the convex-cost term $\left(\frac{\Phi}{\bar{\ell}_c} + x\right)^\sigma$ emphasizes the role of fixed set-up costs, Φ , which have to be sunk in public good provision. Here, as in Alesina and others, the incidence of such costs is reduced over larger territories. In other words, scale economies lower provision costs in larger jurisdictions.

By solving the maximum problem (8), we can characterize the optimal value x^* :¹⁰

$$(9) \quad x^* = \left(\frac{1}{\sigma \cdot \bar{\ell}_c}\right)^{\frac{1}{\sigma-1}} - \frac{\Phi}{\bar{\ell}_c} \geq 0.$$

¹⁰ A parameterization which guarantees an internal solution for x^* is the following: $\Phi = 1/3$, $\sigma = 2$, $\bar{\ell}_c = 1$.

Notice that when $\left(\frac{\Phi}{\bar{\ell}_c}\right)$ is large enough, the best policy will be $x^*=0$, and public good provision will be at the lowest level $A - \left(\frac{\Phi}{\bar{\ell}_c}\right)^\sigma$.

We now investigate the central issue at stake, the impact of changes in administrative boundaries. Suppose that, at the beginning of stage 1, the central government modifies the size of the jurisdiction where the local administrator will have to maximize (8). To evaluate the conditions under which a merger between jurisdictions (such that $\Delta \bar{\ell}_c > 0$) is desirable, we can exploit Envelope Theorem. It holds that:

$$(10) \quad \frac{d\Lambda_c^*}{d\bar{\ell}_c} = \left(\frac{1}{\bar{\ell}_c}\right)^2 \cdot \left[-x^* + \sigma \cdot \Phi \cdot \left(\frac{\Phi}{\bar{\ell}_c} + x^*\right)^{\sigma-1} \right]$$

Expression (10) is more likely to be positive the larger are fixed set-up costs Φ in public good provision: in this case, economies of scale will dominate larger heterogeneity costs, and mergers are beneficial. This conclusion is summarized by Result 2 below:

Result 2. Local residents benefit from integration into larger jurisdictions when fixed costs in the provision of local public goods are sufficiently high.

This conclusion, together with Result 1, has a powerful implication for our purposes. If the mandatory fascist consolidation had positive effects on the provision of local public services (that is, if (10) is positive), then we should observe - on average - an increase in population in the treated municipalities. On the contrary, if the fascist consolidation mainly increased heterogeneity costs, population should decrease - on average - in treated municipalities.

Summarizing, the prediction given by the model on the fascist consolidation remains open. Local administrators have to take borders as a given constraint when choosing local policy. Considering the fascist move towards larger jurisdictions, this means that if the area c is such that (10) is positive, then it will benefit from larger administrative borders. As a consequence, as suggested by Result 1, local population, as well as infra-marginal residents' welfare, will rise in that area. On the contrary, when expression (10) is negative, the model predicts that population in area c will decrease and those who remain will get a lower utility level. In the latter case, one can expect that *residents will be likely to exert political pressure in favour of administrative break-ups that restore the pre-reform status.*

From Results 1 and 2, the empirical implications of the model can be summarized by the following:

Remark:

i) If consolidations had an overall positive (negative) effect on public services provision, local population should increase (decrease) on average.

ii) If scale economies in local public goods provision were negligible, residents would always prefer to live in smaller jurisdictions.

iii) In those specific locations where the consolidation had a negative effect on welfare, residents desired to restore pre-reform borders.

3. History: Fascism and the *comuni*

The *comune* (municipality) is the local authority *par excellence* (Caringella, Giuncato, Romano, 2007). It pre-exists to the birth of Italy as a nation and it is the oldest local autonomy in the history of the Italian political institutions. All the administrative functions - with the exception of those that are more usefully exerted by other authorities of upper competence (subsidiarity principle) - refer to the *comune*. Thus, this type of political jurisdiction has traditionally cured the interests of the local community.¹¹

Following the argument of Alesina and co-authors, whenever the mandatory consolidation enhanced the provision of public goods, a question remains open: Why local administrations had to wait for the mandatory fascist consolidation, rather than going for voluntary mergers over their earlier history? Some explanations are provided in what follows. After the unification of Italy in 1861, for several decades, the central state delegated to municipalities the management of a large variety of tasks, such as public infrastructure of local relevance, local policing, primary schooling (Giannini, 1967). However, since it was recognized that several small municipalities did not have sufficient human and financial resources to guarantee a minimal acceptable level of administrative efficiency, in 1859 a law was passed so to promote aggregations into larger jurisdiction. The implementation of such aggregations, however, largely relied on a voluntary basis, and failed to produce the outcome that had been hoped by the legislator (Troccoli, 1967). As part of a general reform of the administration, a legislative committee was also in charge of studying a project of mandatory consolidations of municipalities with less than 1,000 inhabitants. However, as claimed by Sandulli and Vesperini (2011), the post-unitary orientation of the Italian state opposed such kind of changes. Indeed, the project was later rejected by the committee itself.¹² In other words, over the second half of the nineteenth century, the post-unitary local administrations showed a conservative attitude, reinforced by the central state bias for preserving administrative fragmentation.

The advent of Fascism in 1922 led progressively to dramatic changes in the attitude of the central state towards municipalities. First, the discretionary power in the management of several local activities, such as the organization of primary schooling or the provision of public utilities, which had characterized the Italian municipalities after unification, was progressively reduced by

¹¹ Another local, and larger, administrative unit is the *provincia* (the “county”, a local jurisdiction born in 1859 with the *Decreto Rattazzi*), which however has been endowed with much less competences (and now there is a discussion on whether it should be abolished).

¹² For further details, see the relation accompanying the proposal of law about the administration of *comuni* and *province* presented to the Chamber of Deputies by the Minister of Interior, Minghetti (13 March 1861).

increasing intervention of the central state (see: Piva, 1967; Piras, 1967; Dau, 2012).¹³ Secondly, what matters more to our purposes, two laws (the *Regio Decreto* 2839, 30 December 1923, and, in particular, the *Regio Decreto* 383, 17 March 1927) prescribed mandatory aggregations.¹⁴ The boundaries of local jurisdictions were revised so to “adequate their efficiency to the new and greater national needs”. The claimed rationale for this action was thus to force a number of municipalities, mainly small ones, to aggregate into larger administrations, so to reach a scale which was deemed to be adequate for the provision of public services (Troccoli, 1967). An interesting example, the *comune* of Rovigo, is presented in detail in the Appendix B.

Figure 3 shows the number of municipalities at Census dates (see: ISTAT, 2011; ANCI, 2011). Note that the number of *comuni* changed sharply in 1921 due to the annexation of new territories after the end of WWI (Trentino Alto Adige, Trieste, Gorizia, Istria, Zara) reaching the peak of 9,195. Overall, leaving aside new territories, the number of *comuni* changed only modestly before 1922, the year fascists seized power. In 1921 there were 8,354 municipalities: basically the same number as in 1871 (8,383). From 1921 to 1931, 2,078 small municipalities were consolidated by the regime. In the aftermath of WWII, the number raised, mostly because of the law that allowed the *comuni* to go back to their pre-fascist boundaries (see below) but, since 1961, the number of *comuni* has changed little.

[Figure 3]

The true motives for consolidating have been heavily disputed. Although our model postulates that *local* administrators act for the best of their communities, we remain agnostic about the motivations of the reform. Such a consolidation might have been due to the genuine intent of rationalizing local public administrations, consistently with Gregor’s (1979) view of Fascism as a “developmental dictatorship”.¹⁵ However, some observers have claimed that there were also reasons other than economic efficiency for the suppression of certain municipalities, in particular political punishment exerted by the fascist regime. Mussolini might have been more inclined to consolidate the *comuni* with many political opponents. The example of the municipality of Donelasco makes this point as emphasized by Senator Locatelli in the debate at the Senate House on the 22 of March 1956 (Appendix B). In the next section we give some evidence on political bias in consolidations.

Some observers have given impressionistic, and rather negative, views on the effects of the fascist consolidation. For instance, Giovenco (1958) and Troccoli (1967, p.158) report that several aggregations proved to be a failure, since they could not solve the original deficiencies in

¹³ After 1923, the locally elected mayor and city council were removed and replaced by the *Podestà*, a local member of the Fascist Party who was appointed under the supervision of the central government.

¹⁴ In a few cases, such mandatory aggregations were successfully resisted by *local* fascist authorities, as in the case of Baone: see Appendix B for additional details.

¹⁵ Gregor (1974 and 1979) has argued that Fascism was modernizing in intention, advocating industrialization and rationalization of the bureaucratic infrastructure to govern Italy effectively. In the 1960s and 1970s, this view was largely shared by Marxist scholars like the Soviet Alexander Galkin. Some counter-arguments to Gregor’s interpretation are given, for example, by Cohen (1988).

services such as communications, health, schooling and, additionally, contributed to raise discontent and conflict among residents of formerly independent administrations.

After WWII and the birth of the Italian Republic many communities pushed for the reconstitution of pre-fascist boundaries. The decisional power on the matter was first attributed to an *ad hoc* committee¹⁶ and, later, a new law was passed (Law 71, 1953, called *Ricostituzione dei comuni soppressi in regime fascista*). This law, also known as *legge Rosati* after the name of the proponent, permitted to restore pre-fascist jurisdictions by reconstituting the municipalities suppressed during the fascist regime, when requested by a petition of the 3/5 of the electors, even when the municipality had less than 3,000 inhabitants. Between 1945 and 1961, 778 *comuni* (out of 2,078 that were originally consolidated) regained their pre-fascist size.

Finally, and importantly, the fascist regime put severe restrictions on internal migrations. As mentioned by Ginsborg (1989), in order to make migration unfeasible, a fascist law approved in 1939 trapped the would-be migrants into a paradoxical situation: in order to change residence, the migrants should have proved to have a job in the new destination; however, to get a job at destination, a formal certification of the new residence was required.

In the empirical section, we use the fascist ban on migration to derive an appropriate time frame for our outcomes (city population dynamics), focusing on the period following WWII.

Among historians (see, for instance: Treves, 1976, and Ascoli, 1982) there is some debate on the size of illegal migrations which had occurred before the law against migration was finally abolished (in 1961). Our exercise, which reflects legal migration, might also capture, therefore, post-1961 regularization of illegal immigrants. In what follows, we will provide an empirical test for the absence of legal population movements during Fascism, which supports our estimation strategy.

4. Empirics: consolidation and welfare

This section provides the details of our empirical exercise and is organized as follows. We first discuss the empirical strategy in Section 4.1. Then, we document the data issues in Section 4.2. Finally, the findings are illustrated in Section 4.3.

4.1 Empirical strategy

We run three exercises. They are inspired by Remarks *i*) to *iii*) in Section 2. In each of them, the “treatment group” is made up of municipalities that were consolidated during the 1920s and did not restore their pre-fascist boundaries. We refer to these (treated) municipalities both as they were before consolidation (*consolidating* units) and as they resulted after consolidation (*consolidated* ones). The exercises are the following:

Exercise 1: *Net Welfare variations* (henceforward *Net Welfare*). To gauge the net welfare variations of the fascist consolidation, we compare the consolidating units with a control group of non-consolidated *comuni* that were similar (before consolidation) to the suppressed ones. For instance, if city *a* and city *b* were consolidated by Mussolini (and the result of the merge was city

¹⁶ See the Report of the Permanent Committee on the Proposal of Law on the Restoration of Municipalities suppressed during the fascist regime, approved by the Senate on November 8, 1950.

c), we find counterfactuals for *a* and *b*, and compare the performance of *c* (the only one we observe since 1931) with that of a synthetic control (given by aggregating the counterfactual for *a* and that for *b*). The comparison is illustrated in Figure 4.

[Figure 4]

Note that in this exercise the performance of an aggregated unit is compared with the aggregate performance of disaggregated units. Therefore, the two sources of welfare differences - economies of scale and heterogeneity - are at work at the same time. This implies that we are not able to disentangle their respective role. We can only estimate their net impact.

Exercise 2: Heterogeneity Only variations (henceforward *Heterogeneity Only*). From Remark *ii*) of Section 2, our model unambiguously predicts that the impact due to heterogeneity only should be negative: that is, residents would always prefer smaller jurisdictions if there are no economies of scale. Ideally, to check for this prediction we should compare two areas of the same size, so to differentiate away the effects of the economies of scale, but differently exposed to the consolidation policy. The implication that heterogeneity is bad will find empirical support to the extent that the areas consolidated by Mussolini will show less favourable population growth. This is the rationale we follow with exercise 2. We isolate the sole role of heterogeneity costs by comparing the consolidated units with a control group of non-consolidated *comuni* similar (before the fascist shock) to the ones resulting from consolidation. For instance, if city *a* and city *b* were consolidated (and the result of the merger was city *c*) we find a counterfactual for *c* and compare it with the performance of the factual (see Figure 4). Differences in performance might only come from the fact that the factual units have higher heterogeneity (they were consolidated by the fascist reform) than the counterfactuals (which maintained their original, pre-dictatorship, size).

The sample of consolidated municipalities is not randomly drawn. Our results are obtained (see Section 4.2) by using propensity score (PS) matching (see Rosenbaum and Rubin, 1983), a method that makes justice of pre-treatment observable characteristics which might determine selection into treatment. As the availability of data for those characteristics, which refer to the 1920s, is clearly reduced, we need to worry that some unobservables might drive the likelihood of receiving the treatment.

The fascist regime (see Section 3) claimed that the consolidation was intended to improve local efficiency in the provision of public goods. If this rationale was indeed put into practice by the regime, this implies that the results could be biased, as they might refer to municipalities with the highest pre-treatment inefficiency (this concern applies to Exercise 1; no obvious source of bias should instead prevail for Exercise 2, as in this case the effect of economies of scale is differentiated away). Some observers, however, have argued (see Section 3) that - irrespective of the above stated rationale - Mussolini was more inclined to consolidate *comuni* where political opposition was predominant. According to this view, the decision of whether to consolidate was a matter of sheer political will. The possible existence of a political selection bias might make our results more credible, insofar selection into the treatment does not depend on the efficiency of the local public sector. To the extent that the likelihood of receiving the treatment for two

otherwise identical municipalities depends on the political preferences of the residing population, our exercises will exploit a source of variation that is arguably less related to the economic perspectives of the local area.

We try to shed some light on the possibility of a political bias in consolidation (see Table A1 in the Appendix C). For a subsample of *comuni* for which we have been able to collect data for the shares of votes at the political elections of 1919 and 1921 (the sample includes roughly 350 *comuni* among the 2,078 consolidated ones), we provide linear probability model estimates¹⁷ of the effect of local political preferences on the likelihood of receiving the treatment (controlling also for all the time-invariant and 1921 characteristics, reported in Table 1, Section 4.2).¹⁸ Our results give only a mixed support for the role of a political bias: higher local voting shares for the *Blocchi Nazionali*, the alliance between liberals and fascists created *ad hoc* to participate in the 1921 elections, is a negative predictor of consolidation, although not significant. Surprisingly, a local electorate more inclined to the positions of socialists negatively (and significantly in 1921) predicts treatment. Finally, the coefficient for the Communist party enters positively but not significantly. Overall, our results on the political determinants of consolidation have to be considered as hardly decisive. To reassure on selection issues we design a different strategy.

Exercise 3: Returning Independent Municipalities (henceforward *Returning Independent*). To shed some light on the extent to which selection affects our estimates we compare our treated units with control units that shared all the feature of the selection process that led to consolidation, while having the status of untreated as for our estimation window. In this perspective, we contrast treated municipalities with a control group of municipalities that were first consolidated during the 1920s, but then, after WWII, returned to their pre-fascist boundaries.^{19,20} First, returning independent municipalities received the treatment. That is, during the 1920s they shared with our treatment group many features - both observable and unobservable - that led them into the fascist consolidation. Second, for returning independent municipalities the treatment was reversed after WWII. After the reversal, these *comuni* regained their original size; thus, population movements referring to these places cannot be related to

¹⁷ Probit estimates provide similar results.

¹⁸ In 1919, the political parties that obtained the three highest shares of votes were the followings: the Socialist Party - *Partito Socialista Italiano* - (vote share equal to 32.3 per cent); the Popular Party - *Partito Popolare Italiano* - (20.5 per cent); the coalition of liberals, democratic and radicals - *Liberali e altri* - (15.9 per cent). In 1921, the three main political parties were: *Partito Socialista Italiano* (24.5 per cent); *Partito Popolare Italiano* (20.8 per cent); and the alliance between liberals and fascists called *Blocchi Nazionali* (14 per cent). These were the first elections in which socialists and communists were divided. The new born Communist Party - *Partito Comunista Italiano* - obtained a vote share of 4.6 per cent. As mentioned, the fascists participated in the 1921 elections with an alliance with the liberals of Giolitti. Mussolini became a member of the Chamber of Deputies together with other 34 fascist deputies. After the elections, the *Fasci di combattimento* founded by Mussolini in 1919, became the *Partito Nazionale Fascista* (Fascist Party).

¹⁹ As implied by Remark *iii*) in Section 2, residents will try to undo the administrative reform whenever it has a negative welfare impact. Moreover, if this attempt is successful, the desire to emigrate for the marginal fringe will fade.

²⁰ For this exercise we consider only municipalities that returned independent between 1945 and 1953 (631 of them). Other municipalities (147) which regained their size between 1954 and 1961 are excluded because the reversal in treatment might have occurred too late with respect to the period 1951-1971 over which our outcome variable is defined. At the same time, we checked that the inclusion of these 147 *comuni* has only minor consequences for our results. Similarly, the exclusion of the 41 *comuni* that returned independent between 1951 and 1953, has no implications for our findings.

Mussolini's consolidation. Should we observe from Exercise 3 migration patterns that are different from those estimated in Exercise 1 we would have to worry that migration flows reflect other factors than the fascist consolidation. Indeed, as underscored in Section 2, where residents suffered from the consolidation, either migration or pressure to return to the original boundaries (after WWII) were both welfare-enhancing alternatives.

The sample of returning independent *comuni* is not randomly drawn, too. A potential problem with this control group is that it might overwhelmingly include the *comuni* that Mussolini aggregated for political reasons; a possibility that cannot be neglected, given the results of Table A1. This concern, however, does not seem to be supported by the data. Table A2 (Appendix C) provides some results on the existence of a political bias in reconstitutions. The probability of returning independent is regressed on the same controls used in Table A1 and on the vote shares for the main political parties at political elections held in 1953, the first useful election date to observe a non negligible number of reconstitutions, and in 1963, the first year of political elections after the period 1945-1961 of massive reconstitutions.²¹ Our results refer to a sub-sample of municipalities (more than 6,600, 352 of which returned to be independent) for which we have been able to collect data on vote shares at both the political elections dates. As shown in the table, the probability of returning independent is higher the higher is the vote share for the Christian Democratic Party. This party, which played a major role in the Resistance against nazi-fascism and in the foundation of the Italian Republic since the Constituting Assembly, also attracted in the post-war period the sympathies of a large number of Catholic voters who had been in favour of - or not against to - the fascist regime. Having a local electorate more inclined towards strong anti-fascist positions (as those expressed by the *Partito Comunista*) does not predict reconstitutions, while having an electorate leaning to the views of the other main anti-fascist party, the Socialist Party, reduces the likelihood of regaining the original size.²² Overall, no clear pattern emerges.

4.2 Data issues

The model of Section 2 suggests that the net impact on welfare due to consolidation will be reflected by movements of the population across municipalities. Ideally, as in all counterfactual exercises, one wants to make sure that municipalities were similar before the fascist consolidation and then analyse the outcome just after treatment. As explained in Section 3, however, this option is not available as migration was severely limited under the fascist regime. Therefore, we focus on relocations occurring over the years after WWII, the first period when Italy's households gained freedom to move. In particular, we make use of municipality-level Census population flows from 1951 to 1971. Our results should be read as the effects of the consolidation on outcomes (predicted by the theory) that have been restrained for 25 years. In

²¹ The main Italian political parties at both the election dates were: the *Partito Comunista Italiano* (Communist Party), the *Movimento Sociale* (former Fascist Party), the *Partito Liberale* (Liberal Party), the *Partito Socialista Italiano* (Socialist Party), the *Democrazia Cristiana* (Christian Democratic Party), and - only in 1953 - the *Partito Monarchico* (Royal Party).

²² We also replicated these regressions by considering as returning independent municipalities only those that are used as controls in Exercise 3. Once more, the results (available from the authors) do not support the idea of a political bias in reconstitutions.

our context, the fact that population movements are triggered by something that happened long time before, seems to be not unreasonable. After all, the law allowing for reconstitutions was approved with a similar delay, and many municipalities decided to go back to their original boundaries.

Sample details are summarized in Appendix D. We make use of information on the historical variations of the Italian municipalities provided by the Italian National Institute of Statistics (ISTAT). In the period 1921-1931, the number of municipalities involved in the fascist consolidation amounted to 2,078. Among them, 884 regained their original size (778 between 1945 and 1961) and are therefore excluded from the treatment group (see Section 3). As for the other 1,194, many of them were attached to existing municipalities, often large in size. We also exclude these kinds of consolidations as we are concerned that the impact we estimate may reflect the (pre-treatment) performance of the incorporating municipality rather than the effect of the consolidation policy. The remaining municipalities were consolidated into new entities that we refer to as the *new born municipalities*. Our treatment group is made up of 168 new born municipalities (of the type of Taurianova: see Appendix B).

The PS routine is able to match 136 (out of 168) treated cities with, respectively for the three exercises, 131, 63, and 96 control municipalities. For each exercise, the PS routine selects controls on the basis of the limited set of information at the city-level that is available for the first half of the 20th century. In particular, we make use of: *i*) a number of time invariant city characteristics (surface, altitude of the municipality centre, elevation range of the municipal territory, costal location); *ii*) the (log of) 1921 population; *iii*) some variables measured in 1951 (logs of population, employees, and plants). That is, municipalities are taken to be similar with respect to both 1921 (pre-intervention) and 1951 (pre-observation of the outcomes) characteristics. Therefore, we are comparing municipalities that, in addition to be suitable to inform our identification strategy (Section 4.1), are similar in many respects at the beginning of the 1950s, the period to which the outcomes are referred to. Doing so, the confounding factors that occurred between the fascist consolidation and the time in which we can observe the outcomes are arguably differentiated away. Figure 5 provides a map of Italy with the treated and the control municipalities. Both of them are very small, therefore they are not easily visible on the map of Italy's territory. Figure 5a locates the municipalities we use for our exercise over the entire national territory through the use of their centroids (the geometric centre of their shape). In order to represent the municipalities through their shape (the polygons) rather than the centroids, we focus (Figure 5b) on the North-Western territorial partition, which includes Piedmont, Lombardy, Liguria and Valle d'Aosta, and where the consolidation was more widespread. Balancing properties for the samples we compare are described in Table 1.

[Figure 5]

[Table 1]

4.3 Results

Table 2 presents our baseline results, obtained by using 1951-1971 city population growth rates as the dependent variable. Under Exercise 1, the estimated ATT (Average Treatment Effect on the Treated), calculated using the nearest-neighbour routine, suggests that the net impact of the consolidation resulted in welfare gains, as treated municipalities exhibit higher immigration. The estimated impact is a cumulative 7.1 percent growth differential over a twenty-year period (about 21 percent of the standard deviation of the dependent variable). The estimated ATT is statistically significant (t-stat = 1.76). As for Exercise 2, the impact due to heterogeneity only is negative, as the model would predict, though not significant. Note that the magnitude of the (negative) effect of higher heterogeneity is very close (in absolute value) to that estimated for the *Net Welfare* exercise. As the latter exercise estimates the net impact of consolidation (i.e., gains related to economies of scale minus the costs pertaining to higher heterogeneity), the point estimate obtained in Exercise 2 suggests that the positive effect related to larger economies of scale is estimated to be basically twice the cost of increased heterogeneity. Finally, under Exercise 3, we estimate the impact of consolidation by using as counterfactual the group of municipalities that decided to restore their pre-fascist boundaries. The ATT is still positive while slightly reduced with respect to the one calculated in the *Net Welfare* exercise. This suggests that the selection bias due to the unobserved features of the *comuni* that were consolidated has no major impact for our results.

[Table 2]

Table 3 illustrates a number of robustness checks. The first three panels show that our estimates are rather insensitive to the use of different routines to estimate the ATT.²³ The nearest-neighbour matching method matches each treated unit with the control unit that has the closest propensity score (i.e. the nearest neighbour) and, allowing for replacement, a control unit can be the best match for more than one treated unit (as it happens in our case). The advantage of this method is that all treated units find a match but poor matches can occur if units with fairly different propensity score end up to be matched. Given this limitation, we follow the rule-of-thumb of double-checking the findings with alternative routines.²⁴ Panel A presents the results we obtain by using the stratification method. This method computes the ATT as a weighted average of the ATT computed in blocks such that within each block treated and controls have on average the same propensity score, with weights given by the distribution of treated units across blocks. This approach discards observations in blocks where either treated or controls are absent. Panel B provides results obtained by using the radius matching method. The latter matches treated units with controls whose propensity score belongs to a neighbourhood (i.e. the radius) with a dimension that is arbitrarily chosen by the researcher. A small radius might generate

²³ For all routines, results have been obtained under the common support restriction (see Dehejia and Wahba, 1999 and 2002).

²⁴ As highlighted by Becker and Ichino (2002), none of the available alternatives is *a priori* superior to the nearest-neighbour matching; however, their joint adoption is useful to assess the robustness of the estimates.

higher quality matches at the cost of unmatched treated units. A bigger radius might increase the number of matches at the cost of lower quality matches. We use a radius equal to 0.1, the minimum necessary in order not to lose unmatched treated observations. Panel C presents the results we obtain by using the kernel matching method. This routine matches all treated units with a weighted average of all controls, with weights inversely proportional to the distance between the propensity scores of treated and controls. As shown in the table, our evidence is robust to the choice of alternative routines. Overall, the results with the alternative routines mimic those obtained with the nearest-neighbour matching. However, we find that the role of heterogeneity is now reduced (basically is 1/3 of that due to the economies of scale).

During the period between 1951 and 1971, Italy experienced a massive spatial reallocation of people: over 9 million Italians were involved in interregional migrations, both from rural areas to urban ones and from the relatively underdeveloped South to the prosperous Centre-North (see: Ginsborg, 1989 p. 295). We perform additional checks to make sure that we are not spuriously capturing those kinds of dynamics. Panel D considers only municipalities located in the Centre-North of Italy. As the massive internal migration of the 1950s and the 1960s was mainly coming from the South, we want to make sure that our results are not driven by Southern migrants. The results we obtain by dropping Southern municipalities are very similar to the ones that refer to the whole national territory (except for the importance of heterogeneity, which appears again reduced). Panel E performs a similar robustness exercise for rural-urban migrations. Here we discard all the municipalities that are located in the vicinity of a main urban centre.²⁵ Results confirm our previous conclusions (heterogeneity however has a larger role than the one estimated in the baseline case).

In Panel F we control for another potential confounding factor that we might be capturing in the estimates: the mortality caused by WWII. Note that war casualties are not reflected in our outcome (city population growth over the 1951-71 period) as WWII ended in 1945. However, we cannot be assured that demographic changes induced by the war have no role for our results. For instance, municipalities that suffered more casualties might experience rises or falls in population that might put our identification strategy in danger. Data on casualties and missing persons over the period 1940-1945 have been collected by ISTAT (on the basis of the territorial boundaries established with the 1947 Peace Treaty) and released only at the province level. Therefore, we use 1936 (the last year available before WWII) city population data to attribute to each municipality a share of the provincial data on war casualties. The results provided in Panel F are obtained by computing the ATT conditioning on the number of deaths and missing persons at the end of WWII. Results are still very much in line with those obtained so far.

The empirical results shown so far have been derived in terms of population growth, while the model of Section 2 provides predictions in terms of city migration. Note that, population growth reflects both migration and the “natural movement” (the difference between deaths and births).

²⁵ Vicinity is defined as being located at most 30 kilometres from urban centres. Urban centres are those with more than 100,000 inhabitants in 1951. As we checked, modifications to the vicinity band or to the definition of urban centres produce minor consequences.

To make sure that the natural movement is not driving our results, in Panel G, we also control for the difference between deaths and births at the local level.²⁶ Results are still there.

Finally, Panel H presents the results we obtain by using as outcome the growth rate of population between 1931 and 1951. This exercise, which is run with treatment and control groups matched on the basis of only time-invariant and 1921 variables, shows that no effect is detected during this period.²⁷ This confirms the fact that the fascist law that banned migration was effective, thus giving more credibility to our results, which focus on the post 1951 period.

[Table 3]

5. Conclusions

The paper tries to assess the impact on local welfare of the consolidation of municipalities implemented by the Italian fascist dictatorship during the 1920s. Building on a simple model where people can move across locations, “voting with their feet”, our findings suggest that consolidation was associated with relevant net welfare gains for the communities involved. In particular, the advantages related to the economies of scale prevailed over the costs of higher heterogeneity implied by larger jurisdictions.

Given the type of policy we exploit, and the nature of our data, a possible caution arises. The extent to which our results can be generalized is admittedly limited. Our exercises compare very small municipalities (in 1921 the average resident population was under 750 inhabitants, the average area was less than 1 square kilometer). This implies that the benefits related to scale economies, which we document, might be much smaller when consolidations of larger jurisdictions are considered. On the other hand, the costs related to heterogeneity, which we show to be rather small in our case, might have substantial impact on consolidations of larger areas.

²⁶ As data on natural movement are available in electronic format only at regional level, we have spread regional level data over municipalities through the share of municipality’s population over the regional one.

²⁷ We have also carried out the same exercise for the sub-period between 1921 and 1936 and results are very similar to those estimated for the 1931-51 period.

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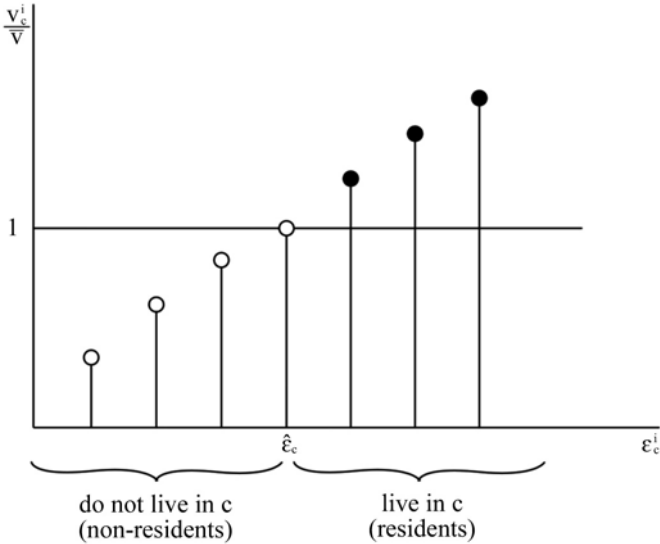
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Figures

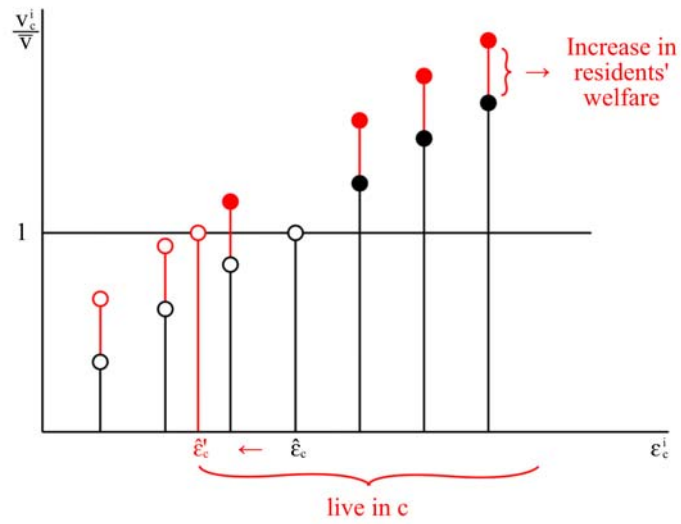
Figure 1. Indirect utility and critical value of the idiosyncratic shock



where: v_c^i - utility for individual i living in location c
 ϵ_c^i - idiosyncratic preference of individual i for location c

Notes: The Figure shows the relationship between the indirect utility, the idiosyncratic preference shock and the critical value of the idiosyncratic preference shock.

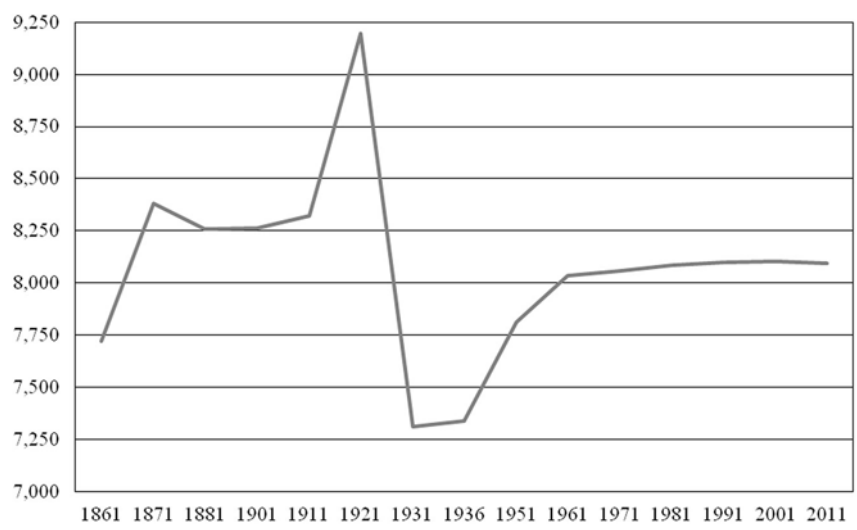
Figure 2. Effect of an increase in local amenities and productivity



Local amenities and productivity $\uparrow \Rightarrow$
 \Rightarrow Local utility for residents $\uparrow \Rightarrow \hat{\epsilon}_c \downarrow$

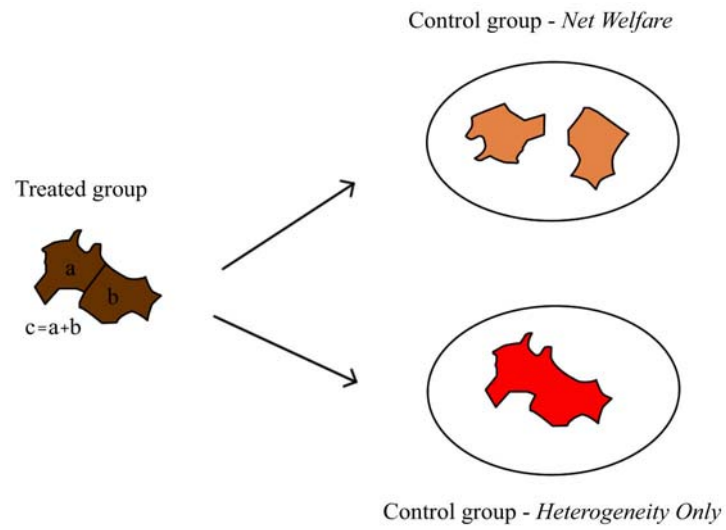
Notes: The Figure shows the effect of an increase in local amenities and productivity on the indirect utility and on the critical value of the idiosyncratic preference shock.

Figure 3. Number of municipalities at Census dates



Notes: The data source is the Italian National Institute of Statistics (ISTAT). The big jump in 1921 is due to the annexations of Trentino Alto Adige, Trieste, Gorizia, Istria, Zara after WWI for a total of 841 (9,195-8,354) *comuni*.

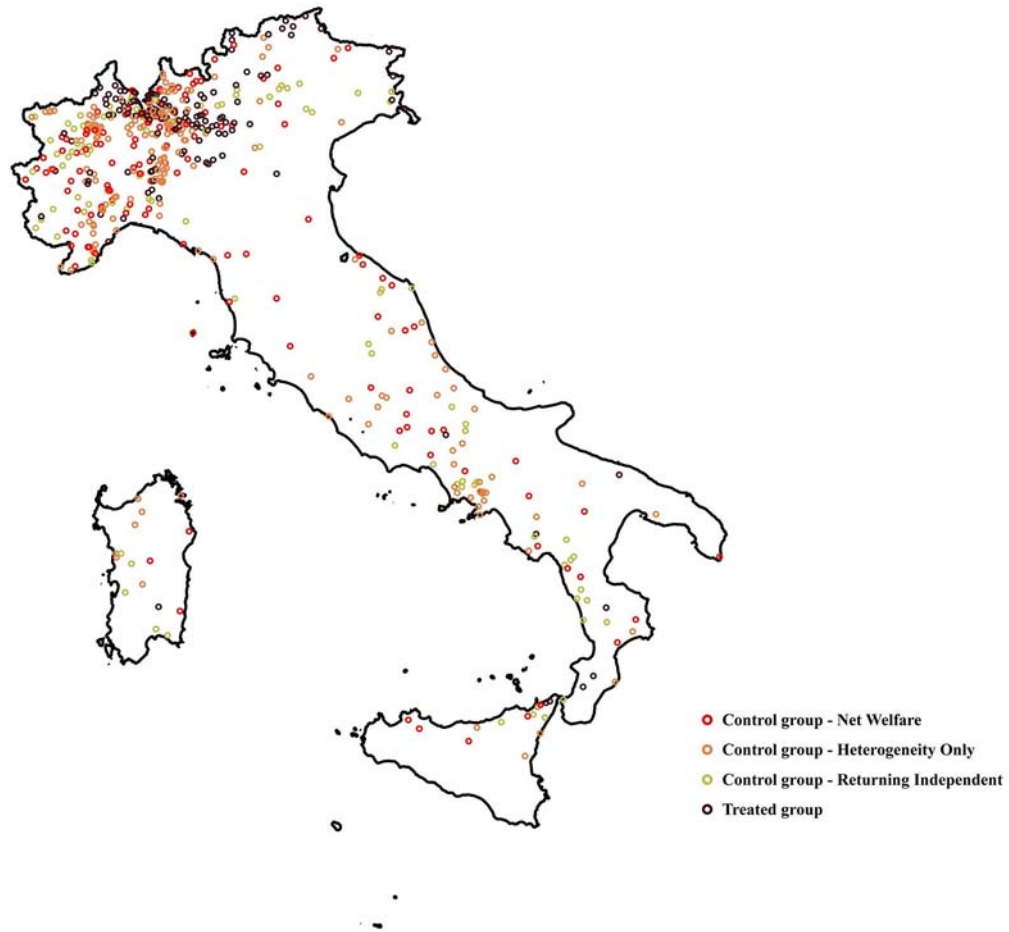
Figure 4. Municipalities involved in the exercises



Notes: Treated group: consolidated municipalities that have been created as a result of consolidation of consolidating suppressed municipalities. Control group - *Net Welfare* exercise: municipalities that are most similar to the consolidating ones and that are joined to constitute synthetic counterfactuals for consolidated municipalities. Control group - *Heterogeneity Only* exercise: municipalities that are most similar to the consolidated municipalities.

Figure 5. Municipalities in the sample

Figure 5a. Municipalities across the entire Italian territory (centroids)

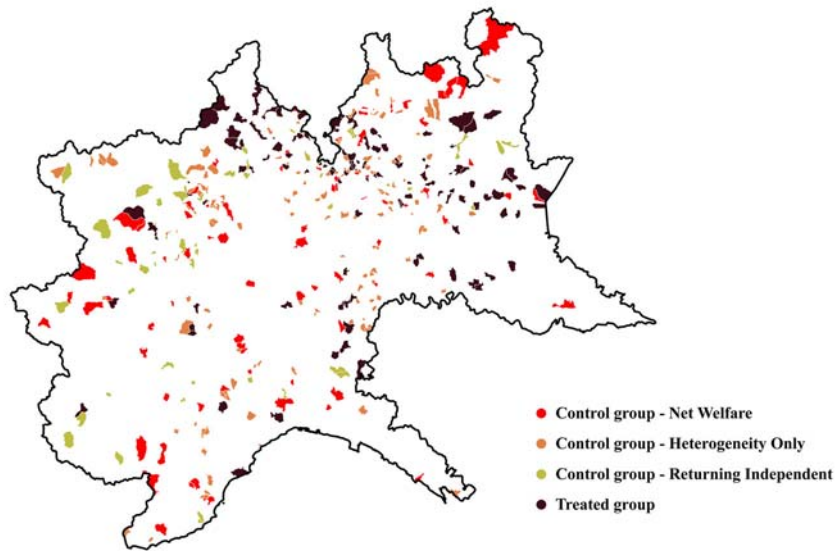


Notes: The Figure shows coloured circles that represent the centroids of the municipalities involved in the exercise. As the latter are very small, polygons would be not easily visible across the entire Italian territory.

(continue)

Figure 5. Municipalities in the sample (*continue*)

Figure 5b. Municipalities across the North-Western territorial partition (polygons)



Notes: The Figure shows the polygons of the municipalities involved in the exercise over the North-Western territorial partition (Piedmont, Lombardy, Liguria and Valle d'Aosta).

Tables

Table 1. Balancing property

Panel A. Treated and PS-selected controls for the <i>Net Welfare</i> exercise			
Covariate	Treated	PS-Controls	Balancing Property
	136	131	Test (p-value)
Ln(Population 1921)	7.557	7.533	0.781
Ln(Population 1951)	7.580	7.503	0.447
Ln(Plants 1951)	5.366	5.254	0.469
Ln(Employees 1951)	4.276	4.254	0.839
Ln(Surface)	7.491	7.436	0.646
Ln(Altitude)	5.724	5.624	0.431
Ln(Elevation range)	6.111	5.830	0.168
Costal location	0.029	0.066	0.156
Panel B. Treated and PS-selected controls for the <i>Heterogeneity Only</i> exercise			
Covariate	Treated	PS-Controls	Balancing Property
	136	63	Test (p-value)
Ln(Population 1921)	7.557	7.601	0.538
Ln(Population 1951)	7.580	7.742	0.110
Ln(Plants 1951)	5.366	5.618	0.113
Ln(Employees 1951)	4.276	4.515	0.307
Ln(Surface)	7.491	7.115	0.184
Ln(Altitude)	5.724	5.775	0.610
Ln(Elevation range)	6.111	6.245	0.392
Costal location	0.029	0.074	0.095
Panel C. Treated and PS-selected controls for the <i>Returning Independent</i> exercise			
Covariate	Treated	PS-Controls	Balancing Property
	136	96	Test (p-value)
Ln(Population 1921)	7.557	7.496	0.462
Ln(Population 1951)	7.580	7.481	0.321
Ln(Plants 1951)	5.366	4.211	0.530
Ln(Employees 1951)	4.276	5.275	0.548
Ln(Surface)	7.491	7.481	0.931
Ln(Altitude)	5.724	5.561	0.201
Ln(Elevation range)	6.111	6.362	0.312
Costal location	0.029	0.062	0.223

Notes: Treated: consolidated municipalities that have been created as a result of consolidation of consolidating suppressed municipalities. Controls - *Net Welfare* exercise: PS-selected municipalities that are similar to the consolidating ones in terms of observable characteristics and that have been joined into synthetic counterfactuals for consolidated municipalities. Controls - *Heterogeneity Only* exercise: PS-selected municipalities that are similar to the consolidated municipalities in terms of observable characteristics. Controls - *Returning Independent* exercise: PS-selected municipalities that have obtained the reconstitution of pre-fascist boundaries and that are similar to the treated ones in terms of observable characteristics. Observable characteristics are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951.

Table 2. Baseline results

Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.071	0.040	1.76
Heterogeneity Only	136	63	-0.068	0.058	-1.17
Returning Independent	136	96	0.055	0.050	1.09

Notes: Treated: consolidated municipalities that have been created as a result of consolidation of consolidating suppressed municipalities. Controls - *Net Welfare* exercise: PS-selected municipalities that are similar to the consolidating ones in terms of observable characteristics and that have been joined into synthetic counterfactuals for consolidated municipalities. Controls - *Heterogeneity Only* exercise: PS-selected municipalities that are similar to the consolidated municipalities in terms of observable characteristics. Controls - *Returning Independent* exercise: PS-selected municipalities that have obtained the reconstitution of pre-fascist boundaries and that are similar to the treated ones in terms of observable characteristics. Observable characteristics are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951. ATT estimated with the nearest-neighbour matching method.

Table 3. Robustness checks

Panel A. Other matching routines. Stratification matching					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.070	0.040	1.76
Heterogeneity Only	136	63	-0.042	0.044	-0.97
Returning Independent	136	96	0.053	0.051	1.04
Panel B. Other matching routines. Radius matching					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.071	0.040	1.76
Heterogeneity Only	136	63	-0.033	0.053	-0.63
Returning Independent	136	96	0.067	0.041	1.63
Panel C. Other matching routines. Kernel matching					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.074	0.040	1.86
Heterogeneity Only	136	63	-0.035	0.044	-0.79
Returning Independent	136	96	0.050	0.046	1.09
Panel D. Only municipalities located in the Centre and North of Italy					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	127	107	0.070	0.055	1.28
Heterogeneity Only	127	34	-0.014	0.077	-0.18
Returning Independent	127	67	0.053	0.060	0.87

Notes: Treated: consolidated municipalities that have been created as a result of consolidation of consolidating suppressed municipalities. Controls - *Net Welfare* exercise: PS-selected municipalities that are similar to the consolidating ones in terms of observable characteristics and that have been joined into synthetic counterfactuals for consolidated municipalities. Controls - *Heterogeneity Only* exercise: PS-selected municipalities that are similar to the consolidated municipalities in terms of observable characteristics. Controls - *Returning Independent* exercise: PS-selected municipalities that have obtained the reconstitution of pre-fascist boundaries and that are similar to the treated ones in terms of observable characteristics. Observable characteristics are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951. Panel A: ATT estimated with the stratification matching method. Panel B: ATT estimated with the radius (0.1) matching method. Panel C: ATT estimated with the kernel matching method. Panels D-G: ATT estimated with nearest-neighbour matching method. Panel H: treated and controls matched on the basis of only time-invariant and 1921 variables. ATT estimated with nearest-neighbour matching method.

(continue)

Table 3. Robustness checks (continue)

Panel E. Only municipalities located not close to main urban centres					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	92	69	0.062	0.064	0.97
Heterogeneity Only	92	47	-0.104	0.061	-1.70
Returning Independent	92	59	0.055	0.053	1.04
Panel F. Population growth rate 1951-1971. Controlling for casualties and missings during WWII					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.067	0.038	1.72
Heterogeneity Only	136	63	-0.059	0.049	-1.20
Returning Independent	136	96	0.047	0.044	1.07
Panel G. Population growth rate 1951-1971. Controlling for natural movement					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	131	0.074	0.036	2.01
Heterogeneity Only	136	63	-0.157	0.066	-2.37
Returning Independent	136	96	0.054	0.045	1.22
Panel H. Population growth rate 1931-1951					
Exercise	Treated	Controls	ATT	s.e.	t-stat
Net Welfare	136	134	-0.037	0.026	-1.44
Heterogeneity Only	136	60	-0.019	0.083	-0.23
Returning Independent	136	108	-0.034	0.012	-2.88

Notes: Treated: consolidated municipalities that have been created as a result of consolidation of consolidating suppressed municipalities. Controls - *Net Welfare* exercise: PS-selected municipalities that are similar to the consolidating ones in terms of observable characteristics and that have been joined into synthetic counterfactuals for consolidated municipalities. Controls - *Heterogeneity Only* exercise: PS-selected municipalities that are similar to the consolidated municipalities in terms of observable characteristics. Controls - *Returning Independent* exercise: PS-selected municipalities that have obtained the reconstitution of pre-fascist boundaries and that are similar to the treated ones in terms of observable characteristics. Observable characteristics are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951. Panel A: ATT estimated with the stratification matching method. Panel B: ATT estimated with the radius (0.1) matching method. Panel C: ATT estimated with the kernel matching method. Panels D-G: ATT estimated with nearest-neighbour matching method. Panel H: treated and controls matched on the basis of only time-invariant and 1921 variables. ATT estimated with nearest-neighbour matching method.

Appendices

Appendix A

Local wage and rents. Expressions for (w_c, r_c) can be obtained by solving the system given by equation (2) and $\bar{v} = \eta \cdot A_c^u \cdot \frac{w_c}{r_c^{1-\mu}} \cdot \hat{\varepsilon}_c$. It holds that:

$$(A.1) \quad r_c = \left[\frac{\theta \cdot \eta^\alpha \cdot A_c^Y \cdot (A_c^u)^\alpha \cdot (\hat{\varepsilon}_c)^\alpha}{(\bar{v})^\alpha} \right]^{\frac{1}{1-\alpha\mu}}$$

$$(A.2) \quad w_c = \left[\frac{\theta^{1-\mu} \cdot (A_c^Y)^{1-\mu} \cdot (\bar{v})^{1-\alpha}}{\eta^{1-\alpha} \cdot (A_c^u)^{1-\alpha} \cdot (\hat{\varepsilon}_c)^{1-\alpha}} \right]^{\frac{1}{1-\alpha\mu}}$$

Derivation of equation (7). Local firms' demands for labour and land are given, respectively, by $N_c = (\alpha Y_c) / w_c$ and $L_c = (1 - \alpha) Y_c / r_c$. Demand for residential space by individuals is given by $(1 - \mu) \cdot N_c \cdot w_c / r_c$. Thus, market clearing in the local land market requires that:

$$(A.3) \quad \bar{L} = \frac{(1 - \alpha) \cdot Y_c + (1 - \mu) \cdot N_c \cdot w_c}{r_c}$$

which also implies that:

$$(A.4) \quad Y_c = \frac{\bar{L} \cdot r_c}{1 - \alpha\mu}$$

Thus, exploiting (A.4), N_c can also be written as:

$$(A.5) \quad N_c = \frac{\alpha \cdot \bar{L}}{1 - \alpha\mu} \cdot \frac{r_c}{w_c}$$

Equation (A.5) can be interpreted as the “local labour demand”, decreasing in the wage-rent ratio. The ratio r_c / w_c is immediately calculated from (A.1) and (A.2).

Consider now the local labour supply. The number of residents in the jurisdiction, n_c , will depend on the critical value $\hat{\varepsilon}_c$, according to the uniform distribution we assumed. Thus, it must

hold that $\frac{n_c}{N} = \int_{\hat{\varepsilon}_c}^{1+\phi} \frac{1}{2\phi} d\varepsilon$. Solving the integral, we obtain the following expression:

$$(A.6) \quad n_c = \frac{[1 + \phi - \hat{\varepsilon}_c] \cdot \bar{N}}{2\phi}$$

Expression (A.6) shows that an increase in the critical value $\hat{\varepsilon}_c$ will reduce the “supply” of residents in area c , since $\frac{dn_c}{d\hat{\varepsilon}_c} = -\frac{\bar{N}}{2\phi}$. Moreover, the larger the dispersion of individual preferences, measured by ϕ , the smaller the size of population movements when $\hat{\varepsilon}_c$ changes. By using (A.1) and (A.2), note that the local labour supply (negatively related to $\hat{\varepsilon}_c$) is increasing in the local wage and decreasing in the local-rent. In other words, local labour supply is increasing in the local wage-rent ratio.

Equilibrium in the local labour market requires that $n_c = N_c$. Thus, equating (A.5) and (A.6) gives equation (7) in the text.

Equation (7) together with equations (A.1) and (A.2) determine the equilibrium levels of local prices (w_c, r_c).

Proof of Result 1. The results that $d\hat{\varepsilon}_c / dA_c^u < 0$, and $d\hat{\varepsilon}_c / dA_c^Y < 0$, follow immediately from differentiation. Part *i*) is a consequence of (A.6): the lower the critical value $\hat{\varepsilon}_c$, the higher the equilibrium population n_c . Part *ii*) is consequence of (6): the lower the threshold $\hat{\varepsilon}_c$, the higher the utility for each resident.

Appendix B

From the history of the *comune* of Baone. Available at <http://www.comune.baone.pd.it/dalla-guerra-al-fascismo>.

Original: *E' noto infatti che tra i comuni di Arquà Petrarca e di Este si è convenuto di fare del Comune di Baone due parti, una delle quali, Valle San Giorgio, dovrebbe essere incorporata ad Arquà Petrarca, l'altra, Baone centro e Calaone, ad Este. Arquà e gli altri due comuni fondavano la loro richiesta sul decreto del 17 marzo 1927 che stabiliva che dovevano essere eliminate quelle "situazioni comunali sfornite non solo di capacità di sviluppo ma anche della possibilità di continuare a far fronte con un minimo di sufficienza all'aumentato costo dei pubblici servizi ed alle cresciute esigenze dei cittadini." Si voleva creare organismi più robusti mediante il raggruppamento di piccole unità preesistenti o mediante l'aggregazione di piccole unità ad un centro consistente. Immediata fu la reazione degli abitanti di Valle. Gli animi si infiammarono. Tutti i capifamiglia firmarono una petizione contraria all'assorbimento del comune. La protesta si allargò coinvolgendo l'intera realtà comunale. Carisio Canevarolo, che in quell'epoca era un dipendente comunale, così la ricorda nelle sue memorie: "Insorse l'Amministrazione comunale di Baone e il Fascio locale. Il Podestà comm. Carturan approntò con grande cura una lunga e dettagliata relazione in piena opposizione alle richieste dei detti Comuni. La relazione del Podestà e apposito ricorso del Fascio locale vennero spediti al Ministero degli Interni, alla Prefettura di Padova, alla federazione dei Fasci di Padova. Dopo un anno tutte le acque si calmarono e Baone rimase intatto."*

Translation: It is well-known that the municipalities of Arquà Petrarca and Este have agreed to separate the *Comune* of Baone in two parts, one of which, San Giorgio Valle, should be merged with Arquà Petrarca, while the other, namely Baone center and Baone Calaone, should be aggregated together with Este. Arquà and the other two municipalities based their request on the Decree of March 17, 1927, which stated the eradication of "municipalities which lack not only of development capacity, but also of the ability to cope with the increasing minimum sufficient financial burden of public services, and the increasing necessities of citizens." The Decree aimed at creating stronger organizations through the grouping of existing small units, or through the aggregation of small units to a large center. The reaction of the inhabitants of the valley was immediate. Tempers inflamed. All the heads of the family signed a petition against the aggregation of the town. The protest spread and involved the whole town. Carisio Canevarolo, at the time a civic employee, wrote in his memoirs: "The City Council and the local Fascist Party section rose up. The *Podestà* (Mayor), Mr. Carturan, wrote a long and detailed report which fully opposed the demands of those municipalities [Arquà and Este]. The report of the Mayor and the appeal of the local section of the Fascist Party were sent to the Home Office, the Prefect of Padua, and to the federation of the Fascist Party in Padua. After one year, the quarrel dust settled, and Baone remained untouched."

Deliberation of the *Podestà* (Mayor) of Rovigo. Archive of the *comune* of Rovigo, vol. 65.

Original: *Il commissario prefettizio di Rovigo sottolinea: «il comune si affatica e arranca in mezzo a difficoltà finanziarie dipendenti non da sperperi o da altre cause di natura*

antieconomica, ma dal fatto che le risorse di cui dispone sono, in via assoluta, inadeguate al costo dei servizi che egli deve mantenere. Per rimediare a questa situazione, che trova la sua origine in una insufficienza di carattere organico, si adottarono in passato vari provvedimenti, che si risolsero però sempre in palliativi, che, in luogo di sanare il male, contribuirono ad aggravarlo»; ed ancora «Rovigo con l'aggregazione acquisterà un più ampio respiro e si procurerà condizioni di vita meno impossibili, ma anche i comuni aggregandi riceveranno vantaggi non indifferenti, primo tra i quali quello di poter dare alle loro popolazioni i pubblici servizi, dei quali sono sprovvisti». Nel provvedimento si spiega il motivo dell'esclusione da questa proposta del comune di Costa, territorio contermina a quello di Rovigo, ma con il centro distante dieci chilometri e senza nessuna dipendenza con il capoluogo, trattandosi di «comune di tipo cittadino dotato di sufficiente autonomia ... fornito di un buon bilancio e provvisto di molti servizi». Si rendeva, invece necessario l'inglobamento di Sant'Apollinare che, per quanto non confinante, distava pochi chilometri dalla città e «col quale ha stretti ed intimi rapporti».

Translation: The prefectural commissioner of Rovigo stresses: «the municipality toils and limps in the midst of financial difficulties that are not due to squandering or other inefficiencies, but to the fact that the available resources are absolutely inadequate to fund the cost of services. Various measures have been adopted in the past to change this situation, originated by lack of organization, but they always happened to be a palliative that instead of acting as a remedy, helped to aggravate the situation», and still, «After the aggregation, Rovigo will improve on its extreme living conditions, and also the municipalities under consolidation will receive considerable advantages, such as the possibility to provide their people with those public services they are currently lacking». The measure explains the reason for excluding from this proposal the town of Costa, located in the vicinity of Rovigo, but with a center located ten kilometers away and without any dependence on Rovigo itself, being «a municipality with sufficient autonomy, due to an adequate budget and provision of many services». It was, however, necessary to merge Sant'Apollinare that, although not neighbouring, is located only few kilometers away from the city of Rovigo, to which is related «through close relationship».

Discussion and referral of the initiative of the senators Farina and Gavina, on the “Reconstitution of the village of Donelasco, in the province of Pavia”. From: Senate Acts, March 22, 1956.

Original: *PRESIDENTE. L'ordine del giorno reca la discussione del disegno di legge d'iniziativa dei senatori Farina e Gavina: «Ricostituzione del comune di Donelasco, in provincia di Pavia». Per questo Comune, essendo stato soppresso dal fascismo, è applicabile la legge Rosati. Inoltre, trattandosi di un Comune di appena 482 abitanti, con 353 ettari di terreno, mancherebbe l'autosufficienza.*

Dichiaro aperta la discussione generale.

LOCATELLI. Conosco molto bene questo paese, che era Comune fin dal 1700. Il fascismo lo sopprese per ragioni politiche; pertanto a me sembra opportuno che si debba ricostituire immediatamente.

BISORI, Sottosegretario di Stato per l'Interno.

A questo Comune è applicabile la legge Rosati. Tanto basterebbe perché, secondo me, dovesse ritenersi non conveniente che il potere legislativo - trascurando la volontà della popolazione, sulla quale qui nulla risulta, e senza tenere presente il riguardo dovuto al Capo dello Stato, al Consiglio di Stato ecc. competente secondo quella legge - emettesse un suo provvedimento. Nel merito, debbo aggiungere questo. Agli uffici risulta che la frazione di Donelasco, sita in zona collinosa, è collegata con il capoluogo da due strade, entrambe in buono stato di manutenzione, lunga l'una chilometri 1,300, l'altra chilometri 3,500. Risulta altresì che i vari nuclei abitati, che dovrebbero essere compresi nel ricostituendo Comune, comunicano più agevolmente con l'attuale capoluogo di Santa Maria della Versa, che non con la frazione di Donelasco. Risulta inoltre che l'economia di Donelasco è strettamente collegata a quella di Santa Maria della Versa dove si trovano persino le cantine sociali nelle quali affluisce l'uva raccolta nel territorio del Comune. Dal lato finanziario attualmente il bilancio di Santa Maria della Versa è in pareggio. Ricostituire, invece, il comune di Donelasco comporterebbe, per quel Comune, una spesa obbligatoria per circa 3 milioni di lire a carico di 482 abitanti.

Per tutte queste ragioni il Governo è contrario all'approvazione di questo disegno di legge.

TERRACINI. Ho piena fiducia e verso al rappresentante del Governo e verso i nostri colleghi proponenti di questo disegno di legge, ma vi sono delle strane contraddizioni tra ciò che è scritto nella relazione ed alcune delle cose che abbiamo in questo momento udito. Nella relazione si parla di una pratica iniziata in via amministrativa, la quale aveva già avuto il parere pienamente favorevole del Consiglio provinciale di Pavia, della quale però poi non si dicono gli sviluppi ulteriori. Pertanto penserei che l'iniziativa legislativa sia stata conseguenza di una di quelle delusioni fatte sorgere in mezzo alla popolazione dall'estrema lentezza della pratica amministrativa. Per ciò che si riferisce alle distanze, nella relazione del nostro collega si parla di 5 chilometri di strada carrozzabile tra Santa Maria della Versa e Donelasco. Per ciò che si riferisce alle spese obbligatorie, se gli abitanti di questa frazione sono disposti a pagarle, non so se abbiamo il diritto di intervenire per consigliarli a devolvere altrimenti il denaro di cui possono disporre. Inoltre non possiamo dimenticare che questa frazione in passato era già Comune e ha dato dimostrazione di poter vivere in maniera autonoma.

Per questi motivi sono favorevole alla approvazione del disegno di legge.

BISORI, Sottosegretario di Stato per l'Interno.

La pratica amministrativa della quale il senatore Terracini ha parlato si è arenata, anzi si è interrotta, non per l'intervento degli uffici, bensì per la presentazione di due opposizioni a firma di frazionisti di Donelasco, già firmatari della istanza di ricostituzione di Donelasco in comune autonomo. A seguito della presentazione di quelle due opposizioni, vennero meno alla istanza i requisiti richiesti dalla legge Rosati.

Quindi, approvando questo disegno di legge, calpesteremmo non solo la legge Rosati, ma anche la volontà della maggioranza delle popolazioni.

TERRACINI. L'onorevole Sottosegretario ha detto che l'opposizione è stata firmata da frazionisti: ciò non vuol dire che questi siano numerosi, ma semplicemente che sono abitanti di Donelasco.

BISORI, Sottosegretario di Stato per l'Interno.

Ritengo che, essendo applicabile la legge Rosati, poiché si tratta di un Comune soppresso durante il fascismo, una delle due: o esistono i requisiti che il Parlamento ha stabilito nel dettare la legge Rosati e allora si deve agire in sede amministrativa; o quei requisiti non esistono, ed allora non è il caso che il Parlamento faccia una leggina ad hoc, contrastando perfino la volontà delle popolazioni.

LOCATELLI. Chiedo che sia sospesa la discussione e che si faccia un supplemento di istruttoria chiaro e preciso.

BISORI, Sottosegretario di Stato per l'Interno.

A me sembra assurdo che una frazione di 482 abitanti possa spendere 3 milioni all'anno. In ogni modo dichiaro che sono contrario alla proposta di sospensiva.

ANGELINI, relatore. Gli atti della istruttoria si riducono solamente alla relazione fatta dal Prefetto di Pavia al Ministero dell'Interno; non mi è stato possibile acquisire altri elementi. Debbo aggiungere che da detta relazione risulta che la distanza tra la frazione di Donelasco e il comune di Santa Maria della Versa è di un chilometro e mezzo.

PRESIDENTE. Nessun altro chiedendo di parlare metto ai voti la proposta di sospensiva formulata dal senatore Locatelli, alla quale il Governo ha dichiarato di essere contrario.

(È approvata).

Il seguito della discussione di questo disegno di legge è pertanto rinviato ad altra seduta.

Translation: PRESIDENT. The next item concerns the discussion of the initiative of Senators Farina and Gavina, on the "Reconstitution of the town of Donelasco, in the province of Pavia." As the municipality has been suppressed by Fascism, the Rosati law can be applied. However, since the city has just 482 inhabitants, with 353 hectares of land, it fails to meet the requirements for self-sufficiency.

I open the general discussion.

LOCATELLI. I know very well this small town, which has been a *comune* since 1700. Fascism suppressed it for political reasons, so I believe it is appropriate to restore it immediately.

BISORI, Secretary of State for the Home Office.

Since the Rosati law applies to this municipality, in my opinion, it is not appropriate that the Parliament - ignoring the will of the people and without any regard for the opinion of the Head of the State, the Council of the State, etc. which are competent by law - would issue its own decision. I must add that, according to the offices in charge, the fraction of Donelasco, located in a hilly area, is connected with the administrative centre by two roads, both in good condition, one 1.3 km, the other 3.5 km long. It is also clear that the various settlements and hamlets which should be included into the reconstituted municipality have better connections with the current administrative centre, Santa Maria della Versa, than with the town of Donelasco. Moreover, the economy of Donelasco is closely connected with Santa Maria della Versa, where there are the wineries which process the grapes of Donelasco. From a public finance perspective, the budget of Santa Maria della Versa is balanced. However, the restoration of the municipality of Donelasco would imply, for that municipality itself, mandatory spending for about 3 millions to be spread over a population of 482 inhabitants.

For all these reasons the Government opposes the approval of this proposal.

TERRACINI. I fully trust the representatives of the Government and our fellow members who propose this bill, but there are some peculiar contradictions between what is written in the report and some of the things we just heard. The report describes an administrative procedure, which has been fully endorsed by the Provincial Council of Pavia, without illustrating any further development. So, I believe that the present legislative initiative was the result of the disappointment arising among citizens who were tired of the extreme slowness of the administrative procedure. With concern to distances, the report of our colleague mentions 5 km of paved road between Santa Maria della Versa and Donelasco. For what it concerns mandatory expenditures, if the residents of this small town are willing to pay, I do not know if it is right to advise them to use their money differently. We cannot also forget that this fraction was formerly a *comune*, and has already demonstrated that it could manage on its own.

For these reasons I support the approval of the bill.

BISORI, Secretary of State for the Home Office.

The administrative process mentioned by Senator Terracini got interrupted because of two petitions signed by groups of Donelasco's residents opposing the reconstitution of the municipality. After such petitions, the requirements of the Rosati law failed to apply. By approving this bill, we would trample not only the Rosati law, but also the will of the majority of the population.

TERRACINI. The Honourable Minister said that the opposition was signed by groups of opponents who are residents of Donelasco: this does not mean, however, that they are majority.

BISORI, Secretary of State for the Home Office.

I believe that the existing Rosati law applies, because Donelasco is a small municipality suppressed during Fascism. One of following two possibilities must be correct: either the requirements prescribed by the Rosati law are met, so that the matter must be left to an administrative act, or those requirements are not met. In the latter case, the Parliament should not make an *ad hoc* law, which would even go against the will of residents.

LOCATELLI. I call for a suspension of the debate, demanding that additional investigation is made on the subject.

BISORI, Secretary of State for the Home Office.

To me, it sounds absurd that a village of 482 inhabitants would spend 3 million per year. In any case, I declare that I am against the suspension of the debate.

ANGELINI, Rapporteur.

The proceedings of the inquiry are limited to the report made by the Prefect of Pavia to the Home Secretary. I have not been able to acquire other information. I should add that this report argues that the distance between Donelasco and the municipality of Santa Maria della Versa is 1.5 kilometers.

PRESIDENT. As nobody else asked to speak, I ask you to vote the proposal of Senator Locatelli on the suspension of the current debate.

(The proposal is approved).

The debate is therefore postponed to a future session.

Consolidation of Radicena, Jatrinoli and Terranova Sappo Minulio in a unique *comune* denominated Taurianova. Decree 16 February 1928 n. 377.

Original: *Vittorio Emanuele, per grazia di Dio e per volontà della Nazione, Re d'Italia:*

In virtù dei poteri conferiti al Governo con R. Decreto 17 marzo 1927, n. 383: sulla proposta del Capo del Governo, Primo Ministro Segretario di Stato, Ministro Segretario di Stato per gli affari dell'Interno; abbiamo decretato e decretiamo:

I comuni di Radicena, Jatrinoli e Terranova Sappominulio, in provincia di Reggio di Calabria, sono riuniti in un unico comune denominato TAURIANOVA. Le condizioni di tale unione, ai sensi e agli effetti dell'articolo 118 della legge comunale e provinciale, testo unico 4 febbraio 1915, n. 148, saranno determinate dal Prefetto, sentita la Giunta Provinciale Amministrativa.

Ordiniamo che il presente decreto, munito del sigillo di Stato, sia inserito nella raccolta ufficiale delle leggi e dei decreti del Regno d'Italia, mandando a chiunque spetti di osservarlo e farlo osservare.

Vittorio Emanuele

Visto: il Guardasigilli: Rocco

Registrato alla Corte dei Conti addì 10 marzo 1928 - Anno VI.

CASATI

Atti del Governo, registrato 270, foglio 80.

Translation: *Vittorio Emanuele, King of Italy for Grace of God and Will of the Nation:*

Owing to the powers conferred to the Government by the Royal Decree of 17 March 1927, n. 383: on proposal of the Head of Government, Prime Minister Secretary of State, Secretary of State for the Home Office, we have decreed and decree that:

The municipalities of Radicena, Jatrinoli and Terranova Sappominulio, in the province of Reggio di Calabria, join together in a single town called Taurianova. The conditions for this union, in the respect of Article 118 of the municipal and provincial law, the Testo Unico of February 4, 1915, n. 148, will be determined by the Prefect, after consultation with the Provincial Administration.

We order that the present decree, bearing the Seal of the State, be inserted in the official collection of laws and decrees of the Kingdom of Italy, commanding the whom is concerned to observe and enforce it.

Vittorio Emanuele

The Registrar: Rocco

Registered at the Court of Auditors on March 10, 1928 - Year VI.

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Appendix C

Table A1. Political determinants of consolidations

Dependent variable: P(consolidation)	Year of elections	
Political party	1919	1921
<i>Liberali e altri</i>	-0.0040 (0.0036)	
<i>Partito Socialista</i>	-0.0015 (0.0035)	-0.0081** (0.0037)
<i>Partito Popolare</i>	0.0030 (0.0036)	-0.0028 (0.0034)
<i>Blocchi Nazionali</i>		-0.0011 (0.0049)
<i>Partito Comunista</i>		0.0016 (0.0035)
Controls	YES	YES
R2	0.118	0.118
Observations	3,780	3,483
<i>of which: Consolidated</i>	343	354

Notes: Dependent variable: dummy equal to one if a municipality consolidated. In this case, for consolidation we mean that the municipality is subject to any kind of territorial variations due to the consolidation policy. Explanatory variable of interest: vote share obtained in each municipality by the main Italian political parties in 1919 (Socialist Party - *Partito Socialista Italiano*, Popular Party - *Partito Popolare Italiano*, and the coalition of liberals, democratic and radicals - *Liberali e altri*) and 1921 (Socialist Party - *Partito Socialista Italiano*, Popular Party - *Partito Popolare Italiano*, liberals and fascists alliance - *Blocchi Nazionali*). We also included the Communist Party as the 1921 elections were the first in which socialists and communists were divided after the birth of the *Partito Comunista Italiano*. Controls: population, surface, altitude, elevation range, costal location, southern location. Coefficients are linear probability model estimates. Probit estimates produce similar results. * - ** - ***: coefficient statistically significant at 1% - 5% - 10% significance level. Standard errors in brackets.

Table A2. Political determinants of reconstitutions

Dependent variable: P(reconstitution)	Year of elections	
	1953	1963
<i>Political party</i>		
<i>Partito Liberale</i>	0.0033 (0.0023)	0.0015 (0.0030)
<i>Partito Socialista</i>	-0.0007 (0.0027)	-0.0094*** (0.0032)
<i>Movimento Sociale</i>	-0.0004 (0.0028)	-0.0079*** (0.0030)
<i>Partito Comunista</i>	0.0004 (0.0029)	0.0007 (0.0031)
<i>Democrazia Cristiana</i>	0.0313*** (0.0053)	0.0257*** (0.0050)
<i>Partito Monarchico</i>	-0.0022 (0.0024)	
Controls	YES	YES
R2	0.062	0.070
Observations	6,682	6,963
<i>of which: Returning Independent</i>	352	352

Notes: Dependent variable: dummy equal to one if a municipality returned to be independent. Explanatory variable of interest: vote share obtained in each municipality by the main Italian political parties in 1953 (Communist Party - *Partito Comunista Italiano*, Fascist Party - *Movimento Sociale*, Liberal Party - *Partito Liberale*, Socialist Party - *Partito Socialista Italiano*, Christian Democratic Party - *Democrazia Cristiana*, and Royal Party - *Partito Monarchico*) and 1963 (Communist Party - *Partito Comunista Italiano*, Fascist Party - *Movimento Sociale*, Liberal Party - *Partito Liberale*, Socialist Party - *Partito Socialista Italiano*, and Christian Democratic Party - *Democrazia Cristiana*). As for the 1963 elections, we add the vote shares for the Social Democratic Party to those for the Social Party. Controls: population, surface, altitude, elevation range, costal location, southern location. Coefficients are linear probability model estimates. Probit estimates produce similar results. * - ** - ***: coefficient statistically significant at 1% - 5% - 10% significance level. Standard errors in brackets.

Appendix D

Our data source is the Italian National Institute of Statistics (ISTAT), which provides information about the territorial variations of Italy's municipalities and links them with the corresponding legislative act. Among them we select only the municipalities involved into the fascist consolidation policy. The number of consolidating municipalities amounts to 2,078. At the end of WWII, municipalities were allowed to restore their pre-fascist boundaries. The total number of consolidating municipalities that regained their original features is 884, of which 778 between 1945 and 1961. The other 1,194 were either attached to 736 already existing municipalities or consolidated into 248 new born municipalities.²⁸ As 80 out of 248 new born municipalities were definitely suppressed after WWII to allow reconstitutions of pre-fascist boundaries, the number of new born municipalities available for our exercise is 168. Information is summarized in Table A3, Panel A. The estimation sample is described below. Information about the estimation sample is summarized in Table A3, Panels B to E.

Treated group (Table A3, Panel B). This is a group of 136 municipalities chosen among the 168 new born municipalities (the consolidated municipalities), resulting from the aggregation of 302 suppressed municipalities (the consolidating municipalities). Of the 168 new born (consolidated) municipalities, 136 are those that find a match with each of the three control groups described below. The matched consolidated municipalities correspond to 205 suppressed (consolidating) municipalities.

Control group - Net Welfare exercise (Table A3, Panel C). This is a group of 131 municipalities that are similar to the consolidating ones in terms of observable characteristics (see below) and that have been joined into synthetic counterfactuals for consolidated municipalities. To construct this group we use a three step procedure. In the step I, we use an exact matching procedure to choose, among 5,709 untreated municipalities, those that are most similar to the 205 consolidating ones in terms of surface and population in year 1921. In the step II, the selected municipalities are joined into synthetic municipalities (see Figure 4). On average, each synthetic municipality is made up of 2.6 selected municipalities. In the step III, we use a propensity score method to choose, among the synthetic municipalities, those that are most similar in terms of observable characteristics (see below) to the 136 consolidated municipalities. Observable features are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951.

Control group - Heterogeneity Only exercise (Table A3, Panel D). This is a group of 63 municipalities similar to the 136 consolidated ones. To construct this group, within the set of 5,094 untreated municipalities, we PS-select the 63 that are most similar in terms of observable features to the consolidated municipalities. Observable features are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951.

²⁸ The policy involved also 143 municipalities that have lost only fractions (attached either to the already existing municipalities or to the new born municipalities). These municipalities have not been considered in this study.

Control group - Returning Independent exercise (Table A3, Panel E). This is a group of 96 municipalities that return to be independent after being involved in the fascist consolidation. To construct this group, within the set of municipalities that return to be independent in the period 1945-53, we PS-select the 96 municipalities that are most similar to the treated municipalities in terms of observable features. Observable features are: (log of) surface, (log of) altitude, (log of) elevation range, costal location, (log of) population in 1921, (log of) population in 1951, (log of) number of plants in 1951 and (log of) employment in 1951.

Table A3. Sample construction

Panel A. Municipalities involved in the consolidation	Obs.
Municipalities involved in the consolidation as consolidating units	2,078
<i>of which:</i>	
Attached to existing municipalities or consolidating into new born municipalities	1,194
Returning independent	884
<i>of which:</i> Returning independent in the period 1945-1961	778
<i>of which:</i> Returning independent in the period 1945-1953	631
Municipalities involved in the consolidation as consolidated units	984
<i>of which:</i>	
Existing municipalities	736
New born municipalities	248
<i>of which:</i> New born municipalities not suppressed after WWII	168
Panel B. Treated group	Obs.
New born municipalities not suppressed after WWII	168
Matched new born municipalities not suppressed after WWII	136
Panel C. Control group - <i>Net Welfare</i> exercise	Obs.
Untreated municipalities	5,907
PS-selected untreated municipalities	131
Panel D. Control group - <i>Heterogeneity Only</i> exercise	Obs.
Untreated municipalities	5,094
PS-selected untreated municipalities	63
Panel E. Control group - <i>Returning Independent</i> exercise	Obs.
Returning independent municipalities	631
PS-selected returning independent municipalities	96

Notes: Data source is the Italian National Institute of Statistics (ISTAT)