Journal of Comparative Economics 000 (2016) 1–21

Contents lists available at ScienceDirect

Journal of Comparative Economics

journal homepage: www.elsevier.com/locate/jce

The size of political jurisdictions: A model with some evidence from a fascist consolidation☆

Monica Andini[a,*], Alberto Dalmazzo[b], Guido de Blasio[a]

[a] Bank of Italy, Structural Economic Analysis Directorate, Via Nazionale 91, 00184 Roma, Italy
[b] Department of Economics and Statistics, University of Siena, Piazza San Francesco 7, 53100 Siena, Italy

ARTICLE INFO

Article history:
Received 8 January 2016
Revised 19 July 2016
Accepted 24 August 2016
Available online xxx

JEL classification:
R12
H10
R11

Keywords:
City size
Local government
Local economic development

ABSTRACT

Andini, Monica, Dalmazzo, Alberto, and de Blasio, Guido—The size of political jurisdictions: A model with some evidence from a fascist consolidation

We present a model that explains 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. *Journal of Comparative Economics* **000** (2016) 1–21. Bank of Italy, Structural Economic Analysis Directorate, Via Nazionale 91, 00184 Roma, Italy; Department of Economics and Statistics, University of Siena, Piazza San Francesco 7, 53100 Siena, Italy.

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; 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

☆ The views expressed in this paper are those of the authors and do not necessarily correspond to those of the Institutions they are affiliated with. We thank the editor Gérard Roland, two anonymous referees, Giulio Cainelli, Gabriele Cappelli, Henry Overman, Giacomo Ponzetto, Luca Sessa, Alessandra Staderini, Michelangelo Vasta and the participants at the Bank of Italy Workshop in Regional Science (Perugia, February 2013), the Seminar Series of the University of Padova (Padova, March 2013), the 53rd Congress of the European Regional Science Association (Palermo, August 2013), the 54th Congress of the Italian Economic Association (Bologna, October 2013), the Political Economy Workshop of the Catholic University of Milan (Milan, May 2014) for comments and suggestions.

* Corresponding author.
E-mail addresses: monica.andini@bancaditalia.it (M. Andini), dalmazzo@unisi.it (A. Dalmazzo), guido.deblasio@bancaditalia.it (G. de Blasio).

[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.

http://dx.doi.org/10.1016/j.jce.2016.08.005
0147-5967/

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 – 2078 small municipalities were consolidated (over a total number of 9195 *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 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 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

[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 (1998), Alesina, Baqir and Easterly (1999, 2000).

[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.

[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 $2\bar{L}$.

Please cite this article as: M. Andini et al., The size of political jurisdictions: A model with some evidence from a fascist consolidation☆, Journal of Comparative Economics (2016), http://dx.doi.org/10.1016/j.jce.2016.08.005