# The bright side of breaking up

How territorial fragmentation increases political engagement in local communities

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# The bright side of breaking up: how territorial fragmentation increases political engagement in local communities

#### October 2023

#### Abstract

Territorial reforms of administrative boundaries are primarily aimed at pursuing cost and administrative efficiency objectives, but their impact on local communities' political engagement remains unclear. Moreover, while amalgamations have been widely studied, little is known about the effects of territorial fragmentation. To address this gap, we examine a regional reform in Italy's Apulia region, where five municipalities split voluntarily in the mid-Seventies. We analyze the long-term effects on political engagement using a synthetic difference-in-difference approach. Our findings reveal that newly founded municipalities experienced a substantial increase in voter turnout, particularly at the local level. This positive impact grew over time, enduring for almost half a century post-fragmentation. Interestingly, the 'old' municipalities remained unaffected.

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#### 1. Introduction

The debate surrounding **territorial reforms for jurisdictional reorganization processes** has been long-lasting. Although the rationale behind reorganization can be influenced by a trade-off between multiple drivers, such as political, demographic, or socio-economic changes (OECD, 2017), the size effect underpins both theories that animate territorial reform plans from a dichotomous perspective: the *reform theory* and the *political economy theory* (Mouritzen, 1989).

Arguments in favor of the *reform theory* rest on the scale economy postulate, which posits that a population threshold for cities is necessary to provide greater efficiency in delivering institutional services to citizens. The *reform theory*, therefore, advocates for larger-sized local governments achieved through amalgamations, mergers, intermunicipal cooperations, or consolidations. On the other hand, the *political economy theory* emphasizes the economic and political role of smaller-sized governments. In this view, active participation of the constituency in political life benefits from direct interaction with local representatives, who are perceived to be less bound by bureaucracy and technocracy (De Ceuninck et al., 2010). This rationale can be exemplified by Tiebout's postulate (1956), which suggests that people 'vote with their feet,' meaning that a larger number of small governments allows people to find places where their preferences are better satisfied, thereby determining an optimum size for the community concerned. Such a theory leans towards the opposite type of territorial reorganization, where splits and fragmentation are prevailing.

Over the last few decades, mergers and amalgamations have occurred much more frequently than fragmentations in developed countries (OECD, 2017). As a consequence, most ex-post evaluation studies have focused on the impact of mergers (e.g., Hinnerich, 2009; Reingewertz, 2012; Blom-Hansen et al., 2014 and 2016; Allers and Geertsema, 2016; Blesse and Baskaran, 2016; Roesel, 2017; Steiner and Kaiser, 2017), leaving territorial fragmentation rather underrepresented in the literature (Billing, 2019; Swianiewicz and Łukomska, 2019).

In this paper, we aim to fill this gap by focusing on **five voluntary municipal splits that occurred in the Seventies in the Italian region of Apulia**. Such fragmentation followed a regional law (Apulian Regional Law 26 of December 20<sup>th</sup>, 1973) that ruled the criteria to proceed with bottom-up split requests, mainly driven by identity, socioeconomic, and historical reasons of the aspiring newlyformed territorial jurisdictions. Our focus will be directed at the **political implications of territorial reforms in terms of political engagement expressed by the citizens' voter turnout**. We evaluate the long-term impact of municipal splits on this dimension within a policy evaluation framework using a synthetic difference-in-difference approach (Arkhangelsky et al., 2021).

Our contribution to the literature is threefold. First, our study adds to the limited body of research on the effects of municipal fragmentation on voter turnout, particularly when considering the long-term effects of jurisdictional splits. Second, our empirical analysis differentiates between the impacts of municipality splits on both the newly created and the 'old' municipalities. This choice allows us to analyze the sources and nature of the impact and provide policymakers with insights into the likely effects of municipal fragmentation on voter turnout in a fragmented jurisdictional

scenario. Additionally, we complement the analysis by creating five 'artificial' municipalities that directly mimic the counterfactual situation in which the splits never occurred. Third, the paper makes an empirical contribution by combining a recently developed policy evaluation method, i.e., the synthetic difference-in-differences estimator (SDiD), with an accurate selection of the donor pool based on the number of inhabited centers within a municipality. We claim that this element is crucial when analyzing voluntary municipal splits.

Our findings suggest that newly founded municipalities experienced a considerable increase in voter turnout, especially at the local level. At the same time, the split did not affect the voter turnout of the 'old' municipalities. These results are long-lasting and suggest that the creation of smaller-sized political entities enhances the political engagement of the newly formed local communities.

The remainder of the paper is organized as follows: Section 2 reviews the literature on the main political implications of territorial reorganizations, while Section 3 provides the institutional setting. Then, Section 4 illustrates the data and methodology, describes the main results, and presents some robustness checks. Finally, Section 5 concludes.

# 2. Theoretical background: The political 'costs' of territorial reorganizations

Voter turnout is a pivotal sentry of the health status of a representative democracy. Low civic engagement in political life jeopardizes the overall performance of democratic institutions (Schafer et al., 2022), by worsening the economic, environmental, and administrative efficiency of cities (Lo Prete and Revelli, 2021).

Territorial reorganizations are not free of charges for involved municipalities in terms of citizens' political engagement. Indeed, mergers reduce the direct touch between the voter and the local polity, as the increased population size requires reshaped electoral districts in which political representation might be subverted by the merge (Heinisch et al., 2018). The belief that their one is the 'decisive ballot', which is typical of local elections (Cancela and Geys, 2016), fades if voters do not perceive the possibility to elect the politician(s) with whom they share strong interpersonal relations. The empirical evidence largely supports this claim as voter turnout was significantly and negatively affected by up-scaling territorial reorganizations in many advanced democracies and in federal countries.

In **Sweden** the municipal merger reform of 2009 has reduced the voter turnout by 4 percentage points (pps), but the effect was visible only in small municipalities where the merger has consistently increased the population size, as opposed to larger municipalities where the population change was barely noticeable (Lapointe et al., 2018). Similar results come from **Netherlands**, where Allers et al. (2021) have quantified in 2.2 pps the turnout decrease in local elections and in 0.7 pps the decrease in national turnout. In **Portugal**, instead, a merger reform of sub-municipal governments decreased the turnout in the medium term, but the effect weakened in subsequent elections (Rodrigues and

Tavares, 2020). Along the lines of what happened elsewhere, a substantial drop in turnout was observed also in two different **Swiss cantons** after mergers, Ticino (Koch and Rochat, 2017) and Glarus (Frey et al., 2023). A partial different story arises from **Denmark**, where a positive effect on turnout was found immediately after the municipal merger reform of 2007, but the impact quickly turned negative especially in those municipalities who experienced radical changes in their jurisdictional setting (Bhatti and Hansen, 2019).

Furthermore, studies on the Denmark merger reform of 2007 show that the increased size of municipalities brought a general worsening of the citizens' satisfaction towards the local governments (Hansen, 2015), a substantial drop in the local political trust (Hansen, 2013) and discouraged citizens to participate in politics (Lassen and Serritzlew, 2011).

This overview has shown that mergers reduce the political engagement of local constituencies, increasing the distance between citizens and local political representatives. At the same time, this section has shown that there is no compelling evidence on the long-term impact of territorial reforms of administrative boundaries and that there is a lack of studies on the effect of municipal fragmentations on local political engagement. In the following, we aim to fill both gaps by testing whether municipality splits increase political engagement, and if they do so for all kind of elections and for a long time period.

# 3. Institutional background and the Apulian regional law allowing municipal splits

Municipality mergers or splits in Italy have been handled by the national government on parliamentary push from the unification of Italy until the end of the Sixties. This scenario changed with the Law 281 of May 16<sup>th</sup>, 1970, which established the creation of 20 regions, an intermediate level of governance between central government and municipalities. The newly formed regional governments were immediately conferred a broader decision-making autonomy regarding jurisdictional arrangement issues. Regions inherited a chameleonic institutional framework, since during the fascist period the number of municipalities first markedly dropped from 9,195 municipalities to around 7,200, and then immediately after World War II, 778 municipalities regained their autonomy (Andini et al., 2017).

One of the first measure adopted by regional governments concerned the norms to rule the changes to administrative boundaries and the jurisdictional asset of municipalities. In Apulia, the regional Law 26 of the December 20<sup>th</sup>, 1973<sup>1</sup> set out the guidelines for municipalities who wished to proceed with any form of institutional change. Municipality split requests should be submitted to regional government together with a technical proposal showing the administrative feasibility of the change (in terms of financial resource, planimetry of the new municipality, and a draft of the organization chart to manage the new institution), and with a popular referendum in which the petitioners should express a majority vote to motivate the split request.

<sup>1</sup> The full text of Law 26 is available in Italian language at the historical administrative archive of Apulia: http://portale2015.consiglio.puglia.it/documentazione/leges/modulo.aspx?id=3621

From the entry into force of Law 26, several inhabited centers belonging to larger municipalities, named *frazioni*<sup>2</sup>, moved forward the request to erect themselves as a new municipality by splitting from the original one, drawing mainly on identity, economic, geographical, cultural, and historical reasons. The rationale behind most split requests was that the *frazioni* were in practice already autonomous municipalities, but the formal belonging to a larger administrative unit prevented them to provide an appropriate territorial administration.

After the reform, five Apulian *frazioni* started operations to become independent, and after the approval of the regional government they were erected as autonomous municipalities. **The splits occurred in 1975 leading to the creation of five newly-formed municipalities, namely Castro, Ordona, Porto Cesareo, San Cassiano and Zapponeta, while the municipalities of origin were Diso, Manfredonia, Nardò, Nociglia and Orta Nova (henceforth 'old' municipalities).** 

As visible in the Table 1, the population of the newly erected municipalities ranged from 2.1 to 3.4 thousand inhabitants, while the 'old' municipalities keep variable population sizes (from the 2.7 thousand inhabitants of Nociglia to the 53 thousand inhabitants of Manfredonia). Appendix A provides a focus on the main features of treated municipalities by highlighting reasons behind the split requests with the support of extracts of original documents.

<sup>2</sup> The exact Italian syntax to describe such inhabited centers is 'frazioni', meaning a portion of territory administratively belonging to a broader municipality.

Table 1. - Apulian municipality splits. Main descriptives.

Name before the split	Number of frazioni	Year of the split	Surface (km²)	Population before the split (1971 census)	Regional law	Political party proposing the split	Name after the split	Population after the split (1981 census)	Number of frazioni after the split
Orta Nova	2	1975	143.93	14,633	n. 35 of 02-05-1975	Christian Democracy	Orta Nova	14,409	1
							Ordona	2,153	1
Nociglia	2	1975	19.50	4,632	n. 36 of 02-05-1975	Christian Democracy	Nociglia	2,728	1
							San Cassiano	2,184	1
Manfredonia	6	1975	391.93	47,521	n. 37 of 02-05-1975	Christian Democracy	Manfredonia	53,030	5
						•	Zapponeta	2,307	1
Diso	4	1975	15.99	5,553	n. 39 of 07-05-1975	Christian Democracy	Diso	3,315	3
						·	Castro	2,324	1
Nardò	6	1975	225.15	29,053	n. 40 of 16-05-1975	Christian Democracy	Nardò	28,461	5
						,	Porto Cesareo	3,402	1

The initiatives for municipal autonomy found **support by politicians** sat on the regional government, who acted as advocates of the *frazioni's* will. The political proposers were in all case affiliated to the Christian Democracy, the 'consociational' established party (Guzzini, 1995) who ruled at national level and over most Italian local institutions since the end of the fascist era until the early Nineties.

During the years from 1973 to the late Eighties, several other *frazioni* filed the same lawsuit, but their requests for autonomy did not receive the approval from the regional government. As reported in Table B1 in Appendix B, rejected split requests were moved by politicians belonging to other political parties (Italian Social Movement, Italian Socialist Party, Italian Communist party, Democratic Left party) as well as Christian Democracy. Such circumstance helps to dispel doubts that successful results of split proposals were only driven by the political affiliation to the leading party in Italy. In Section 4.4 we will exploit these unsuccessful splits to further restrict the donor pool only to these municipalities as they have not only similar characteristics to the treated ones but also share with them the willingness for a split.

#### 4. Conclusion

#### 4.1. Data

We collected **municipal-level data on all municipal and national elections** (specifically, for the Chamber of Deputies) **held between 1949 and 2022 in Apulia** from the historical electoral archive of the Ministry of the Interior.<sup>3</sup> Then, we used such data to create the **voter turnout** at municipal and national elections and the share of votes at the national elections for the most relevant and extremist parties in the First Republic, i.e., the Christian Democracy (DC), the Communist Party (PCI), and the Italian Social Movement (MSI).

We have complemented the political variables with those obtained from **census data** on: population, old-age index, incidence of graduates in the population aged 6 and over, employment rate, incidence of employment in the agricultural sector, and incidence of employment in the manufacturing sector. Including such variables allows giving sizable weights to untreated municipalities, not only similar with respect to political variables but also regarding population, age structure, education and employment levels, and sectoral composition.

Municipal elections are typically held every five years. However, they have been scattered over time in Italy since the end of WWII. In addition, a local government's term of office may end prematurely in case of an early dissolution of the municipal council, leading to new elections held on the

<sup>3</sup> While data for national elections from 1949 to 2022 and data for municipal elections from 1989 to 2022 are publicly available (see here: https://elezioni.interno.gov.it/opendata), we collected the municipal elections data from 1949 to 1988 by digitizing all volumes containing municipal electoral results. These volumes are located at the archives of the Ministry of the Interior.

first available date.<sup>4</sup> To take into account the non-concomitance of municipal elections across municipalities, we have created the following **five-year election rounds**: 1949-1953, 1954-1958, 1959-1963, 1964-1968, 1969-1973, 1976-1980, 1981-1985, 1986-1990, 1991-1995, 1996-2000, 2001-2005, 2006-2010, 2011-2015, 2016-2020. In most cases, each round of elections contains a single municipal election. In the few instances with two elections held in the five-year periods considered, the turnout has been computed as the average of the turnouts.<sup>5</sup> The few municipal elections held in 1974 and 1975 have been removed from the analysis as they cover the years in which the treated municipalities proposed the split (among the treated, only the municipality of Nardò held elections in 1974).

Before running the empirical analysis, we have restricted the sample under analysis. Because control units have to approximate the counterfactual situation, it is important to restrict the donor pool – the set of potential comparison units – to units with outcomes that are thought to be driven by the same structural process as for the treated units and that were not subject to different structural shocks affecting the outcome variable during the sample period of the study (Abadie et al., 2015). Our initial donor pool includes all municipalities belonging to Apulia. Limiting the donor pool to municipalities belonging to the same region is important as regional governments and policies might affect turnout at local elections. We then restrict the donor pool to only those Apulian municipalities that did not change their boundaries over the period 1949-2022<sup>6</sup> and are made up by two or more frazioni. The latter criterion is strictly related to the nature of municipality splits: given the criteria established by regional Law 26, only municipalities made up by two or more frazioni might express the willingness for splitting up. Indeed, all municipalities that obtained or proposed the split were made up by at least two frazioni. Therefore, the information about the number of frazioni per municipality (got by digitalizing the encyclopedia 'Città e Paesi d'Italia' published in 1966) is key for creating a plausible counterfactual. To our knowledge, such a variable has never been used in empirical studies on municipality splits/mergers.

#### 4.2. Identification strategy

To assess the impact of municipal splits on turnout, we adopt the recently developed synthetic difference-in-differences (SDiD) estimator (Arkhangelsky et al., 2021; Clarke et al., 2023). SDiD is a general reweighting approach for causal inference, which builds upon the synthetic control method (SCM) and the difference-in-differences estimator (DiD), enabling to estimate the treatment effect in the presence of one or a few treated units. Like the SCM, SDiD reweights and matches pre-exposure trends to weaken the reliance on parallel trends type assumptions. Like

<sup>4</sup> There might be several reasons for a shorter duration of the local government, such as political contrasts in the municipal council or criminal infiltration in the administration.

<sup>5</sup> Concerning the pre-treatment period, such a split allows that in each five-year periods only one national election occurred, i.e., 1953, 1958, 1963, 1968 and 1972. Concerning census data, we have imputed the values between census by averaging the values of the census before and after the five-year period considered, for each of the census variables considered.

<sup>6</sup> Other than the 5 municipality splits under analyses, there were other 8 municipalities which modified their boundaries during the period under analysis. The most common reason is an exchange of portions of lands between two neighboring municipalities.

DiD, it deals with pre-treatment differences and allows for valid large-panel inference. The idea is to compare the turnout (the outcome of interest) observed in the five treated municipalities with a 'synthetic' version of the treated units, that represents what would have happened to turnout in the five municipalities assuming that the municipality splits never occurred. In this setting, the 'synthetic' version of the treated units in the absence of treatment is given by a weighted average of control units in the donor pool whose pre-treatment characteristics closely match those observed in the municipalities of Diso, Manfredonia, Nardò, Nociglia, and Orta Nova. We then consider the difference between the trend of turnout in the treated municipalities and the same trend in the 'synthetic' version of the treated municipalities to determine whether municipality splits affected turnout. If, for instance, we would observe a positive difference between these trends from 1976 onwards, SDiD would suggest that the increase in turnout is ascribable to the municipality splits.

As input, SDiD requires a balanced panel of N municipalities, observed over T time periods. An outcome, denoted Yit, is observed for each municipality i in period t. Some of these observations are treated with a specific variable of interest, denoted Wit. This treatment variable is equal to 1 if observation i is treated by time t, otherwise, Wit = 0 indicates that municipality i is untreated at time t. In our case we are in a 'block treatment assignment', i.e., there is a single adoption period for treated units. In this design, once treated, municipalities are assumed to remain exposed to treatment forever thereafter. For estimation to proceed, SDiD requires at least two pre-treatment periods off of which to determine control units (in the application we have 5 pre-treatment periods). Estimation of the average treatment effect (ATT) proceeds as follows:

$$\left(\hat{\tau}^{SDiD}, \hat{\mu}, \hat{\alpha}, \hat{\beta}\right) = \underset{\tau, \mu, \alpha, \beta}{\operatorname{argmin}} \left\{ \sum_{i=1}^{N} \sum_{t=1}^{T} (Y_{it} - \mu - \alpha_i - \beta_t - W_{it}\tau)^2 \widehat{w}_i^{SDiD} \lambda_t^{SDiD} \right\}$$

where the estimand  $\hat{\tau}$  is the ATT, generated from a two-way fixed effect regression, with optimally chosen weights  $\hat{w}_i^{SDiD}$  and  $\lambda_t^{SDiD}$ . This procedure flexibly allows for shared temporal aggregate factors given the estimation of time fixed effects  $\beta_t$  and time invariant unit-specific factors given the estimation of unit fixed effects  $\alpha_i$ . The presence of unit fixed effects implies SDiD will seek to match treated and control units on pre-treatment trends, not both pre-treatment trends and levels as in SCM, allowing for a constant difference between treatment and control units.

In addition, thanks to a recent evolution of the SDiD estimator (see Clarke et al., 2023), it is possible controlling for time-varying exogenous covariates ( $X_{it}$ ) by conducting regression adjustment based on parameters estimated only in untreated units. The standard errors have been computed by using the bootstrap procedure (100 replications).

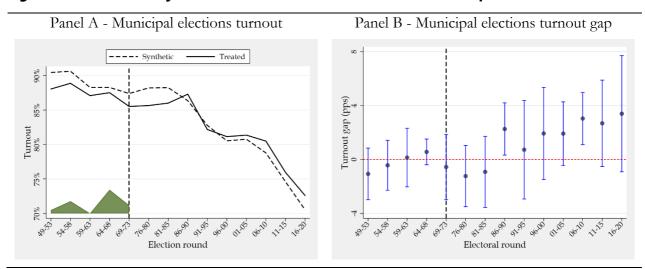
<sup>7</sup> The SDiD estimator has been implemented using the Stata command 'sdid'.

#### 4.3. Results

This study investigates the impact of five municipal splits occurred in 1975. As data are collected at the municipal level, this implies that we have data on the five municipalities before the splits until 1975 and then we have data for the 'old' and newly constituted municipalities from 1976 onwards. Our first approach is to create **five 'artificial' municipalities from 1976 onwards**, **mimicking that the municipality splits never occurred**.

The values of the artificial municipalities are created by summing (e.g., for population) or averaging (e.g., the weighted average of turnout) all variables under analysis. **Figure 1** reports the impact of municipal splits on voter turnout at the municipal elections by showing the trends of the five treated units and the synthetic counterfactual (Panel A), as well as the gap between the two and the corresponding confidence intervals at the 95% level of significance (Panel B). The horizontal axis represents the electoral rounds from 1949-1953 to 2016-2020, while the vertical axis represents the turnout (Panel A) or the turnout gap expressed in pps (Panel B).

Figure 1. - Actual and synthetic counterfactual turnout at the municipal elections

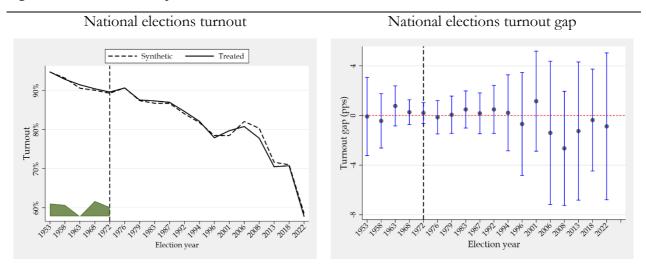


Notes: the time weights used to average pre-treatment time periods are reported at the bottom of the graph in Panel A.

The figure shows that the turnout trend at the municipal level follows its synthetic counterpart closely pre-treatment as well as until the mid-Eighties. Nevertheless, from the electoral round 1986-1990 onwards, we observe a positive gap between the trends, which turns out to be statistically significant at the 5% level in two instances (1986-1990 and 2006-2010). The same analysis is replicated for turnout at the national elections. In this analysis, the post-treatment period presents more time points. This is because we can directly use the exact years of national elections, rather than creating 5-year electoral rounds as above (national elections are held on the same date in all municipalities). The estimates reported in **Figure 2** show that municipal splits did not affect at all the turnout at national elections as the turnout gap is mixed, rather small, and never statistically significant.<sup>8</sup>

<sup>8</sup> All municipalities included in the donor pool and the weights they receive in the turnout analyses shown in Figures 1 and 2 are reported in Table C1 in Appendix C.

Figure 2. - Actual and synthetic counterfactual turnout at the national elections



Notes: the time weights used to average pre-treatment time periods are reported at the bottom of the graph in Panel A.

While these are relevant findings, they need further investigation, particularly concerning the nature of their origin. With this aim, we replicate below the same analyses reported in Figures 1 and 2 but in which we split between new and 'old' municipalities. In other words, we use the same pretreatment period for both 'old' and newly created municipalities, while we use the actual post-treatment periods for the new-established municipalities (Castro, Ordona, Porto Cesareo, San Cassiano, and Zapponeta) as well as the municipalities of origin (Diso, Manfredonia, Nardò, Nociglia, and Orta Nova). This approach implies that, for each dependent variable, the counterfactual would be the same for the three versions of treated units (artificial, new, and 'old') as, of course, the weights assigned by SDiD do not depend on the post-treatment values of the treated units.

**Figure 3** reports the impact of municipal splits on voter turnout at municipal elections by showing the trends of the five new-established municipalities (Castro, Ordona, Porto Cesareo, San Cassiano, and Zapponeta) and the synthetic counterfactual (Panel A), as well as the gap between the two (Panel B). The figure also reports the trends of the five 'old' municipalities (Diso, Manfredonia, Nardò, Nociglia, and Orta Nova) and the synthetic counterfactual (Panel C), as well as the gap between the two (Panel D).

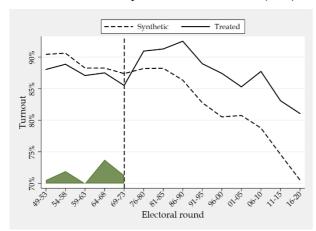
The estimates reported in these panels demonstrate that the positive impact concerns exclusively the new established municipalities. In addition, the impact gets larger over time, going from +4 pps in the 1976-1980 electoral round (statistically significant at the 10% level) to +12 pps in the 2016-2020 electoral round (statistically significant at the 1% level).<sup>9</sup>

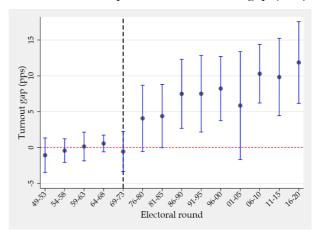
<sup>9</sup> It is worth noting that in the pre-treatment period there are no data available at the sub-municipality level. This implies that in the pre-treatment period we cannot differentiate between the newly created municipalities and the 'old' municipalities. Nevertheless, we reckon that the estimates reported in Figure 3 should dispel any doubt about the potential pre-treatment differences in turnout between the newly-created and the 'old' municipalities. Indeed, the positive impact on turnout in the new established municipalities is initially limited and not statistically significant and then it grows over election rounds. In case of sizable pre-treatment differences between 'new' and 'old' municipalities we should have

Figure 3.- Actual and synthetic counterfactual turnout at the municipal elections for 'old' and new municipalities

Panel A - Municipal elections turnout (new)

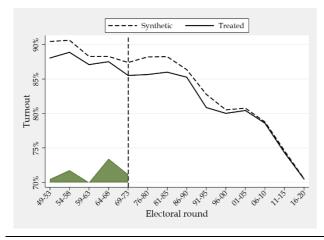


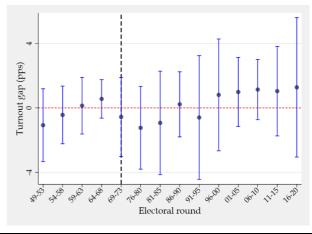




Panel C - Municipal elections turnout (old)

Panel D - Municipal elections turnout gap (old)





Notes: the time weights used to average pre-treatment time periods are reported at the bottom of the graphs in Panels A and C.

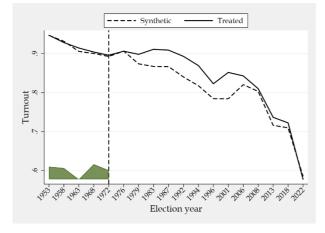
When we replicate the same analyses for national elections (reported in **Figure 4**), we find a statistically significant increase in turnout at the 5% level from 1983 to 2001 for the new established municipalities. However, such an increase is temporary as the gap reported in the Panel B of Figure 4 gets negligible from 2006 onwards. Conversely, the impact on the 'old' municipalities is always small and under no circumstances statistically significant.

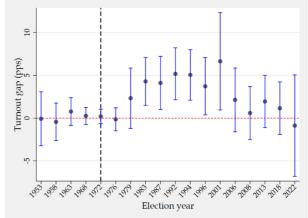
expected an immediate and sizable increase in turnout for the 'new' municipalities and a large drop in turnout for the 'old' municipalities but this is not the case.

Figure 4. - Actual and synthetic counterfactual turnout at the national elections for 'old' and new municipalities

Panel A - National elections turnout (new)



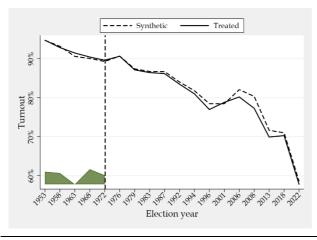


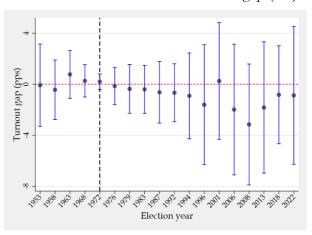


Panel B - National elections turnout gap (new)

Panel C - National elections turnout (old)

Panel D - National elections turnout gap (old)





Notes: the time weights used to average pre-treatment time periods are reported at the bottom of the graphs in Panels A and C.

#### 4.4. Robustness

In this section we carry out several robustness exercises, which help us verify the sensitivity of our main estimates to changes in the design of the evaluation approach. Notably, we:

- 1. restrict the donor pool only to those municipalities that requested the municipality split but have had their request denied by the regional government;
- 2. replicate the estimates without conditioning for the control covariates;
- 3. test the sensitivity of our method by adopting two alternative estimators: the DiD with multiple time periods estimators developed by Callaway and Sant'Anna (2021) and by De Chaisemartin and D'Haultfœuille (2020).

All these estimates are reported in Tables C2 and C3 in Appendix C. All robustness checks lead to estimates which are very close to those reported in Figures 3 and 4. The estimates in panel A of Table C2 are substantially unchanged when we remove the conditioning covariates as well as when alternative estimators are adopted. In particular, the effect on voter turnout at local elections of newly formed municipalities is stable starting from the second period after the policy outset and it is ascending over time, with a magnitude ranging from +11.8 pps to +14.5 pps over the dependent variable in the last period available. While the estimates based on the restricted donor pool tend to be of a slightly smaller magnitude. No statistically significant effects are found when looking at voter turnout in 'old' municipalities (Table C2, Panel B).

When national elections are considered, we observe that the voter turnout of newly formed municipalities (Table C3, Panel A) get positively influenced a few years later the enactment of the jurisdictional change, and this is confirmed both by changing specification type and by removing control variables. However, similar to the main estimates, the effect is confirmed to be not long-lasting, and the magnitude is lower compared to local elections (ranging from +4.6 pps to +6.4 pps in the last election period in which significant results are found across different estimators). As per 'old' municipalities, unlike the main estimates, in case of the restricted donor pool and when using the Callaway and Sant'Anna estimator, we found some periods in which the municipal fragmentation seems to have negatively influenced the voter turnout. However, for the latter analysis, we found that two pretreatment differences are statistically significant different from 0. This means that, in our analysis, the estimates based on the Callaway and Sant'Anna estimator are not reliable as the parallel trend assumption might be violated.

# 5. Discussion and concluding remarks

Territorial size plays a crucial role in determining voter turnout (Blais, 2006; Gerring and Veenendaal, 2020). The literature overwhelmingly agrees that larger constituencies tend to have lower voter turnout, while smaller ones experience higher participation (Geys, 2006). This pattern has been observed in Europe (Denters et al., 2014), the US (Trounstine, 2013), and Latin America (Remmer, 2010). Territorial reforms that involve rescaling administrative constituencies may further influence voting behavior. While the effects of mergers on turnout have been extensively studied and documented in the literature, evidence regarding splits has remained largely unexplored.

Overall, our empirical analysis demonstrates that the voluntary division of existing municipalities into new ones increases turnout at municipal elections, but only in the newly created municipalities. Smaller and more localized government units (newly created municipalities are always smaller than the municipalities that remain in place) are, therefore, more likely to generate a heightened sense of local identity, place attachment, and civic engagement. Citizens may feel more connected to their local government and be motivated to participate in the local polity, including voting. Moreover, municipal splits lead to the establishment of new local governing bodies, including mayors and council members, which can attract greater attention from voters, encouraging them to participate and have their voices heard.

However, if the only reason behind this impact was the smaller size of newly created municipalities, we should have observed an increase in turnout (even if to a lesser extent) in the 'old' municipalities as well. This apparent conundrum might be partially explained by the common history and identity of citizens living in the same *frazione*. Indeed, while newly created municipalities consist of a single *frazione*, three out of five 'old' municipalities are composed of several *frazioni* (see Table 1). Therefore, citizens of municipalities that are still composed of multiple *frazioni* may not develop the same level of political engagement as citizens living in autonomous and newly established municipalities. This suggests that studies investigating the impact of territorial reforms on political engagement should no longer disregard information about the composition of administrative areas.

It is also interesting to highlight that **newly established municipalities experienced an increase** in turnout at national elections. However, such an increase is much smaller in magnitude and **only temporary**. This can be attributed to the psychological distance that voters perceive towards first-order elections, where they often cannot recognize a tangible impact of national or transnational elections on their personal lives (Lefevere and Van Aelst, 2014).

Some policy lessons can be drawn from this study. For instance, regarding Italy, the legislative field regulating jurisdictional changes between municipalities relies on constitutional amendment n. 133. Subsequently, each regional government holds the final decision-making power to approve or refuse merger or split requests. However, the reform of local government regulation (Legislative Decree number 267 of August 18, 2000) has strongly discouraged municipality splits in favor of mergers and intermunicipal compulsory cooperation, despite the latter failing to promote local networking (Bolgherini et al., 2018) or cost efficiency gains (Luca and Modrego, 2021), except in some specific regions (Ferraresi et al., 2018). Article n. 15 of the reform stipulates that each newly formed municipality must have at least 10,000 inhabitants, a threshold currently surpassed by only 15% of Italian municipalities. Consequently, the vast majority of municipalities cannot request a split, even if doing so might lead to an increase in political engagement at the local level. Moreover, economic subsidies are exclusively directed towards those municipalities that carry out mergers, which, given the available empirical evidence, could result in political and economic ineffectiveness.

From the perspective of the *political economy theory*, this paper demonstrates that, at least at the local level, territorial fragmentation might mitigate the political disaffection that has led to the long-lasting drop in voter turnout experienced in many representative democracies of Western Europe (Chiaramonte, 2023; Durovic, 2023)

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Documento di valutazione n. 15

Swianiewicz P, Łukomska J (2019) Is Small Beautiful? The Quasi-experimental Analysis of the Impact of Territorial Fragmentation on Costs in Polish Local Governments. *Urban Affairs Review* 55(3): 832–855. <a href="https://doi.org/10.1177/1078087417744676">https://doi.org/10.1177/1078087417744676</a>

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## **Appendix A**

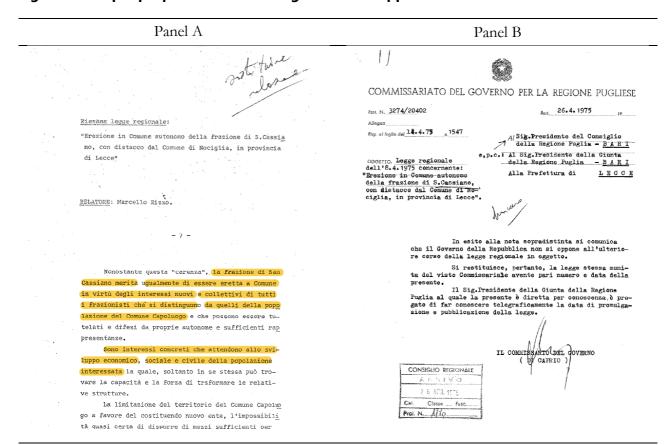
This appendix reports the detailed description of the five municipal splits.

## 1. Nociglia / San Cassiano

The municipality of Nociglia is located approximately 40 kms away from the provincial capital of Lecce. Before the split Nociglia accounted two *frazioni* (Nociglia and San Cassiano) and only one lower secondary school.

Reasons behind the split request are not rooted into certain historical or cultural reasons, rather the two *frazioni* have always considered themselves as separate bodies because of distinct individual and collective interests. Indeed, the *frazione* of Nociglia agreed itself with the split request of the San Cassiano *frazione*. When the regional politician Marcello Rizzo (member of the Christian Democracy) has championed the cause by putting forward the split request, he experienced initial reticence by the regional government authority because of the population size of the San Cassiano *frazione*, which was below 2,000 residents before the split, namely did not meet the basic requirements to proceed with the regional government approval process. Nevertheless, after a re-assessment of the proposal, the *frazione* of San Cassiano was erected as an autonomous municipality with the enactment of the regional law number 36 of May 2, 1975. Figure A1 provides an excerpt of the split proposal (Panel A) and the final decision ending with the regional government approval and the validation of national government (Panel B), which was called to express its judgment regarding the initial non-responding population criterion of San Cassiano.

Figure A 1. - Split proposal and national government approval to law enactment - San Cassiano



Notes: documents are in Italian language. Source is at the link following link of the Apulian open document section of historical legislative provisions:

http://www5.consiglio.puglia.it/Giss1/1PubbArchivioN.nsf/0/A3518714732CF7F8C12579EC002BE805?Open-Document

#### 2. Diso / Castro

The municipality of Diso is located around 50 kms far from its provincial capital (Lecce). Before the split the municipality hosted 4 *frazioni* (Castro, Castro Marina, Diso and Marittima), one of which (Castro) was erected as an autonomous municipality in 1975.

The historical settlement of Castro precedes the institution of the original municipality of Diso, and it dates to the Roman conquest of Salento land occurred around 260 BC. Later, the hamlet of Castro acquired importance during the Norman period around 1100 AD, when it became a military fortress and kept such jurisdiction for all the early Middle Age. When Turkish invasion destroyed Castro and its neighboring castles and farmhouses around 1550 AD, the relevance of Castro collapsed for over two centuries, before acquiring new importance as maritime and tourism centre because of its coastal exposure. In 1973, immediately after the entry into force of the Apulian regional law ruling institutional arrangements, the regional politician Marcello Rizzo, belonging to the Christian Democracy, deposited the split proposal to erect Castro as an autonomous municipality by leveraging on the historical importance of the *frazione* Castro and its identity path that clearly differentiated it from the rest of the municipality of Diso. After a technical assessment, the Apulian regional law number 39 of May 7, 1975, successfully ratified the proposal, by erecting Castro as a new autonomous territorial jurisdiction. Here below it is shown a copy of the incipit of the original document in which the proposal was presented at the regional government (Panel A), and the final decision with the law enactment (Panel B).

Figure A 2. - Split proposal and law enactment by regional government - Diso

Panel A Panel B ONSIGLIO REGIONALE DELLA PUGLIA DELLA PUGLIA PROPOSTA DI LEGGE RIZZO"EREZIONE IN COMUNE AUTONOMO DELLA LEGGE REGIONALE FRAZIONE DI CASTRO, CON DISTACCO DAL COMUNE DI DISQ IN PRO VINCIA DI LECCE". "Erezione in Comune autonomo della frazione di Castro, con distacco dal Comune di Diso, in provincia di Lecce". II Consiglio regionale ha approvato la seguente legge: Signori Consiglieri, l'erezione di Castro, frazione di Diso, della turrita ed antica Castro, in comune autonomo Art. 1 interessa la popolazione di quel centro abitato formato da La Frazione di Castro del Comune di Diso, in provincia di Lecce, è costituita in Comune autonomo con omonima denominazione. pazienti, laboriosi, saggi e forti pescatori, i tanti tur<u>i</u> sti che affollano il fascinoso litorale costiero, ma soprattutto riguarda tutti coloro che amano la caratteristi Art. 2

La Giunta regionale è autorizzata a provvedere con decre
to del suo Fresidente alla-sescuzione della presente legge, compresa la delimitazione delle circoscrizioni territoriali e la regolamen
tazione dei rapporti patrimoniali e finanziari dei due Comuni.

Nella prima applicazione della presente legge e con lo
stesso decreto saranno disposte le opportume riduzioni nell'organi
co del personale dipendente dal Comune di Diso da effettuarsi in con
seguenza della modifica territoriale e saranno determinate le tabelle organiche del personale del Comune di Castro.

Il numero complessivo dei posti risultanti dai due organi
ci, a seguito del provvedimento di cui al comma precedente ed i rela
tivi gradi e trattamenti economici, non potranno essere superiori a
quelli attualmente assegnati ed in servizio presso il Comune di Diso. ca e secolare cittadina ricca di fortezze e castelli. Castro fu sede di Diocesi Vescovile e di Contes con giurisdizione sui casali di Diso, Marittima, Spongano, Or telle, Vignacastrisi, Vitigliano, Cerfignano, Cellino, M $\underline{\underline{i}}$ ratole, Casalicchio, Torre Macchia, Torre Depressa, sin dall'inizio del XII secolo, allorquando i Normanni, istituendola, la affidarono a Tancredi d'Altavilla. Dagli Al tavilla la contea passava agli Orsini del Balzo e quindi alla famiglia Cattinara. Nel secolo XV anche Castro subì le socrrerie turche IL VICE PRESIDENTE DEL CONSIGLIO le quali si fecero più pesanti nel successivo XVI secolo, precisamente negli anni 1537 e 1573, allorquando terribili I CONSIGLIERI SEGRETARI orde aggredirono, saccheggiarono e distrussero sia la ci $\underline{\underline{\iota}}$ tà di Castro che i casali limitrofi, massacrandone parte della popolazione e riducendone altra in schiavitù.

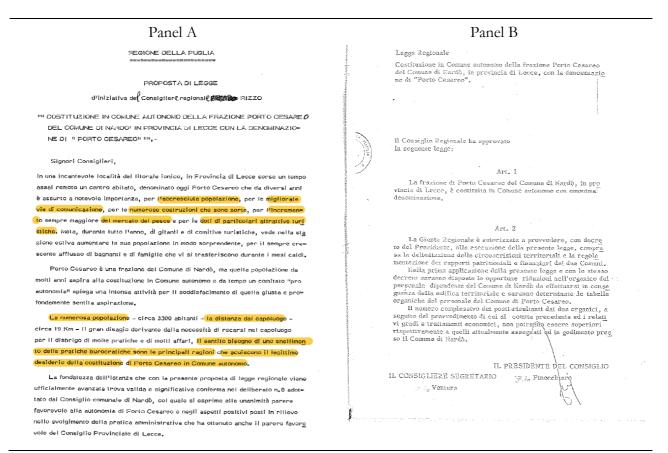
Notes: documents are in Italian language. Source is at the link following link of the Apulian open document section of historical legislative provisions:

http://www5.consiglio.puglia.it/Giss1/1PubbArchivioN.nsf/0/31B1BF417BACDFE9C12579EC002B8897?Open-Document

#### 3. Nardò / Porto Cesareo

At the time of the split request, Nardò was the second largest municipality in the province of Lecce, immediately after the provincial capital. Nardò is an agricultural and commercial town in southern Salento and it is around 25 kms away from the provincial capital of Lecce. The central hamlet of Nardò was partly rebuilt after an earthquake in the middle of 1700 AD, and this reconfiguration marked substantial difference with the other frazioni, whose planning followed different patterns. Before the split, Nardò hosted 6 frazioni (Corsari, Nardò, Porto Cesareo, Santa Caterina, Santa Maria and Torre Lapillo). The frazione of Porto Cesareo has a complete coastal exposure, and it is around 20 kms far from the central frazione of Nardò. During the Sixties, it experienced a considerable population growth, mainly because of tourism expansion, an increased maritime business, and a general improvement of transport infrastructure. The politicians Marcello Rizzo and Emilio Pulli (Christian Democracy party) made themselves advocates of such instances by presenting the formal split request to the regional government, claiming the advocated autonomy for the frazione of Porto Cesareo. The process ended with the regional law number 40 of May 16, 1975, which ratified the erection of Porto Cesareo as a new autonomous municipality. Here below is provided an excerpt of the split proposal (Panel A) and the final pronunciation of regional government with the law enactment.

Figure A 3. - Split proposal and law enactment by regional government - Porto Cesareo



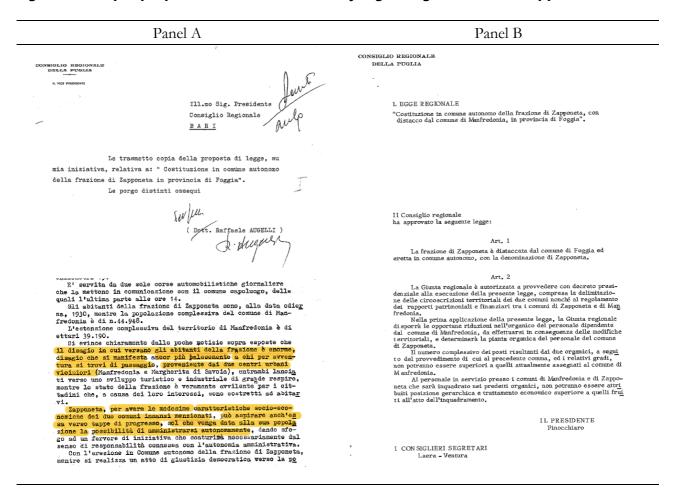
Notes: documents are in Italian language. Source is at the link following link of the Apulian open document section of historical legislative provisions:

http://www5.consiglio.puglia.it/Giss1/1PubbArchivioN.nsf/0/C2E88DE06E5EEB4AC12579EC002C7D5F?Open-Document

### 4. Manfredonia / Zapponeta

The municipality of Manfredonia is an agricultural and industrial town close to the Gargano area in the province of Foggia, located 40 kms far from its provincial capital. The population size of Manfredonia was larger than the other municipalities where splits occurred, and this is reflected in the number of *frazioni* that made up the whole municipality (six *frazioni*, namely Manfredonia, Mezzanone, San Salvatore, Siponto, Tomaiolo, Zapponeta). Zapponeta is a *frazione* located around 23 kms far from the *frazione* of Manfredonia, with a complete coastal exposure. Such significant spatial distance from the core municipality, and the lack of services and connections with other neighbor maritime locations were pointed out as a brake for the full economic and tourism exploitation of Zapponeta territorial potential. Such reasons were gathered and synthesized in the formal split request proposal moved forward by the regional politician Raffaele Augelli, affiliated to the Christian Democracy party. As a result, the regional government approved the split request, and it was formalized with the regional law number 37 of May 2, 1975, which erected Zapponeta as a new autonomous jurisdiction. Figure A4 below shows the documents supporting the split request (Panel A) and the final decision of regional government with the law enactment (Panel B).

Figure A 4. - Split proposal and law enactment by regional government - Zapponeta



Notes: documents are in Italian language. Source is at the link following link of the Apulian open document section of historical legislative provisions:

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#### 5. Orta Nova / Ordona

The municipality of Orta Nova is an agricultural and industrial centre in the province of Foggia, around 20 kms far from the provincial capital. Before the split, Orta Nova hosted only two frazioni (Orta Nova and Ordona). Some historical reasons are behind the aspiring autonomy of the Ordona frazione. After the barbarian and Byzantine invasion which destroyed the former unique municipality of Orta Nova in the 660 AD, in the ninth century AD the remaining residents recreated two different hamlets (Orta Nova and Ordona) around a castle, and the feud later was administered by Jesuit priests who began the clean-up operations of the territory. Moreover, as stated in the split request proposed by the Christian Democracy politician Raffaele Augelli, one other motivation referred to the status of another frazione which got the autonomy from Orta Nova around the middle of 50' (Caravelle), when the split decisions were directly managed at the national level since the powers about jurisdictional reforms still were not in charge to regional governments. The main reason was that inhabitants of Ordona suffered from the absence of administrative autonomy to pursue the same economic development achieved by similar territories which acquired the municipal autonomy. After a re-assessment of the proposal, where also national government was called to express advice, the process ended with the regional law number 35 of May 2, 1975, which erected Ordona as a new autonomous municipality. Below it is shown an excerpt of the split proposal (Panel A) and the final law enactment by the regional government (Panel B).

Figure A 5. - Split proposal and law enactment by regional government - Ordona

Panel A

CONSIGLIO REGIONALE PELLA FORIA

FROPOSEA ET 1.0058

Affinitiative dal Condictions in Particular dal September 1. Page 1. Pag

Notes: documents are in Italian language. Source is at the link following link of the Apulian open document section of historical legislative provisions:

http://www5.consiglio.puglia.it/Giss1/1PubbArchivioN.nsf/0/D627E2DB66AD854DC12579F400269A6C?Open-Document

# **Appendix B**

This appendix reports the description of the municipalities that requested the municipal splits without success. After the enactment of the Apulian regional law ruling the requests for local autonomy of *frazioni*, there were several other split initiatives that did not get the same outcome of the five treated units. Some of them were related to some pieces of peripheries of larger cities (Bari, Brindisi) which moved forward parliamentary initiatives to obtain the autonomy, without success.

However, in Table A1 we report a list of cases where the split request came from *frazioni* of municipalities, which shared similar characteristics with the treated units in terms of population size. The table shows that most split requests occurred during the second legislative period of the Apulian regional government (1975–1980). Requests were mainly moved by politicians belonging to the Christian Democracy, while sometimes the initiatives were joint with other politicians belonging to various socialist and democratic left movements. In three instances, such proposal came from the right-wing Italian Social Movement.

One particular case is related to the municipality of Ginosa in the Taranto province, whose coastal *frazione* (Ginosa Marina, or called with different names, i.e. Marina di Ginosa, Borgata di Marina di Ginosa or Marina Jonica) repeated the split request during four different legislative periods (1970–1975, 1975–1980, 1985–1990, 2005–2010) and under political proposers coming from different political spectrum. Nevertheless, the coastal *frazione* of Ginosa never reached the desired municipal autonomy. One other case in which the procedure was repeated twice during different legislative periods (1970–1975 and 1975–1980) without success concerned the municipality of Bitonto in province of Bari, where the *frazione* of Mariotto moved forward the split request through some advocates of the Italian Social Movement. The other reported cases of unsuccessful splits are all related to small-sized municipalities, most of which included in the Lecce province (Ortelle, Tricase, Alliste, Vernole, Andrano, San Donato, Melendugno, Galatina).

In all these instances, the technical committee designed to evaluate the feasibility of the proposals denied the split. The most frequent reason behind the denial concerned the lack of meeting all the requirements reported by the Apulian regional law n. 26 of 1973. Following the negative opinion, the regional government voted down the legislative proposals to erect new municipalities from such *frazioni*.

Such unsuccessful split cases represent a particularly credible control group for the empirical analysis as they show similar features with the treated municipalities and have analogous reasons behind the petition for the administrative autonomy as newly erected municipalities, but without obtaining the desired autonomy. They will be exploited in a robustness check (see Appendix C).

Table B 1. List of unsuccessful split requests and main characteristics

Municipality of origin	Newly proposed autonomous municipality from an existing frazione	Proponent/s	Party affiliation(s)	Legisla- tive pe- riod
Ginosa	Borgata di Marina di Ginosa	Margiotta	Christian Democracy	<u>I (1970-</u> <u>1975)</u>
Ginosa	Marina di Ginosa	Galatone; Dilonardo; Margiotta	Italian Communist Party, Italian Socialist Party, Christian Democracy	<u>II (1975-</u> 1980)
Ginosa	Ginosa Marina	Massafra; lafrate; Monfredi; Festinante; Cavallo; Abbati; Con- vertino; Pugliese	Italian Communist Party, Christian Democracy, Democratic Left, Italian Socialist Party, Republican party	<u>IV</u> (1985- 1990)
Ginosa	Marina Jonica	Loperfido, Brizio	Come on Italy [Forza Italia]	VIII (2005- 2010)
Bitonto	Mariotto	Tatarella	Italian Social Movement	<u>I (1970-</u> <u>1975)</u>
Bitonto	Mariotto	Tatarella, Cassano, Bortone, Liuzzi, Piqua- dio	Italian Social Movement	<u>II (1975-</u> <u>1980)</u>
Ortelle	Vignacastrisi	Rizzo	Christian Democracy	<u>I (1970-</u> 1975)
Tricase	Depressa	Bortone; Tatarella; Cassano; Liuzzi; Piac- quadio	Italian Social Movement	II (1975- 1980)
Alliste	Felline	Rizzo	Christian Democracy	<u>II (1975-</u> 1980)
Vernole	Strudà	Aprile (Leonardo Brizio)	Christian Democracy	<u>II (1975-</u> 1980)
Andrano	Castiglione	Blandolino	Italian Socialist Party	II (1975- 1980)
San Donato	Galugnano	Aprile (Leonardo Brizio)	Christian Democracy	II (1975- 1980)
Melendugno	Borgagne	Aprile (Leonardo Brizio)	Christian Democracy	II (1975- 1980)
Galatina	Noha	Rizzo	Christian Democracy	II (1975- 1980)

Note: information on the political affiliations of the proposing councillors are taken from the documents of the Apulia Region, or from the Register of Local and Regional Administrators of the Department for Internal and Territorial Affairs: <a href="https://dait.interno.gov.it/elezioni/anagrafe-amministratori">https://dait.interno.gov.it/elezioni/anagrafe-amministratori</a>, or from the Openpolitici portal: <a href="https://politici.openpolis.it/">https://politici.openpolis.it/</a>

# **Appendix C**

Table C 1. Description of the donor pool

Municipality	Population in 1971	SDiD weight municipal elections	SDiD weight nationa elections
Alberobello	9,361	0.024	0.029
Alessano	6,696	0.030	0.034
Andrano	4,620	0.067	0.048
Andria	77,065	0.029	0.026
Ascoli Satriano	8,401	0.022	0.030
Bitonto	42,762	0.031	0.026
Carmiano	10,033	0.025	0.028
Carpignano Salentino	3,237	0.017	0.030
Cerignola	47,797	0.022	0.025
Cisternino	10,665	0.018	0.024
Conversano	18,597	0.038	0.019
Cutrofiano	8,636	0.025	0.03
Faggiano	2,788	0.037	0.020
Fasano	33,206	0.037	0.02
Ginosa	17,373	0.025	0.024
Guagnano	6,102	0.025	0.03
Lequile	6,044	0.031	0.01
Lesina	5,948	0.016	0.02
Maglie	13,657	0.019	0.03
Melendugno	6,665	0.026	0.02
Minervino di Lecce	4,041	0.027	0.04
Monopoli	40,487	0.023	0.02
Monte Sant'Angelo	18,388	0.010	0.02
Orsara di Puglia	4,211	0.016	0.02
Ortelle	2,637	0.028	0.01
Ostuni	30,989	0.033	0.02
Poggiardo	5,522	0.018	0.029
Polignano a Mare	13,662	0.024	0.02
Pulsano	7,199	0.032	0.022
Salve	4,207	0.007	0.00
San Donato di Lecce	4,827	0.025	0.01
San Marco in Lamis	16,258	0.028	0.00
Sannicola	5,972	0.020	0.03
Santa Cesarea Terme	3,073	0.029	0.02
Serracapriola	6,268	0.016	0.02
Tricase	13,745	0.020	0.02
Trinitapoli	13,019	0.050	0.03
Uggiano la Chiesa	4,335	0.022	0.03
Vico del Gargano	8,589	0.011	0.018

Notes: We have removed the Isole Tremiti municipality from the donor pool because it had only 346 residents in 1971.

Table C 2. Robustness tests on municipal elections turnout

			Panel .	A – Newly	establishe	ed munici	palities				
	Electoral round										
	1976-	1981-	1986-	1991-	1996-	2001-	2006-	2011-	2016-		
	1980	1985	1990	1995	2000	2005	2010	2015	2020		
Main Estimates	4.07 (2.59)	4.38* (2.49)	7.49*** (2.66)	7.51** (3.00)	8.22*** (2.43)	5.86 (4.03)	10.29*** (2.34)	9.83*** (3.08)	11.86***		
Smaller donor pool	3.16	3.29	6.35**	5.67	6.22**	4.04	8.56***	7.38**	10.12**		
	(2.73)	(2.91)	(3.10)	(3.68)	(3.09)	(4.17)	(2.81)	(3.79)	(3.95)		
No covariates	3.99	4.25*	7.35***	7.37***	8.07***	5.72*	10.16***	9.84***	11.77***		
	(2.63)	(2.29)	(2.31)	(2.65)	(2.17)	(3.51)	(2.06)	(2.92)	(2.71)		
Callaway &	4.39**	4.57**	8.65***	8.35***	9.64***	6.52***	10.81***	10.73***	13.54***		
Sant'Anna estimator	(1.85)	(1.81)	(1.45)	(1.99)	(1.95)	(1.75)	(1.61)	(2.71)	(2.84)		
de Chaisemartin & D'Haultfoeuille esti- mator	5.14* (2.83)	6.07** (2.87)	9.14*** (2.93)	9.51*** (3.19)	10.46*** (2.54)	7.89*** (2.32)	12.43*** (2.20)	11.78*** (2.62)	14.58*** (2.31)		
				Panel B -	- <i>Old</i> muni	icipalities					
Main Estimates	-1.23	-0.93	0.23	-0.59	0.81	0.99	1.14	1.04	1.28		
	(1.19)	(1.50)	(0.86)	(1.61)	(1.37)	(0.84)	(0.84)	(1.32)	(1.72)		
Smaller donor pool	-2.14	-2.01	-0.91	-2.43	-1.19	-0.82	-0.59	-1.40	-0.47		
	(1.81)	(2.41)	(2.06)	(2.49)	(2.66)	(2.20)	(2.00)	(2.13)	(2.75)		
No covariates	-1.32	-1.05	0.09	-0.73	0.66	0.86	1.01	1.06	1.19		
	(1.25)	(1.40)	(1.13)	(1.70)	(1.54)	(1.07)	(1.14)	(1.58)	(2.04)		
Callaway &	-0.92	-0.73	1.39	0.25	2.23	1.66	1.66	1.95	2.96		
Sant'Anna estimator	(1.36)	(1.34)	(1.90)	(2.12)	(2.34)	(1.81)	(2.03)	(2.51)	(2.81)		
de Chaisemartin & D'Haultfoeuille esti- mator	-0.17 (1.92)	0.77 (2.17)	1.88 (3.26)	1.41 (4.32)	3.05 (4.49)	3.03 (3.27)	3.28 (3.07)	3.00 (4.00)	4.00 (4.75)		

Notes: We have used the Stata commands 'csdid' and 'did\_multiplegt' for implementing the Callaway and Sant'Anna (2021) and the de Chaisemartin and D'Haultfoeuille (2020) estimators, respectively. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

Table C 3. Robustness tests on national elections turnout

					Panel .	A – Newly	establish	ed municij	palities				
	Election year												
	1976	1979	1983	1987	1992	1994	1996	2001	2006	2008	2013	2018	2022
Main Estimates	-0.14	2.33	4.29**	4.10**	5.17***	5.05***	3.72*	6.63*	2.13	0.59	1.94	1.15	-0.87
	(0.75)	(2.35)	(1.81)	(1.99)	(1.91)	(1.84)	(2.02)	(3.17)	(1.98)	(1.99)	(1.63)	(1.74)	(2.95)
Smaller donor pool	-0.16	1.10	2.92*	2.29	3.35**	2.26	1.04	4.68*	1.23	-0.45	0.84	-0.50	-1.06
	(0.90)	(1.74)	(1.61)	(1.54)	(1.64)	(1.84)	(2.11)	(2.61)	(2.12)	(2.40)	(1.77)	(1.90)	(2.84)
No covariates	-0.30	2.15	4.08***	3.91***	4.91***	4.84***	3.57**	6.42**	2.22**	0.51	1.91*	1.10	-0.93
	(0.49)	(1.64)	(1.34)	(1.38)	(1.43)	(1.33)	(1.53)	(2.47)	(0.95)	(1.51)	(1.01)	(1.67)	(2.48)
Callaway &	-0.27	2.26	3.95***	3.85**	4.52***	4.52***	3.39**	5.85***	1.72	-1.03	1.45	1.14	-1.02
Sant'Anna estimator#	(0.56)	(1.78)	(1.53)	(1.64)	(1.41)	(1.39)	(1.60)	(2.08)	(1.20)	(2.10)	(1.70)	(1.92)	(1.70)
de Chaisemartin & D'Haultfoeuille esti- mator	-0.17 (0.62)	2.55 (2.21)	3.80** (1.91)	3.72* (2.12)	4.58** (2.00)	4.61** (1.81)	3.26* (1.92)	6.09* (3.41)	1.15 (1.71)	-0.77 (1.35)	0.81 (1.39)	0.16 (1.22)	-1.70 (2.87)
						Panel B -	· <i>Old</i> mun	icipalities					
Main Estimates	-0.14	-0.37	-0.40	-0.63	-0.67	-0.91	-1.61	0.25	-1.99	-3.15	-1.83	-0.83	-0.87
	(0.83)	(0.77)	(0.69)	(0.86)	(0.85)	(1.56)	(2.04)	(1.84)	(2.97)	(2.85)	(2.68)	(2.11)	(2.96)
Smaller donor pool	0.09	-1.44	-1.32	-2.04*	-2.46*	-3.51*	-4.05*	-1.85	-2.42	-4.70	-2.15	-1.57	-0.45
	(0.94)	(1.31)	(1.46)	(1.15)	(1.33)	(2.06)	(2.35)	(2.02)	(3.20)	(3.23)	(2.99)	(2.24)	2.85
No covariates	-0.30	-0.54	-0.60	-0.82	-0.93*	-1.12	-1.76	0.04	-1.90	-3.24	-1.86	-0.87	-0.93
	(0.46)	(0.80)	(0.62)	(0.54)	(0.55)	(0.99)	(1.69)	(1.33)	(2.00)	(2.24)	(1.78)	(1.09)	(2.35)
Callaway &	-0.27	-0.43	-0.74	-0.88*	-1.32***	-1.43	-1.94	-0.54	-2.40*	-4.77***	-2.32	-0.84	-1.02
Sant'Anna estimator#	(0.56)	(0.80)	(0.64)	(0.53)	(0.48)	(1.04)	(1.24)	(1.27)	(1.22)	(1.53)	(1.55)	(1.60)	(1.70)
de Chaisemartin & D'Haultfoeuille esti- mator	-0.17 (0.62)	-0.14 (1.00)	-0.89 (0.96)	-1.01 (0.87)	-1.26 (0.82)	-1.34 (1.64)	-2.06 (2.24)	-0.29 (1.72)	-2.97 (3.05)	-4.51* (2.39)	-2.96 (2.83)	-1.82 (2.06)	-1.70 (2.87)

Notes: We have used the Stata commands 'csdid' and 'did\_multiplegt' for implementing the Callaway and Sant'Anna (2021) and the de Chaisemartin and D'Haultfoeuille (2020) estimators, respectively. \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

<sup>\*</sup> Two of the pre-treatment differences are statistically significant different from 0. This means that these estimates are not reliable as the parallel trend assumption might be violated.

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