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RESEARCH ARTICLE

Process matters: the variegated effects of municipal amalgamation features on voter turnout revealed in a 10-country comparative investigation

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Abstract

Most literature finds a detrimental effect of amalgamation on voter turnout in municipal elections. Some other studies reveal instead null or even positive effects. We argue that this inconsistency derives from the fact that previous research has only analysed the amalgamation/turnout relation in single case studies. The contribution of this article is therefore twofold. First, it proposes a unified framework to investigate the amalgamation/turnout relation in comparative perspective, which clarifies the shortcut between size and amalgamation, disentangles the multifaced nature of municipal amalgamation, and outlines clear testable hypotheses related to its implementation – both at the national and at the local level. Secondly, it provides an original 10-European-country dataset of municipal amalgamations in the last decades (comprising Albania, Austria, Denmark, Finland, Germany, Iceland, Italy, Luxembourg, the Netherlands, and Norway) to empirically verify such hypotheses concerning the effects of the amalgamation features on voter turnout. Our study crucially reveals the relevance of the characteristics of the amalgamation process. When the amalgamation is imposed by the national government, turnout is particularly low, similarly to when the amalgamation occurs independently from a wide reform scheme. On the other hand, municipal turnout after amalgamation is higher when a larger number of municipalities are merged and when the amalgamated municipalities had a similar population before being merged. Moreover, our empirical evidence confirms the importance of traditional second-order predictors of turnout in municipal elections, even with specific reference to the post-amalgamation elections. Conversely, in such elections, the overall size of the (final) municipality is not a significant predictor of voter turnout.

Keywords: municipal amalgamation; turnout; comparative politics; policy process; local government

Introduction

Numerous studies have observed how territorial reforms have (re)entered many countries' policy agendas over the last decades. The amalgamation[1] of municipalities has often been employed as a policy tool for territorial rationalisation reforms. The advantages and disadvantages of enlarging the size of municipal jurisdictions have been widely investigated, along with its causes, drivers, and possible determinants (Baldersheim and Rose, 2010; Askim *et al.*, 2016).

On the other hand, the outcomes of this policy process, after its implementation, still needs further exploration. Studies are mostly country-specific (Steiner *et al.*, 2016). They frequently

[1]Municipal merger is the unification of two or more pre-existing municipalities. Consistently with most of the literature, we employ here amalgamation as a synonym of merger.

focus on effects over economic performances – including economies of scale and quality of local services (Dollery *et al.*, 2008; Blesse and Baskaran, 2016; Blom-Hansen *et al.*, 2021).

Based on the size-and-democracy paradigm (Dahl and Tufte, 1973), the effects of amalgamations on democratic activities (Askim *et al.*, 2016) and their efficacy (Strandberg and Lindell, 2020) have also raised attention. In particular, concerning the effect of amalgamation on voter turnout, most studies find a negative effect, while a minority of them detect a null or even positive effect. Studies indicating a detrimental impact of amalgamation on turnout mainly investigate Northern European cases, although the same trend was observed in non-European countries too – e.g., Japan and Israel. However, a few studies examining Southern Europe show mixed evidence, with negative (Portugal) and positive effects (Italy).

This brief overview suggests a more complex, probably nonlinear (Kraaykamp *et al.*, 2001) relation between merger and turnout. Most studies are single-case analyses, while cross-country comparative analyses looking for regularities are extremely rare (Denters *et al.*, 2014; Blesse and Roesel, 2019). This inevitably reduces the range of possible predictors to characteristics varying within-country at the municipal level, without the possibility to assess the impact of country-level variables.

This article aims to fill this gap by providing an original dataset of municipal amalgamations occurred during the last decades in ten European countries (Albania, Austria, Denmark, Finland, Germany, Iceland, Italy, Luxembourg, the Netherlands, and Norway). We selected these countries to maximise variance on specific predictors related to municipal amalgamation processes, geographical area, and institutional features. This allows uncovering the possible explicative role of the characteristics of the particular amalgamation processes on voter turnout. To compose a unified theoretical framework, we considered several municipal-level and country-level features of the amalgamations – alongside other classical institutional, cultural, and second-order explicative factors.

Since we are interested in assessing the impact that the varying features of the amalgamation processes may have on turnout variation, we focus on the merged municipalities in the ten countries and look at how the different merging treatments influence turnout at the post-amalgamation elections. As such, our research design is a most-different systems design: amalgamation is constant in all cases, and there is much variation on the predictors expected to influence the impact of this common condition on electoral participation.

The contribution of this article is, therefore, both empirical and theoretical. Theoretically, it proposes a common and consistent theoretical framework, clarifies the shortcut between size and amalgamation, disentangles the multiple nature of size, and outlines clear testable hypotheses related to the features of the amalgamation as a policy process. Empirically, it provides a comparative dataset designed to make sense of the current incongruences in the literature on amalgamation and turnout, allowing us to test the hypotheses properly.

The chosen countries (1) have all experienced amalgamation processes in recent decades, (2) come from all the main European subregions (i.e., Northern, Continental, Southern, and Eastern Europe), and (3) present variation on the features of the amalgamation processes, which is essential to assess the expected effects.

Our findings highlight the relevance of crucial features of such processes. Specifically, in the case of amalgamations forced by the national government, turnout is particularly low. The same happens when the amalgamation takes place on its own, separately from a wide reform plan. Furthermore, post-amalgamation turnout is higher when the number of merged municipalities is larger and when the amalgamated municipalities had a similar population size before merging. Moreover, we empirically confirm the importance of some traditional predictors of turnout in municipal elections. Namely, turnout is higher when powers of the municipal level are high and when the number of municipalities voting together increases. In turn, the final dimension of post-amalgamation municipalities is not a significant predictor of turnout in municipal

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elections after amalgamation – which sheds new light on the size-and-democracy paradigm, at least with specific reference to such elections.

The article is structured as follows. The next section reviews the literature on the amalgamation/size and turnout relation. Then we illustrate our theoretical framework and our hypotheses. "Data, design, and methods" is devoted to the measurement and methodological aspects of our investigation. The subsequent section discusses the findings obtained from regression analysis. "Conclusion" follows.

Amalgamation and size (increase) – two faces of the same coin or not?

As Gendźwiłł *et al.* (2020: 2) state, 'cross-national comparative studies of municipal amalgamations (. . .) are rare' since almost all contributions are single-case studies. From a non-exhaustive but accurate review of over 100 articles published on the size, merger, and local democracy relations since the early 2000s, little less than 90% focus on a single country.[2]

Moreover, the existing comparative analyses are usually devoted to single out the drivers of territorial reforms (Baldersheim and Rose, 2010; Askim *et al.*, 2017) or to exploring the different strategies (Steiner *et al.*, 2016) and paths in their implementation (Sancton, 2000; Swianiewicz, 2010; Reingewertz, 2012) – rather than their consequences. Evidence on the impact of the amalgamation reforms on different aspects of local government remains, at best, unclear and unsystematic (Swianiewicz *et al.*, 2017; Tavares, 2018). However, recently, some studies have started addressing the consequences of mergers on some aspects of the local government. They primarily focus on the economic performances – considering, for instance, the aggregate effects of consolidation and size on efficiency gains and cost/expenditure reduction (Reingewertz, 2012; Bel and Warner, 2016; Blesse and Baskaran, 2016; Blom-Hansen *et al.*, 2016; Harjunen *et al.*, 2021), on the costs of public services provision (Solé-Ollé and Bosch, 2005), on the economies of scale (Dollery *et al.*, 2008; Soukopová *et al.*, 2014; Drew *et al.*, 2016), or local taxation (Allers and Geertsema, 2016).

Voter turnout variation has also raised scientific interest as a potential consequence of amalgamation. A large majority of the studies on this aspect observe a detrimental effect of the enlarged size on electoral participation (Fritz and Feld, 2015; Koch and Rochat, 2017). Other studies show that information costs for electoral participation are higher (Lapointe *et al.*, 2018), thus implying lower turnout rates – which is more evident in the first election after a merger (Koch and Rochat, 2017; Heinisch *et al.*, 2018). Studies revealing a detrimental effect of size increase on turnout are mostly Continental-European cases – Germany (Fritz and Feld, 2015; Roesel, 2017), Austria (Heinisch and Mühlböck, 2016; Heinisch *et al.*, 2018), Switzerland (Ladner, 2002; Koch and Rochat, 2017), Netherlands (van Houwelingen, 2017; Allers *et al.*, 2021) – but the same negative effect was also observed elsewhere, e.g., in Japan (Horiuchi *et al.*, 2015), and Israel (Zeedan, 2017).

Nonetheless, the overall picture is not entirely consistent: a null effect was observed in South Africa (Cameron and Milne, 2013), Japan (Mabuchi, 2001), and Finland (Lapointe *et al.*, 2018); while some positive, albeit limited, effects were found in the Netherlands (Kraaykamp *et al.*, 2001), Canada (Hicks, 2006), and Denmark (Bhatti and Hansen, 2019). Southern Europe shows few but, again, mixed pieces of evidence. While in Italy, Bolgherini and Mollisi (2021) find a positive effect on turnout after amalgamation, in Portugal, Rodrigues and Tavares (2020) observe a negative impact – although referring to sub-municipal units.

[2]Within the few comparative works, only a couple investigate the effects of amalgamation on voter turnout (e.g., Blesse and Roesel, 2019), while most focus on the effects of size (in general) over local democracy and/or turnout (Gaardsted, 2002; Denters *et al.*, 2014).

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Significant cross-country inconsistencies are therefore evident. They may reflect specific conditions in individual countries, such as legal/institutional or political factors. Thus, we posit that these inconsistencies derive from the single-country focus and the lack of a comparative perspective, which this article instead provides. Moreover, literature so far has devoted its attention to the (positive or negative) effect of amalgamation on turnout. We argue that, while interesting, this strategy is somewhat limited, as the actual effect of the process of amalgamation results from the specific characteristics of that particular process. Indeed, different countries show different features in the amalgamation policy process, such as average municipal size (both pre- and post-merger), timings, and type of mergers. Thus instead, we believe it is more fruitful to comparatively investigate the different amalgamation processes in different countries to make sense of the apparent idiosyncrasies by including various features of the reform process and assessing their predictive power over voter turnout.

Amalgamation is not (only) enlarged size

Any municipal amalgamation implies an increase in the size of the municipality, which, however, can vary in meaningful ways. This is often assumed in the studies on the amalgamation/turnout relation but rarely thoroughly discussed in its implications, which is indeed essential to make sense of the complexity of the effects of amalgamation on municipal electoral participation.

We can trace back the link between size and turnout to the well-known argument on the relation between the size of the community and the level of democracy posed by Dahl and Tufte (1973). In a nutshell, a smaller size should favour control by the citizens over the politicians, responsiveness, political efficacy, and thus, a better functioning of democratic ties. Larger sizes should foster systemic capacity, service delivery, efficiency, and hence a higher level of public services, but also a wider distance between citizens and institutions. Therefore, the former should favour higher political and electoral participation (and thus higher turnout levels), while the latter should lead to the opposite.

Size seems to matter at the local level more than at the national level (Dahl and Tufte, 1973; Gaardsted, 2002) as far as turnout is concerned. This relation has been repeatedly investigated and as nearly as often confirmed but, again, in single-case studies, while comparative studies remain exceptions.

In the case of amalgamation, there is indeed a size increase, but this can be highly differentiated, and some theoretical caveats are in order. First, the concepts of size and amalgamation suffer from a critical bias. The trivial fact that amalgamation implies enlarged size led to a shortcut between the effect on turnout of size *per se* and that of amalgamation as a process. As a result, size is often used as a proxy for amalgamation when exploring the effects of amalgamation on various phenomena – turnout, quality of service delivery, economies of scale, etc. – and therefore, it is often the effect of size that is measured (Kraaykamp *et al.*, 2001, 415). Though amalgamation undoubtedly implies increased size, it also means much more. Politically, amalgamation may entail enlarged powers and competences (Allers and Geertsema, 2016). Legally, it may imply various constitutional/institutional prerogatives (e.g., different electoral systems) and thus distinct political competition, and it also may trigger several political and social – let alone economic – dynamics. This means that effects on turnout are multifaceted. While size *per se* entails mid- and long-term effects (e.g., municipal powers may be larger in more populous municipalities), amalgamation effects are more short-termed (e.g., citizens' reactions towards the merger and its policy process, perceptions concerning the loss of representation/gain of critical mass). Thus, turnout is affected by all these combined effects, especially in the first post-merger election. Several studies are devoted to time series analyses and to the mid- and long-term effects on turnout (Koch and Rochat, 2017; Roesel, 2017; Zeedan, 2017; Bhatti and Hansen, 2019; Rodrigues and Tavares, 2020; Allers *et al.*, 2021). Instead, we focus on disentangling the various aspects of size and therefore pick

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a single post-merger election[3] in order not to put another element (time) on top of this disentanglement in the upcoming regression models.

Secondly, size has a multifaceted nature.[4] First, we start from the premise that municipal size largely differs among European countries: a small pre-amalgamation Danish/Dutch municipality would be considered relatively big in Germany also after a merger; similarly, those considered as superior municipalities in Italy (over 15,000 inhabitants), a size hardly attained also after a merger, would be rather small in the Netherlands or Denmark, even before amalgamation. Moreover, Eythórsson (2009) suggests that, besides absolute size, relative/proportional size matters too, in particular in terms of voters' attitudes towards the amalgamation. Jenny and Ennser-Jedenastik (2014) find that when a small village merges with a larger town, the opposition is more likely to come from the former than from the latter. Some pioneering studies in the Scandinavian countries stressed how the expected power position in the post-amalgamation municipality is the strongest explanatory variable for attitudes pro or against mergers (Eythórsson and Jóhannesson, 2002 on Iceland; Kjær, 2002 on Denmark).

Thus, when it comes to municipal amalgamations, size has at least two sides: an input and an output side. The output side simply consists of the final dimension attained by the post-amalgamation municipality because of the amalgamation itself. In contrast, the input side reflects the relation between the municipalities' pre-amalgamation population sizes. In other words, after amalgamation, we can have a final unit composed of two small municipalities, or five small municipalities, or one large municipality and one small one, or else one large with four small municipalities. These different combinations are what the input side of size looks at, regardless of the population of the final unit (which constitutes the output side).

The features of the member municipalities contribute to form those of the final unit, and thus the output-side size. However, the point is that final units with similar (output-side) populations may derive from different combinations in the input side, and we argue that this may lead to different effects on turnout. Distinguishing these two sides, and being aware of how they impact turnout differently, can help explain why the amalgamation-turnout relation is not straightforward and why the literature thus far has found mixed evidence.

Crucially for our investigation, as we shall discuss more thoroughly in the next section, the relative population ratio of each municipality also plays a role concerning turnout (Gaardsted, 2002; Koch and Rochat, 2017; Voda and Svačinová, 2020).

Theoretical framework

This article aims at making sense of the apparent idiosyncrasies in the effects of municipal amalgamation on municipal electoral participation emerged in the literature, by investigating this variance in a comparative cross-country setting and focussing on the explicative role of the features of the amalgamation processes. Are there characteristics of these processes within the various countries (which could not be controlled for in case studies) that account for (part of) the turnout variation? And which ones? Furthermore, turnout after amalgamation varies significantly within country as well. Our comparative dataset is helpful to investigate this too, again focussing on the characteristics of the specific process of amalgamation occurring in each municipality – in which direction, to what extent, and under which circumstances do these elements impact turnout?

With this in mind, in this section, the theoretical framework employed to conduct our empirical investigation is outlined. It combines the above-reviewed literature arguments about size, municipal amalgamations, and their specific (national and local) features with classical predictors

[3]Moreover, the same number of post-merger elections is not available in all ten countries, which makes a systematic analysis in this respect impossible.

[4]We intend here size as population, namely the number of inhabitants of a municipality, although we are aware of its possible different measurement.

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of electoral participation in municipal elections. First, we consider some characteristics of the amalgamation process at the national level, which are constant within each national electoral wave but vary across countries and by different national waves within our dataset. Analysing these, serves to evaluate the explicative ability of the type of reform enacted by each country over turnout and to assess under which circumstances amalgamations have different effects on municipal electoral participation. Amalgamation reforms can occur in different ways. The literature commonly stresses two main types of merging processes: compulsory vs. voluntary and massive vs. gradual. Massive indicates a comprehensive reform involving all municipalities in a country, while gradual refers to incremental, step-by-step reform. A compulsory amalgamation reform implies a top-down imposed decision, while voluntary reform entitles the single (groups of) municipalities to decide (with guidelines varying in strictness) if, when, and with whom to merge.[5]

Previous studies have found these elements to be particularly important (Steiner *et al.*, 2016). Top-down reforms are more likely to meet resistance at the local level (Baldersheim and Rose, 2010) since they can be considered as power-gathering by the central government. On the contrary, resistance to amalgamations may decrease if the reforms are introduced bottom-up (Eythórsson, 2009). Voluntary amalgamation processes are considered more successful. When the initiative is bottom-up, the process towards the amalgamation is more rapid (ibidem). Moreover, Steiner *et al.* (2016) argue that top-down compulsory amalgamations are likely to trigger conflicts. This could imply a higher level of dissatisfaction. We still need to understand how this translates into effects on turnout. It could be both ways, as Denters *et al.* (2014: 231) stress the unpredictability of the direction of (dis)satisfaction on the likelihood to vote since voting may be an expression of both satisfaction and dissatisfaction. However, we believe that in the case of low-stake, second-order municipal elections, dissatisfaction leads more probably to de-mobilisation than to mobilisation. Municipal elections are usually considered second-order elections (Reif and Schmitt, 1980). Hence, regarding the electoral consequences of post-merger conflicts and dissatisfaction, we can reasonably expect apathy and a consequent de-mobilisation, because of the amalgamation, to prevail over mobilisation. Therefore, in general terms, to recall Hirschman's (1970) classic concepts, we assume an *exit* strategy (de-mobilisation) as prevalent over a *voice* strategy (which might, in turn, lead to an increase in electoral participation). Thus, we expect a depressive effect of more conflictual (forced) amalgamations on turnout. Hence, we hypothesise that:

HYPOTHESIS 1: *Ceteris paribus, opposed to a voluntary amalgamation, a forced amalgamation process will have a negative effect on voter turnout in municipal elections after amalgamation.*

Analogous mechanisms can be expected for the overall scope of the amalgamation process, namely the portion of national municipalities involved in it. We argue that the scope of a particular amalgamation reform wave may be (inversely) related to the reaction triggered by it. We start by considering that the reaction to the policy decision to amalgamate is prevalently negative,[6] consistently with most previous studies that found a negative variation in voter turnout after amalgamation. Against this backdrop, voters might be expected to react less negatively when the whole country is affected (massive process), while they could oppose more fiercely the amalgamation when they are 'alone' (gradual process) in suffering the loss of their previous municipal home.[7] The

[5]Obviously, real-word amalgamation policy processes entail more nuances than a simple compulsory v. voluntary dichotomy. The specific operational criteria to distinguish the two types in order to classify our cases are discussed in the next section.

[6]We do not deny the benefits of the amalgamation policy process, which might in turn trigger a positive reaction and consequently translate into a turnout increase. Simply, we consider that the negative reaction, due to the loss of the previous municipal home, exceeds, on average, the positive one.

[7]Steiner et al. (2016) indicate that comprehensive reforms are more likely to *overall* raise conflict nationwide. However, this is not relevant for the reasoning we are conducting on the dynamics of conflict/(de)mobilization/participation *within the amalgamated units*.

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reasoning behind this claim can be traced back to Wilson's (1973) classic argument that conflict tends to be lower when the costs of a policy are distributed rather than concentrated, as individuals feel less (or more) closely related to the policy. This classic claim has been widely applied to policy feedback studies, which emphasise the importance of perception of proximity as a key element in understanding citizens' reactions to a policy, also with specific reference to the micro level (Larsen, 2019).

As for the previous hypothesis, how this translates into turnout variation is somewhat ambiguous. It depends on whether dissatisfied voters will turn out to the polls more (mobilisation hypothesis) or less (de-mobilisation hypothesis) than the others. Again, we argue that de-mobilisation is the most likely translation of such dissatisfaction in low-stake, second-order municipal elections. Thus, we expect that:

HYPOTHESIS 2: *Ceteris paribus, the overall scope of the amalgamation wave will have a positive effect on voter turnout in municipal elections after amalgamation.*

We now shift to the local features of the amalgamation. A crucial element is clearly the size of the constituent units, as many of the fundamental mechanisms discussed in the literature review are connected (directly or indirectly) with it. Hence, considering that the role of a different size (either absolute or relative) of the merged local units on the reform outcomes remains severely underexplored, we aim to analyse exactly this 'heterogeneity of effects' (Gendźwill *et al.*, 2020: 13). We articulate the size-effect on turnout by employing the distinction between the input and output sides of municipal size introduced in the previous section.

First, we look at the output side by starting from the classical size-and-democracy argument posed by Dahl and Tufte (1973). Smaller size should favour higher turnout levels by enhancing political efficacy, while larger size should lead to lower turnout by putting a larger distance between citizens and institutions. As anticipated, this relation has been repeatedly tested and very often confirmed. Quite straightforwardly, our hypothesis thus sounds as:

HYPOTHESIS 3: *Ceteris paribus, post-amalgamation municipal size will have a negative effect on voter turnout in municipal elections after amalgamation.*

Besides the output side of size, we consider two aspects of the input side: the number of constituent units and the cross-unit population polarisation, which refers to the size relations among pre-amalgamation municipal units. Lapointe *et al.* (2018) and Koch and Rochat (2017) both found that turnout was primarily affected in the small pre-merger municipalities. Considering this, we need to understand how these patterns translate into turnout variation in the post-amalgamation municipal units. While focussing on the pre-merger municipalities, the mechanisms highlighted by these studies can nicely serve our aim of building a theoretical framework that accounts for turnout variations in post-amalgamation units. On the one hand, we can expect higher population polarisation among pre-amalgamation constituent units (namely, mergers occurring among a bigger unit and much smaller ones) to lead to a stronger effect on turnout propensity operating on a limited population (that of the smallest units). In the opposite case of low population polarisation (when merging units are more balanced in population), mergers may have a weaker effect on turnout propensity, which however operates on a larger population.

Still, we need to consider the overall expected effects on turnout taking place in the final units. Some studies have specifically looked at this aspect. Jakobsen and Kjaer (2016) found that (in Denmark) the struggle for representation in amalgamated municipalities is affected by the relative sizes of the former jurisdictions, with higher mobilisation when municipalities of similar size amalgamate. Moreover, the degree of mobilisation of the amalgamated units is more similar in medium cases, in contrast to amalgamated jurisdictions characterised by concentration.[8]

[8]Namely with a strong centre-periphery dimension (i.e., a large city amalgamated with smaller units).

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This evidence leads us to hypothesise a dual dynamic linking cross-unit population polarisation to turnout variation, a dynamic that presents maximum and minimum expected points. On the one hand, we can expect that turnout after amalgamation will be highest when polarisation is lowest – i.e., when equal-size municipalities are merged (lowest depressive effect). On the other hand, the highest depressive effect on the overall post-amalgamation municipality is not expected to be found at the opposite extreme (i.e., when polarisation is highest). In such a case, the strong depressive effect on turnout operates on a too tiny fraction of the overall post-amalgamation unit (namely, voters of the small units that represent a smaller portion of the final overall population) to be appreciated, and hence, instead, a depressive effect of intermediate strength is expected. To appreciate a remarkable decrease in the post-amalgamation municipality (which can be expected to produce the highest depressive effect on turnout), the population on which the depressive effect operates needs to be large enough. The expected trend thus assumes a sort of v-shape.[9] In formal terms, we then expect that:

HYPOTHESIS 4: *Ceteris paribus, cross-unit population polarization will have a v-shaped effect on turnout after amalgamation, with highest marginal effect for minimum polarization values.*

Besides the cross-unit population polarisation aspect, amalgamations result from the merger of a varying number of municipalities. This amalgamation feature is also an important element to include in our framework, as recently suggested by Allers *et al.* (2021). The reasoning behind this is that, in line with the instrumental voting theory, (some) voters turn out to the polls hoping to affect policy outcomes with their vote. From this perspective, amalgamation reduces the probability that one's vote matters. This reduction increases as more jurisdictions are included. Moreover, the (perception of) internal political efficacy (Niemi *et al.*, 1991) is expected to decrease with the increase of size (here, the number of involved units) since the marginal weight of a single vote on a larger aggregate tends to vanish (Lassen and Serritzlew, 2011).[10] Therefore we hypothesize that:

HYPOTHESIS 5: *Ceteris paribus, the number of amalgamated units will have a negative effect on voter turnout in municipal elections after amalgamation.*

As anticipated, our theoretical reflection needs to consider classic predictors of electoral participation in municipal elections, regardless of the presence of amalgamations. Gaardsted (2002) argued that a cross-national comparison of the relation between size and local electoral participation is especially interesting when the countries compared differ for structural variables, such as size of the local authority, electoral system, and scope of government – which is exactly the case of our set of 10 countries. For instance, Gaardsted (2002: 858) pointed out that the relatively high autonomy and scope of functions of local governments in the Nordic countries may be related to relatively high local election turnout. Furthermore, as Cancela and Geys (2016) stated, on top of population size and composition, concurrent elections and the electoral system play an important role in explaining turnout in subnational elections. More generally, municipal elections are perfect examples of second-order elections (Reif and Schmitt, 1980). As such, their turnout is expected to be influenced by the powers of the municipal government, the placement within the national electoral cycle, and the number of municipalities voting together (Bolgherini *et al.*, 2021).

[9]To illustrate the expected relationship between cross-unit population polarization and turnout, online Appendix B Figure B1 graphically shows its dynamic in the simplest case of amalgamation between two units. We underline that the expected effects from H4 are net of the impact of both overall population and the number of amalgamated units, which are separately accounted for, both theoretically (H3 and H5, respectively) and empirically in the regression models with autonomous indicators.

[10]Furthermore, the more municipalities merge, the higher the transitional effect caused by the (often slow) acceptance of the new institution is supposed to be (Allers *et al.*, 2021: 3–4). This may cause turnout to (stronger) decrease (especially in smaller units).

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Are these features also relevant in cases of municipal merge? Our empirical investigation will reveal the factual answer to this research question. Nonetheless, the core of our scientific contribution lies in the assessment of the effects of the features of the amalgamation process on turnout. Hence, we do not formulate specific hypotheses on these classic predictors of electoral participation in municipal elections as their (dis)confirmation would not add very much to the existing literature. Instead, our framework includes these elements (as our regression models will) as controls, to make sure that our evidence on the hypotheses concerning the effects of the (local and national) amalgamation process is as robust as possible and to assess the impact of the amalgamation process' characteristics net of the effects of all traditional turnout predictors. Although they do not vary before or after the amalgamation, they can be expected to interfere with the effects that amalgamation features have on voter turnout. It is therefore appropriate, when assessing the theoretically expected effects of the different amalgamation features, to control for them.

Finally, we believe that national political culture needs to be considered, as it may influence the electoral reactions to the amalgamation processes across different countries. Namely, polities more prone to passively accept decisions by the authority may show lower variations in municipal turnout after the introduction of a territorial policy change like the municipal amalgamation.

Data, design, and methods

To empirically assess the outlined hypotheses about the variegated effects of the municipal amalgamation processes on turnout in municipal elections, we have assembled an original dataset consisting of ten European countries –Albania, Austria, Denmark, Finland, Germany, Iceland, Italy, Luxembourg, the Netherlands, and Norway.[11] The pool of countries includes Northern, Southern, Eastern, and continental European countries, and it is large enough to perform a multi-level analysis – required given the nature of our data.[12] Moreover, the selection of these national cases was driven by the necessity to maximise variance on the amalgamation processes' crucial features highlighted by our theoretical framework– voluntary v. compulsory; massive v. gradual; more or less municipal merging units; more similar- or more different-sized units. Finally, we were forced by data availability – crucially on both the municipal elections and the amalgamations enacted.[13] We have included all municipalities amalgamated in the period 1991–2019 in the selected countries.[14]

Our dataset features 1,204 post-amalgamation municipalities, constituting the units of analysis of this study, which have merged 4,348 pre-amalgamation municipalities (see Table 1). Thus, on average, each post-amalgamation unit is formed by roughly four constituent municipalities. However, we note relevant cross-country variance. Germany and Albania merged, on average, more than four municipalities into one, Denmark is in line with the pooled mean value, and all remaining countries merged no more than three units.

[11]Our observations come from five States in Germany (Saxony, Saxony-Anhalt, Mecklenburg-Western Pomerania, Brandenburg, Thuringia), and a single State in Austria – Styria, the only one to have performed post-amalgamation elections. In these cases, we have measured country-level variables with State-level features.

[12]The validity of the multi-level structure choice is confirmed by the value of the intra-class correlation (ICC) coefficient, performed over a null model, which indicates that over 30% of the variance is accounted for by the higher level.

[13]Our dataset includes all European countries for which all such data were available. We could not include countries experiencing amalgamation processes where electoral data, for one of the considered elections, was either missing (Baltic countries) or unavailable at the municipal level (Ireland), and where we could not merge municipal names from the electoral data with the list of amalgamated municipalities (Greece). Albania is rated "partially free" by Freedom House. However, after the territorial reforms in 2015 its score on democratic governance improved (https://freedomhouse.org/country/albania/nations-transit/2015). Still, as a robustness test, we replicated our models without Albania and main findings are consistent (Appendix B, Table B3).

[14]Appendix B, Table B1 reports the lists of municipal elections included in the different countries.

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For each country, we have consistently measured the electoral data, which will constitute our dependent variable, along with the predictors – both at the lower (municipal) and at the higher (country) level – emerging from our theoretical framework. A discussion about the specific operationalisation of our DV is necessary. Our hypotheses revolve around voter turnout in municipal elections after amalgamation. Consistently with previous amalgamation literature (trying to assess the treatment effect of being amalgamated), it is here operationalised as the turnout variation between pre- and post-amalgamation municipal elections. Although we argue that no single amalgamation treatment effect exists – rather, there are different treatments with different expected effects on turnout – we need to look at the variation to disentangle these different treatment effects. Consequently, we constructed our main DV by subtracting the turnout percentage in pre-amalgamation municipal elections from the turnout percentage in post-amalgamation elections.[15] Post-amalgamation turnout percentage was calculated by dividing the number of voters that went to the polls by the number of registered voters in the post-amalgamation unit (and then multiplying by 100).[16] We computed the turnout percentage in the pre-amalgamation elections by dividing the sum of the participating voters in the merging municipalities (multiplied by 100) by the sum of the registered voters in those municipalities.[17]

Overall, the process of municipal amalgamation results in a decline in electoral participation in municipal elections (−2.9 percentage points on average). However, Table 1 reveals remarkable variations across countries. In Denmark and the Netherlands, turnout decreases are way above the mean value (15 and 9 points drop on average); in Italy, Austria, and Albania, on average, turnout decreases similarly to the overall mean; in the remaining countries, the average variation is virtually null or even positive (i.e., turnout increased).

This variance in the turnout after amalgamation (which is not limited to a cross-country comparison – as also indicated by the high values of the standard deviation for each national mean, last column) is particularly interesting to our analytic purposes. Indeed, this article attempts to model this variance according to the predictors highlighted by our theoretical framework with a rigorous cross-national multi-level empirical investigation.

We focus on the amalgamated municipalities only (and not on the comparison between merged and non-merged units),[18] as we are interested in the different effects on turnout of different treatments (i.e., different amalgamation processes) – and not in isolating a unified effect of treatment. We have argued that no such treatment exists, precisely as the treatments are different in nature. Conversely, varying expected consequences of the differences in the type of treatments can be meaningfully empirically verified. To this end, we choose a most-different-system design, in which amalgamation is a constant across all the municipal cases included in the dataset, which vary remarkably in terms of the predictors expected (according to our theoretical framework) to influence the impact of amalgamation on electoral participation. Our design strategy is methodologically particularly well-suited to empirically assess how different constellations of municipal

[15]We consider only one pre- and one post-amalgamation election, hence the separated short- and long-term effects cannot be investigated here. This does not alter the empirical assessment of the hypotheses but limits to the short term its validity.

[16]We are aware that turnout in the constituting units would be more appropriate to test the hypothesized mechanisms regarding the differentiated reactions to the amalgamation in different municipal contexts. However, such data is not available but in a few countries. Hence, we had to employ turnout in the post-amalgamation final municipalities.

[17]We have relied on official data provided by national Ministries of Interior.

[18]We do not implement a difference-in-difference (DiD) empirical design. Such an alternative design would allow a strong internal validity and to better isolate the effect of merging *per se*. However, that is not our analytic goal. We want to assess whether the theoretical expectation of different effects according to different implementation strategies of the amalgamation policy process are empirically confirmed. Given the nature of our data, it would be impossible to perform such an analysis with a DiD design. For instance, when the amalgamation process is massive, there are not (enough) non-treated municipalities to do the matching. And performing the analyses only in countries where DiD is possible would reduce our sample of countries (with specification problems for the multi-level structure), and it would imply an artificial truncation of the variance on crucial national-level predictors (such as the scope of the national amalgamation wave).

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Table 1. Municipalities involved in amalgamation processes included in our dataset and turnout variation

	N mergers	Involved municipal Units (N)	Involved municipal Units (Mean)	SD	Turnout Variation (PP)	SD
Albania	60	372	6.2	3.1	−3.8	5.4
Germany	483	2,121	4.4	3.6	1.2	8.9
Denmark	67	246	3.7	1.3	−15.4	3.0
Austria	130	390	3.0	1.3	−4.1	3.0
Netherlands	152	430	2.8	1.0	−9.0	5.7
Iceland	19	52	2.7	1.1	0.3	8.3
Norway	63	166	2.6	1.0	2.6	3.9
Finland	96	244	2.5	1.2	0.6	3.7
Italy	123	301	2.4	0.7	−4.3	6.7
Luxembourg	11	26	2.4	0.5	−1.5	2.3
Total	1,204	4,348	3.6	2.7	−2.9	8.6

Source: Authors' computation from official electoral data.
Note: Appendix B, Table B2 reports pooled descriptive statistics about both the dependent and independent variables of the regression models (presented below) specifically for the 1,174 municipalities included in them.

amalgamation features impact turnout in the subsequent local-level election, which is the analytic goal of our article. To such end, we need to maximise variance on these process features.

Moving now to the specific measurement choice for our predictors, we point out that they consist of municipal-level variables (measured on post-amalgamation units) and country-level variables (on which values for post-amalgamation units are clustered by country – though often differentiated within country by year of election).[19] As selected predictors are at two different levels, and our DV is continuous, we will perform multi-level mixed regression with random intercepts at the country level, which allows the estimation of the effects for the country-level indicators, while best coping with the multi-level clustering of the observations.[20]

We discuss here the measurement strategy for the predictors highlighted by our theoretical framework, whose effects on municipal turnout are in the hypotheses, while the online Appendix A reports similar information concerning the control variables included in our models. Starting with the municipal-level variables pertaining to the characteristics of the amalgamation process in each municipality, we included the number of merging municipal units and the population polarisation. The former simply counts the number of merged municipalities, ranging from 2 to 30. The latter implements the threefold classification proposed by Jakobsen and Kjaer (2016), which distinguishes between amalgamation among equals (score = 3), characterised by one large municipality (=1), or mixed (=2) according to the relative size of the largest, second-largest and smallest pre-amalgamation municipalities. Namely, 'one large' represents cases of high cross-unit polarisation – when the largest of the former municipalities is more than twice as large as the second largest; the amalgamation is 'mixed' in cases of medium polarisation – when the largest of the former municipalities is more than twice the size of the smallest, but less than twice as large

[19]The higher-level is not the country but the combination of country*year. Thus, the clusters for national-level variables are much more than 10, because (within country) certain features do vary with time – local authority powers, placement of the municipal elections within the national electoral cycle, portion of municipalities included in different amalgamation waves. Hence, we have no issues with degrees of freedom, nor with excessive multicollinearity.

[20]Our main models will feature classic standard errors. As a robustness check, they have been replicated with both robust (Appendix B, Table B4) and clustered by country standard errors (Appendix B, Table B5). No relevant difference emerges for what concerns the testing of our hypotheses. As a further robustness test, we replicated the main models with country fixed effects, finding the same significant effects (both in a multi-level model and with OLS regression, Appendix B, Table B6 and Table B7).

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as the second largest; and 'equal' is when polarisation is low – the largest of the former municipalities is less than twice as large as the smallest municipality (Jakobsen and Kjaer, 2016: 216).[21] At the country level, we include a dummy indicator scoring 1 for municipal elections following forced amalgamations (when a higher-ranked authority has, if willing, the power to impose the amalgamation) and 0 for voluntary amalgamation processes (when either the municipal authority or the citizens have the final say on amalgamation)[22]; and a continuous predictor indicating the scope of the specific amalgamation wave within the country. This is calculated as the fraction of the registered voters involved in the amalgamation wave on the overall national voters.[23]

Findings

We now present and discuss the empirical evidence concerning the hypothesis testing for the effects of the features of the municipal amalgamation over turnout (variation) after amalgamation. Through these analyses, we can answer the focal research question of this study – what accounts for differences in turnout at municipal elections after municipal amalgamations? Are there significant effects for the characteristics of the amalgamation process? Which ones?

The relevant models – also including a control for the flowing of time within the period of observation (days since January 1, 1991) – are reported in Table 2. In a nutshell, they reveal the decisive role of the (national and municipal) characteristics of the amalgamation process. Compared to a baseline model (Model 1) only including the multi-level specification and the control variables, we find that the addition of the national features of the amalgamation (Model 2) reveals how, when the amalgamation is imposed by the national government, net of everything else, this translates into a highly statistically significant negative effect (4.5 percentage points large). The significant negative effect for the dichotomous indicator separating forced amalgamation processes from voluntary ones is a strong empirical confirmation for H1. Voters appear demotivated to participate in the local electoral process when they endure an imposed amalgamation as opposed to when they are included in the decision-making process.

However, this is counterbalanced by the large, highly significant, positive effect of the continuous indicator measuring the overall (nation-wide) scope of the amalgamation wave. The coefficient indicates that one municipality included in a country-wide reform of municipal boundaries (fully massive reform, 1) has a turnout variation around 12 points higher than a municipality identical on all other aspects but merged alone (gradual reform, almost 0).[24] This empirically corroborates H2. Voters appear to be particularly dissatisfied with their amalgamation when this is isolated, which brings de-mobilisation and depresses turnout. Yet, they are much less prone to feel alienated when they are not alone in losing their own old municipal entity. In other words, gradual amalgamations are particularly detrimental for turnout compared to large-scale reforms.

Furthermore, the addition (in Model 3) of the local characteristics of the amalgamation process, namely the output and input sides of municipal size, confirms the robustness of the effects of national-level amalgamation features. Moreover, Model 3 indicates the importance of the input-side features – number of units and cross-unit population polarisation. In fact, we find

[21]Size of the pre-amalgamation units is operationalised as the number of registered voters in the last pre-amalgamation municipal election.

[22]We are aware of the many different nuances that amalgamation reform may assume in the different countries. The dummy option allows to clearly distinguish between top-down processes (where a higher-ranked authority has the final say on the amalgamation) and bottom-up processes (where either the municipal council/mayor or the citizen through binding referenda approve/reject the amalgamation). We also employed alternative measurements by further distinguishing the degree of compulsoriness, with results in line with those obtained employing the dummy variable (Appendix B, Table B8).

[23]Appendix B, Table B2 reports descriptive evidence on our dependent variable and the predictors.

[24]This does not mean that implementing a nation-wide amalgamation reform increases turnout, compared to not amalgamating municipalities. It simply indicates that, opposed to an isolated amalgamation, a massive, large-scale reform has a less depressive effect on turnout.

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Table 2. Predictors of turnout variation compared with previous municipal elections in post-amalgamation municipalities

	(1)		(2)		(3)		(4)	
Time	0.002***	(0.000)	0.001***	(0.000)	0.001***	(0.000)		
National electoral cycle	3.122***	(0.000)	6.944***	(0.000)	6.819***	(0.000)		
National electoral cycle^2	−6.060***	(0.000)	−4.347**	(0.001)	−4.487***	(0.001)		
Horizontal simultaneity	8.552***	(0.000)	4.428***	(0.000)	4.506***	(0.000)		
Municipal powers	0.659**	(0.002)	0.668**	(0.002)	0.615**	(0.005)		
Proportional electoral system	−2.393	(0.487)	−3.586	(0.346)	−3.125	(0.408)		
Direct major election	4.202	(0.434)	3.190	(0.674)	3.332	(0.655)		
Subject political culture	−0.085	(0.669)	−0.161	(0.550)	−0.166	(0.531)		
H1. Forced (1)v. voluntary (0) amalgamation process			−4.541***	(0.000)	−4.525***	(0.000)	−8.087***	(0.000)
H2. Amalgamation wave overall scope: Gradual (0) v. massive (1)			12.373***	(0.000)	11.800***	(0.000)	14.861***	(0.000)
H3. Post-amalgamation municipal size					−0.000	(0.195)	−0.000	(0.554)
H4. Cross- unit population polarisation:								
Type = 'One large'(v. 'Mixed', 0)					0.683	(0.138)	1.250*	(0.025)
Type = 'Equal'(v. 'Mixed', 0)					1.727**	(0.002)	2.038**	(0.003)
H5. Number of amalgamated units					0.171*	(0.014)	0.185*	(0.028)
Constant	−52.580***	(0.000)	−35.750**	(0.003)	−36.172**	(0.002)	−5.551**	(0.009)
lns1_1_1_cons	1.404***	(0.000)	1.776***	(0.000)	1.758***	(0.000)	1.798***	(0.000)
lnsig_e_cons	1.754***	(0.000)	1.711***	(0.000)	1.705***	(0.000)	1.901***	(0.000)
AIC	7508.376		7419.671		7412.888		7855.411	
BIC	7564.126		7485.558		7499.047		7901.024	
Log likelihood	−3743.188		−3696.836		−3689.444		−3918.705	
N	1,174		1,174		1,174		1,174	

P-values in parentheses. *P < 0.05, **P < 0.01, ***P < 0.001. ICC coefficient for an analogously specified multi-level null model is 0.32.

an empirical confirmation for H4, hypothesizing a v-shaped effect of polarisation on turnout. In particular, our analysis unveils that the baseline mixed type has the most depressive effect on turnout, precisely as H4 predicts.[25] To recall, the mixed type is intermediate in terms of polarisation – namely, the largest of the former municipalities is more than twice the size of the smallest, but less than twice as large as the second largest. On the other end, the two extreme types ('one large' and 'equal') both show higher levels of voter turnout. The significant positive coefficient for the 'equal' amalgamation type suggests that, when similar-sized municipalities are merged, a power struggle between the constituent units (for instance, to control the resources of the new municipal entity) might arise, and that this struggle might have a mobilising effect on voters. This is in line with our arguments that voters in smaller municipalities that are merged with much larger ones do feel less motivated than before to participate in local elections[26]; but that, in order to appreciate the depressive effect on turnout variation, the smaller units need to be not too small – otherwise, the lower participation rate of their former inhabitants risks passing unnoticed/unperceived.[27] It shall be noted that the effect of moving from 'mixed' to 'one large' is only marginally positive and the P-value is not significant. However, we deem this not to contradict the overall confirmation of the v-shaped hypothesis as the coefficient is in the expected direction, its P-value close to the .1 slight significance threshold, and considered the lower number of observations used to compute that P-value (not including the 'equal' type cases). Moreover, H4 expects the 'one large' type to fall in between 'mixed' and 'equal' (see Appendix B, Figure B1), which is exactly what is found in Model 3. Furthermore, Model 4 (without control variables, see below) indicates a full confirmation for H4 in terms of both statistical significance and ranking of the effects.

Moreover, Model 3 shows that the number of units constituting the post-amalgamation municipality has a positive and significant effect, indicating that the more units are merged, the less turnout tends to decrease. This is contrary to H5, which thus must be rejected. This piece of evidence might appear counterintuitive at a first glance. However, we argue that it can be interpreted as the manifestation of a mechanism possibly traced back to instrumental voting theory. Indeed, as Allers *et al.* (2021) point out, the amalgamation is also an increase in voters' power to affect policy through their vote, as the post-amalgamation municipality has more resources than pre-amalgamation ones. This is even more true the higher the number of the amalgamating units. Hence, the positive and significant effect emerging for the number of merged units suggests that voters weigh the increase in value of their vote in terms of higher resources at stake more than the loss of power of their vote due to its dispersion in a larger municipal unit.

Surprisingly, the indicator for the final dimension of the post-amalgamation unit (output-side size), while showing an effect in the expected negative direction, does not yield a significant effect. Thus, we have to reject H3: once national and local characteristics of the amalgamation process are included, overall size is not a significant predictor of turnout in municipal elections. This is a very relevant piece of evidence, which suggests a careful reconsideration of the classic argument about the relation between (local) size and democracy, seminally proposed by Dahl and Tufte.

[25]The mixed type was chosen as the baseline to immediately show how that is different from both the 'one large' and the 'equal' type.

[26]Our data is aggregated, thus unable to properly test individual-level mechanisms about the behavior of voters, to avoid ecological fallacy issues. Therefore, we do not ultimately claim that certain voters behaved in a way, differently from others. Nevertheless, we can discuss whether our aggregate evidence is consistent with the individual-level mechanisms hypothesized.

[27]The effects for the cross-unit polarization are net of all other predictors included in the model, controlled for the overall final population after amalgamation, which captures -within each type (e.g., 'equal')- the different possible combinations of pre-merging sizes (e.g., two equally big cities merging or two equally-small ones). We recognize the possible limitation of our strategy of not further distinguishing among the different possible combinations within the three categories and we therefore performed an interaction (see Appendix B, Table B9), which displayed non-significant interactive effects. Without a theoretical expectation regarding the direction of possible interactive effects, we have preferred to consider such analysis as a robustness check.

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Finally, Model 4 serves as a crucial robustness test for our hypothesis testing. By replicating the full model without the control variables, we make sure that no result is due to the encompassing control strategy adopted. Model 4 shows the robustness of our findings.[28] All significant effects are confirmed, while post-amalgamation population is clearly not relevant, thus making the rejection of H3 even stronger. Moreover, Model 4 corroborates the empirical confirmation for H4, as the coefficient for the effect of experiencing a 'one large' amalgamation (as opposed to the 'mixed' type) is fully statistically significant – but still lower than the 'equal' v. 'mixed' effect, exactly as expected. In short, in the case of a 'mixed' amalgamation, turnout variation will be roughly 2 points lower than in an 'equal'-type amalgamation, and roughly half of that lower than a 'one-large' amalgamation. Thus, exactly as H4 argues, the least detrimental effect on turnout emerges for minimum cross-unit population polarisation values, and the most detrimental effect is found at medium polarisation values.

Overall, our empirical evidence provides a clear confirmation of the explicative role of the features of the specific amalgamation process over municipal electoral turnout. As we have hypothesised, different types of amalgamations do translate into different effects over electoral participation, which vary according to predictable dynamics responding to clear mechanisms. This is something that only a large cross-country comparative investigation, such as the one at hand, could unveil.

Our empirical analyses also reveal some interesting points concerning the classic predictors of electoral participation in municipal elections, included here as control variables. Net of all other variables in the models, the characteristics of the municipal electoral system do not play a role. Both the coefficients for the proportional electoral system and the direct mayoral elections are far from suggesting any statistically relevant effect. The composed marginal effect of the (linear and quadratic indicators for the) placement of the municipal elections within the national electoral cycle is also not significant.[29] Moreover, national political culture is not significant.[30]

On the other hand, the powers of the municipal level yield a statistically significant effect. In line with the second-order elections theory, the coefficient is positive, indicating that, also after amalgamation, lower local autonomy depresses turnout. Furthermore, a highly significant positive effect emerges for horizontal simultaneity, which confirms that, also with specific reference to post-amalgamation municipalities, holding their municipal elections together with more municipalities increases electoral participation.

Conclusion

In this article, we investigated what accounts for variations in the effect of the municipal amalgamation process on voter turnout in municipal elections. To this end, we assembled an original dataset comprising around 1,200 amalgamated municipalities in 10 European countries.

Preliminarily, our descriptive evidence shed new light on the open debate concerning the amalgamation/turnout relation. The amalgamation process indeed results in a decline in participation in the subsequent municipal elections. At the same time, it challenged the approach usually employed to explore municipal amalgamation as a uniform phenomenon, by showing how such an effect is, in fact, very much variegated both across and within countries.

Consequently, we have investigated the variance in the municipal turnout according to a theoretical framework we have elaborated, which focuses on crucial features of the amalgamation process itself – both at the municipal and at the national level. National case studies published

[28]Appendix B Tables B10 and B11 report a series of supplementary robustness tests, with the inclusion of (national or municipal) turnout as an additional control, which further corroborate the validity of our claims.

[29]As visible in the marginal plots (Appendix B, Figures B2–B4). Rather than the expected parabolic trend, a linear positive effect seems to emerge from the models specified without the quadratic cyclical element (Appendix B, Table B12).

[30]This is robust to the choice of different alternative indicators (Appendix B, Tables B13 and B14).

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so far could not successfully disentangle the effects of the latter and were much more limited in terms of variance also on municipal-level amalgamation characteristics.

Our findings reveal the crucial importance of the specific features of the amalgamation process on electoral turnout, be they national or local. Indeed, turnout is more negatively affected – voters participate less – when the amalgamation is forced by the national government (rather than voluntary), when municipalities are included in a gradual amalgamation reform (rather than in a massive amalgamation wave), when larger units are merged with not-too-small ones (rather than equal-size units), and when fewer municipalities are merged. Other relevant features are the level of local autonomy and the simultaneity of the municipal elections, which instead boost post-amalgamation turnout levels.

In particular, national features of the amalgamation process matter greatly. Forced and gradual processes considerably depress municipal turnout in amalgamated municipalities. Indeed, the compulsoriness and the scope of the territorial reform are the most powerful explanatory factors, net of other institutional and political–cultural variables – and this is robust against several controls. Hence, a major contribution of this article rests in the clear policy recommendation that these features are carefully scrutinised when governments intend to pursue amalgamation reforms.

Besides the policy dimension, these results also present numerous important implications for the scientific debate on the effects of amalgamations on voter turnout. First, both our theoretical reflection and empirical evidence show that amalgamation, while implying a size enlargement, is neither a uniform phenomenon nor a monolithic/fixed/invariant treatment in itself – as often implied in the size-and-democracy literature. This distinction should be carefully considered in any further research on this topic.

Secondly, while amalgamation is indeed a variegated and multifaceted policy process, its effects on voter turnout vary according to predictable patterns – which pertain to its specific features. This means that any attempt to investigate the amalgamation/turnout relation, even single case studies, should encompass the peculiar characteristics of the amalgamations under scrutiny.

Third, (post-amalgamation) municipal size *per se* does not hamper turnout after amalgamation. Hence, the main size-and-democracy assumption must be somewhat reconsidered, at least with specific reference to the municipal merger phenomenon.

Fourth, the detrimental effect of merger process graduality on turnout is in line with Wilson's (1973) idea of concentrated policy costs of a proximate policy generating higher conflict, which appears to translate into de-mobilisation through the expected exit strategy (Hirschman, 1970) – just as it happens with the dissatisfaction produced by amalgamations imposed by the national government.

Fifth, we see confirmation of a particular perspective of instrumental voting theory emerging from the significant increase in turnout when the number of amalgamated units is larger. This suggests that the increase in municipal efficacy after amalgamating is larger (in voters' minds) than the decrease in the probability of each individual vote to matter, making voting in municipal elections more worthwhile when the number of amalgamated units increases.

Finally, our analysis indicates that post-merger municipal elections are second-order elections, as suggested by the significant reduction in turnout when the number of municipalities voting together, or municipal powers, are lower.

Moreover, from a territorial policy perspective, our findings may be of some interest as policy advice for national and local policymakers striving for evidence on the effects of territorial reforms and, more specifically, for the consequences of the different procedural choices when implementing a process of amalgamation.

Thus, overall, the first large comparative cross-country investigation conducted here provides a meaningful contribution to the literature. Nevertheless, several points still need to be explored. Further research is needed to assess whether these findings, specifically related to the first post-amalgamation municipal elections, do hold in subsequent elections, thus disentangling

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the shock and long-term effects of the amalgamation process. Moreover, we believe that additional elements could be fruitfully added to the picture. We do not argue to have exhausted the possible explicative factors of the turnout variance in post-amalgamation municipal elections. Future studies could profitably complement the theoretical framework with additional relevant dimensions. Furthermore, upcoming analyses should verify the robustness of our findings, increasing the number of countries investigated and employing alternative research designs – possibly including non-amalgamated municipalities through a matching strategy.

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10.1017/S175577392300005X.

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We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

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