The Effects of Jurisdictional Reforms on Political Disaffection*

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Abstract

Jurisdictional reforms have become more widespread in the last decades prompting scholars to assess both the economic and political consequences of such reforms. In this paper, we contribute to this literature investigating how local boundary reforms affect citizens' perceptions. We combine data on Swiss municipal mergers with individual-level panel data from the Swiss Household Panel to study how jurisdictional reforms impact citizens' political trust, satisfaction with democracy, political interest, and perceptions of political influence. Using a difference-in-differences design, these data allow us to compare individuals living in merged municipalities with individuals living in non-merged municipalities and to assess the effects of local boundary reforms over a long time-period (1999-2019). In contrast to existing studies, we find no negative effect of municipal mergers on citizens' political trust, satisfaction with democracy, and feelings of political influence, and uncover a positive effect on political interest. Probing further into the mechanism that might drive these (null) findings, we provide evidence that this has to do with the nature of the reform process – which is bottom-up and participatory in Switzerland in contrast to top-down procedures present in most other countries.

Keywords: Public opinion, territorial reform, democratic legitimacy, local government, decision-making process

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1 Introduction

Jurisdictional structures have become more fluid over the last decades and political authority is moving away from nation-states, upwards to international organizations (Hooghe, Lenz and Marks, 2019) as well as downwards to regional and local governments (Hooghe and Marks, 2016). The reason why policies or polities are down- or upscaled is often rooted in a search for efficiency: some public problems – e.g. security or climate change – are more efficiently dealt with at a larger scale, whereas others – schools or public transport – require a certain level of decentralization (Alesina and Spolaore, 2003). However, jurisdictional reform does not only impact the scale at which policies are provided but often also *who* can decide on these policies (Hooghe and Marks, 2016). Jurisdictional reforms, thus, have profound political consequences.

The issue of jurisdictional reform is closely tied to the classic debate on the appropriate size of jurisdictions. In a nutshell, scholars argue that the advantage of large jurisdictions is "system effectiveness" – the capacity to deal with a variety of different problems – whereas the advantage of small jurisdictions is "effective participation" – citizens can have a real influence on the decisions that are made and are closer to their elected representatives (Dahl and Tufte, 1974).

This article is concerned with the political consequences of jurisdictional reform. If the classic debate on size and democracy is correct, the amalgamation of jurisdictions should be associated with adverse effects on the quality of democracy. Because citizens are less close to their representatives, find themselves in more complex systems, and can have less impact on political decisions, they might turn away from politics altogether. Put differently, jurisdictional reform that leads to bigger jurisdictions should increase citizens' political disaffection and decrease their support for the political system.

Existing studies that look at the political consequences of jurisdictional reform predominantly focus on the local level, because many (European) countries have experienced substantial changes in their local jurisdictional structures since the new millennium (Swianiewicz et al., 2022). Usually, scholars compare jurisdictions that underwent a local boundary reform with those that did not, in order to estimate the causal effect these reforms have on the quality of democracy. The majority of these studies focuses on aggregate-level outcomes such as local turnout (e.g. Koch and Rochat, 2017; Heinisch et al., 2018; Bhatti and Hansen, 2019; Rodrigues and Tavares, 2020; Allers et al., 2021; Frey, Briviba and Gullo, 2023) or support for the radical right (e.g. Rösel, 2017; Blesse and Rösel, 2019). By contrast, studies investigating the causal effect of municipal mergers on individual citizens are much more scarce. This largely has to do with the high demands in terms of the data necessary for such an analysis. Ideally, to convincingly estimate the causal effect of municipal mergers on citizens' political attitudes, one would need geo-coded panel data observing the same individuals for several time points before

and after a merger has happened. In the absence of such data, the few existing works that look at merger effects at the individual-level rely on repeated cross-sections (Lassen and Serritzlew, 2011; Lapointe, Saarimaa and Tukiainen, 2018) or panel data with two time points only (Hansen, 2013, 2015).

What most aggregate- and individual-level studies on the political consequences of jurisdictional amalgamation have in common, is that they find a negative effect on the quality of democracy: turnout in local elections declines and protest voting increases, whereas citizens feel less politically efficacious and are less trusting of elected representatives. Scholars commonly ascribe these effects to the change in jurisdiction size: because citizens live in larger jurisdictions after a consolidation reform, they turn away from politics, because it becomes too complex or because they feel they cannot have an impact.

A second aspect that most of these studies have in common is that they focus on "top-down" reforms (Callanan et al., 2023), i.e. reforms that are imposed on local jurisdictions by higher tier governments where the affected jurisdictions do not have a say in whether or not they want to reform. Yet, there are also other situations, where such reforms are implemented "bottom-up", i.e. where the affected jurisdictions and citizens can decide themselves whether or not they want to carry out a reform. So far, studies on the political consequences of jurisdictional reforms that are implemented following a "bottom-up" approach are largely missing (expections are Koch and Rochat, 2017; Lapointe, Saarimaa and Tukiainen, 2018). Yet, the political consequences of jurisdictional reforms might differ depending on whether it is implemented top-down or bottom-up.

We make two contributions in this paper. First, we argue that the negative political consequences of jurisdictional amalgamation do not necessarily result from changes in jurisdiction size but they might also result from the reform process itself. Citizens might become disaffected with politics not because they live in a larger community, but because they feel like a quite fundamental reform was imposed on them.

Second, we contribute to the scarce number of studies of individual-level outcomes and improve on them by combining original data on bottom-up Swiss municipal mergers with geo-coded individual-level panel data from the Swiss Household Panel (SHP) over a time period of 20 years (1999-2019). This approach allows us to leverage the power of around 70,000 observations (individual-years), to estimate the causal effect of local boundary reforms on citizens' political attitudes in a more credible way than was possible so far. Relying on a difference-in-differences (DiD) design with staggered treatment and different control groups, we study how bottom-up municipal mergers impact citizens' political disaffection, operationalized as citizens' political trust, satisfaction with democracy, political interest, and perceptions of political influence. In line with our argument, we do not find negative effects of jurisdictional amalgamation on citizens' political trust, satisfaction with democracy, and political influence, and we uncover a significant positive effect on political interest. To further probe our proposed mechanism – that it is the

process through which jurisdictional reforms are implemented that drive the results – we provide evidence from the only top-down merger in Switzerland – a large-scale reform in the canton of Glarus in 2011 – showing that there is evidence for a decrease in satisfaction with democracy and political interest after this reform.

These results suggest that giving citizens a say on jurisdictional reform in local referendums – as is the case in bottom-up mergers in Switzerland – can act as a shield against the otherwise negative political consequences of jurisdictional consolidation. In addition to the size effect that other studies have uncovered, there also seems to be a process effect that should not be neglected by policy-makers.

2 The political consequences of territorial reforms

Does the size of a political jurisdiction impact citizens' political attitudes and behavior? This has been a particularly hotly debated issue in the literature on size and democracy (Denters et al., 2014). On the one hand, scholars have argued that citizens living in smaller jurisdictions are more likely to feel and be politically engaged than citizens of larger jurisdictions because in small jurisdictions citizens are both closer to their representatives as well as to their fellow citizens. In turn, this enables citizens to exert a more direct influence on politics and establish meaningful exchanges (Dahl and Tufte, 1974). On the other hand, citizens in larger jurisdictions should be more politically engaged, because they need to make sure their interests are taken into account. In a larger and more diverse jurisdiction, citizens have an incentive to participate in order to make their voices heard (Oliver, 2001).

Testing these theoretical propositions is challenging, because certain kinds of citizens might self-select into particular types of jurisdictions based on their political attitudes and behavior. To rule out such self-selection issues, scholars strive to identify situations in which jurisdictional boundaries are subject to sudden changes. Municipal mergers – the amalgamation of two or more jurisdictions in a new one or the incorporation of one jurisdiction by another – represent such a situation of sudden change.

Scholars have been studying the political consequences of municipal mergers both at the aggregate and the individual level. At the aggregate level, the main focus has been on the change in political participation to determine whether increases in size are indeed causing citizens to participate more or less in politics. Given that most territorial reforms at the local level in the last decades have led to a consolidation of local boundaries through municipal mergers, scholars have studied the effects of sudden increases in jurisdiction size on turnout. Generally speaking, existing studies find a negative or null, but never a positive, effect of municipal mergers on turnout (Koch and Rochat, 2017; Heinisch et al., 2018; Lapointe, Saarimaa and Tukiainen, 2018; Bhatti and Hansen, 2019; Rodrigues and Tavares, 2020; Allers et al., 2021; Frey, Briviba and Gullo, 2023). Moreover, scholars

show that when the experienced change in jurisdiction is more pronounced, the effect of the merger on turnout is stronger (Koch and Rochat, 2017; Lapointe, Saarimaa and Tukiainen, 2018; Bhatti and Hansen, 2019). Yet, there are mixed findings with regards to the longevity of these effects. While Koch and Rochat (2017) show that turnout recovers after an initial merger "shock", Allers et al. (2021) find permanent effects of increases in jurisdiction size on turnout.

Scholars have also studied whether the quality of representation declines as a result of a merger – given that closer contact to representatives is a key argument in favor of small jurisdictions. Studying the large-scale Danish local government reform of 2007,[1] Jakobsen and Kjaer (2016) show that peripheral parts of a new municipality, i.e. those municipalities that make up a small share of the merger coalitions' population, are *better* represented in the local council of the new municipality after a merger than central parts. They attribute this difference to a higher mobilization in the peripheral parts and a stronger "territorialization" of the vote, i.e. voting for candidates that come from a particular place (and not necessarily from a particular party) (see also Saarimaa and Tukiainen, 2016). In the absence of such a mobilization, Voda and Svačinová (2020) show that peripheral parts are less well represented in the councils of merged municipalities – even decades later – and Harjunen, Saarimaa and Tukiainen (2021) show that such an underrepresentation can have negative distributional consequences for the peripheral parts of a municipality.

Finally, recent aggregate-level studies have shown that territorial reforms can also have an impact on electoral outcomes. Scholars have shown that populist radical right parties perform better in jurisdictions that are affected by territorial reforms, attributing this improved performance to citizens' feeling of alienation and consequential turn to protest parties (Rösel, 2017; Blesse and Rösel, 2019).

Studies on the impact of territorial reforms on citizens' attitudes and behavior at the individual level are much more scarce. This is likely the case because studying the effects of territorial reforms on individuals' political attitudes and behavior is very demanding in terms of data. In a strict sense, a robust test of the impact of territorial reforms requires repeated measurements of the same individuals' attitudes and behavior at different time points – i.e. panel survey data. Only with such data, it is possible to assess how a change in jurisdictional structures affects an individuals' perceptions.

The few existing studies that focus on individuals' political attitudes tend to rely on repeated cross-sections and mainly study the impact of the Danish local government reform of 2007 (see footnote 1). In essence, this means that surveys were conducted before and

[1] This reform was carried out by the Danish national government. It implied that from 2007 onwards, municipalities need to have at least 20,000 inhabitants. After a parliamentary decision on the reform in 2004, municipalities had half a year to conclude merger contracts with neighboring units to achieve this threshold, otherwise the national government would decide on their new jurisdictional boundaries (Callanan et al., 2023, 8)

after a reform, however, not with the same sample of individuals, but with different individuals from the same jurisdictions. While this does not allow to identify individual-level changes, an aggregation of individuals' responses at the level of the jurisdiction allows to assess whether individuals living in a jurisdiction affected by a reform *on average* changed their attitudes compared to individuals living in a jurisdiction not affected by a reform. Based on this approach, Lassen and Serritzlew (2011) find that Danish citizens' perceived internal political efficacy, i.e. the feeling to understand politics, decreases in merged municipalities. Hansen (2013, 2015), the only study using both repeated cross-sections and panel data, finds that trust in local politicians as well as satisfaction with democracy decreases after municipal mergers. Likewise, Hansen and Kjaer (2020) show that Danish citizens' attachment to their municipality is lower in merged compared to non-merged municipalities after a merger. All of these studies find stronger effects in municipalities that experienced a larger change in size, suggesting that the observed differences indeed result from changes in size and not from the territorial reform process itself.

Beyond the Danish case, Baskaran and Blesse (2019) analyze the effects of regional splits and regional mergers on political attitudes in African countries. They find that regional splits increase trust in the country's president, but decrease political interest, whereas they do not find any effects of regional mergers. Yamada and Arai (2020) use survey data collected ex-post after Japanese municipal mergers to show that citizens living in more peripheral parts of a new municipality perceive to have less close contacts with their representatives than before the municipal merger. Finally, Stein, Broderstad and Bjørnå (2022) study the impact of the 2020 county consolidation reform in Norway on citizens' trust in politicians using a survey with four repeated cross-sections. While they do not find an overall effect of the reform, they show that in counties in which there was a mobilization against the reform, but where it was nevertheless implemented, citizens' trust in politicians declines as a result of the reform.

The few existing studies on the impact of territorial reforms on citizens' political attitudes, thus, suggest that an increase in jurisdiction size is associated with a decrease in citizens' support for the political system, its community and actors. However, these studies also have in common that they exclusively focus on reforms that have been implemented "top-down", i.e. where a higher government tier decides to merge or split lower-level jurisdictions.[2] Citizens' and elected officials in the affected jurisdictions can thus, not decide themselves whether their jurisdiction should participate in a reform or not (Baldersheim and Rose, 2010; Callanan et al., 2023). In light of this, territorial reforms are somewhat "imposed" on jurisdictions and the citizens inhabiting them.

The resulting decline in citizens' political support might, thus, also result from the way

[2]An exception is the study of Yamada and Arai (2020), which focuses on the Japanese case, where municipal mergers were incentivized but not imposed by the national government. However, this study does not allow to distinguish pre- and post-reform attitudes and does not include indicators for political disaffection.

the reform is carried out – namely top-down and with very limited influence of citizens and elected officials in the affected jurisdictions. However, territorial reforms are not only carried out top-down, as there are also situations where higher-tier governments limit their role to incentivize territorial reforms and give the affected jurisdictions the authority to decide whether or not they want to merge or split (Strebel, 2018). Recently, this type of "bottom-up" or voluntary reform strategy has gained traction and several countries have experienced such bottom-up municipal mergers (Swianiewicz et al., 2022). Under these conditions, the impact of territorial reforms might play out differently: when local elected officials – or even citizens in popular votes – can decide whether their jurisdiction should undergo a border change, there is a higher chance that local preferences regarding jurisdictional borders and design are being respected. Hence, a backlash against such border changes is less likely under these conditions.

To the best of our knowledge, there are neither studies that compare the political consequences of top-down and bottom-up reforms, nor studies that focus on the impact of bottom-up reforms on citizens' attitudes. However, there are a few studies that compare top-down and bottom-up reforms with respect to their economic impact. They find that local population growth increases after voluntary, but not after forced mergers (Hanes and Wikström, 2010), that last-minute spending prior to a forced merger is more pronounced (Askim et al., 2020), and that voluntary mergers lead to a cost reduction while forced ones do not (Mughan, 2019).[3] The authors of these studies explain their findings with the fact that voluntary or bottom-up mergers are more effective because they are in line with local preferences and local actors know best what is good for their jurisdiction.

Given that bottom-up territorial consolidation of jurisdictions are more likely to reflect the preferences of the affected communities than top-down reforms, we expect that citizens living in jurisdictions that underwent consolidation based on a bottom-up process do not become more politically disaffected than citizens that did not experience such a reform:

H_1 Citizens that live in merged municipalities are not more politically disaffected after the reform than citizens living in non-merged municipalities.

3 Research design

3.1 Swiss municipal mergers, 1999-2019

In our study, we focus on local boundary reforms in Switzerland. Since the new millennium, Switzerland has experienced a significant decline in the number of municipalities due to municipal mergers. In 1999, there were still 2,903 municipalities. 20 years later

[3] Blesse and Baskaran (2016) find the opposite: forced mergers save costs whereas voluntary mergers do not. They argue that this is the case, because higher government tiers have a more "technocratic" view on reforms and are driven by efficiency considerations, whereas local actors might value other things than cost efficiency when choosing their merger partners.

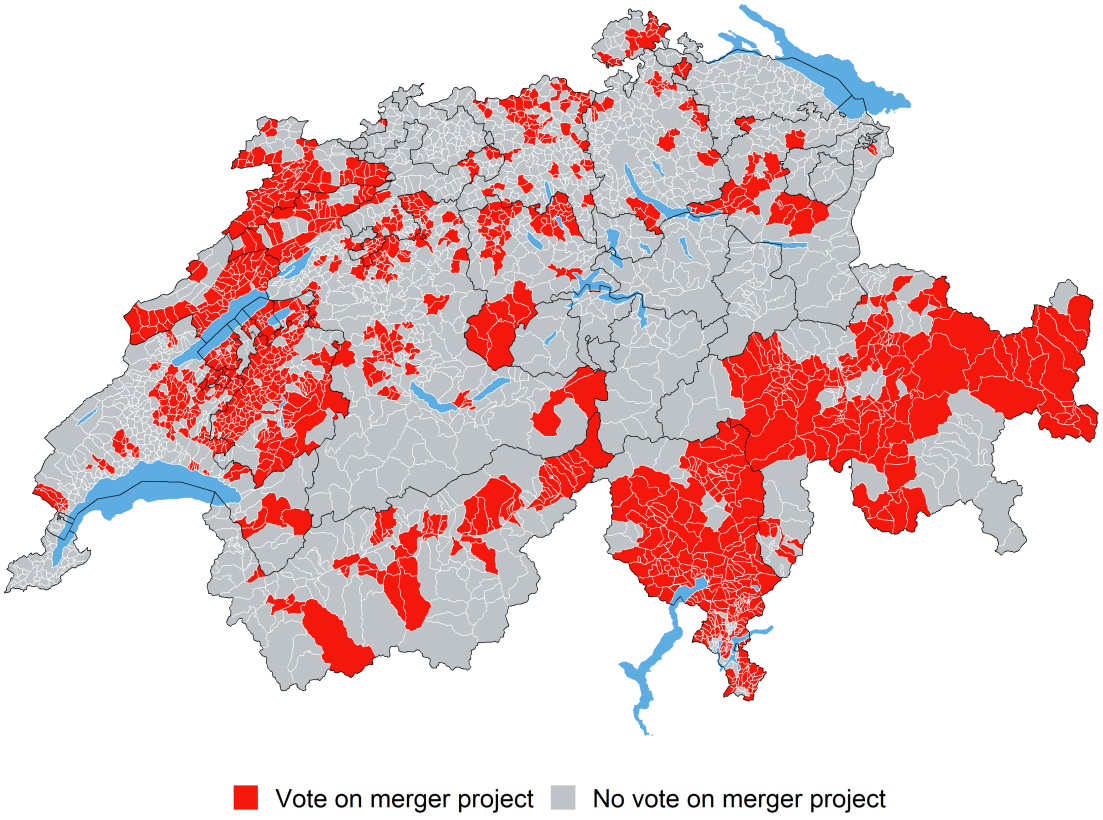
this number had shrunk to 2,212, which is a reduction of almost 25%. This is an impressive consolidation process, all the more so if one considers that municipal mergers in Switzerland are voluntary and bottom-up processes (Strebel, 2018).

Unlike many other European countries, where higher-tier governments implement local territorial reforms top-down (Baldersheim and Rose, 2010), Swiss cantons limit their role to the provision of financial incentives – lump-sum payments per inhabitant in case of a merger – in order to encourage municipalities to merge. Such incentives are an almost necessary condition for Swiss municipal mergers to take place (Kaiser, 2014). Municipalities – and here mainly local officials – then react to these incentives and set up merger projects with neighbouring municipalities. A key feature of Swiss municipal mergers is that, in order to be implemented, merger projects need the approval of a majority of voters in each of the participating municipalities (el-Wakil and Strebel, 2022).[4] Between 1999 and 2019, almost 1,300 municipalities voted on 427 different merger projects (Strebel, 2022). Figure 1 shows these municipalities in red. As one can see, these merger projects take place in the whole of Switzerland and concern a substantive part of the Swiss territory.

Based on their merger experience, we can distinguish different types of municipalities (see Figure 2). A first differentiation is of course, whether a municipality ever embarked on a merger process or not. In a next step, the question is whether the voters of a municipality accepted a merger project or not. In 15% of all municipalities that participate in a merger project, the merger project is rejected in a popular vote. Among those that accepted a merger, we can then further distinguish those municipalities that implemented the merger reform in the end and those that did not. Since the decision to merge is a multi-sided decision – i.e. it requires the approval of a majority of voters in all participating municipalities – accepting a merger is a necessary but not a sufficient condition to merge. For a merger to be implemented, the partner municipalities also need to say yes. Therefore, we can further distinguish municipalities that accepted a merger which was cancelled and municipalities that accepted and implemented a merger, because all other involved municipalities also agreed to merge. We consider this last group of municipalities as our treatment group. Those municipalities that never participated in a merger project represent our first control group, whereas those that also accepted a merger which was cancelled *due to the refusal of another municipality* represent our second control group.

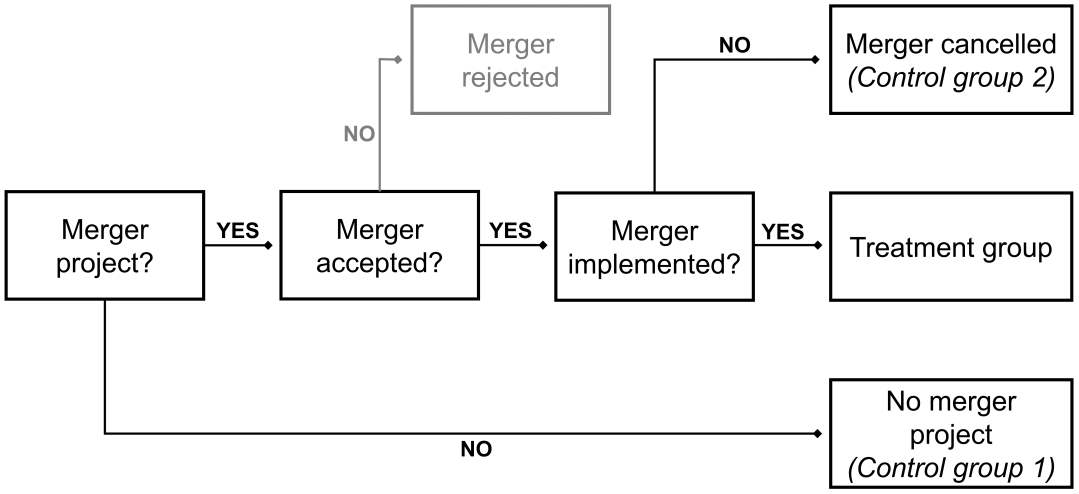
[4] As always, there are exceptions to this rule. In the cantons of Jura and Ticino, some merger projects were implemented even though the voters of one or several municipalities rejected it at the ballots: those municipalities that accepted the merger still merged, without a renewed vote. Moreover, the cantonal government of Ticino has also forced municipalities that rejected a merger to merge nevertheless, thus overruling the outcome of the local popular vote. Yet, this concerns only very few cases. Finally, the canton of Glarus is the only canton, where a top-down reform that concerned the whole cantonal territory was implemented in 2011 – after the citizens of the canton had decided to merge the 25 municipalities of the canton into 3 new ones at the *Landsgemeinde* (the canton's citizen assembly that takes place outdoors once a year) in 2007 (Hofmann and Rother, 2019; Frey, Briviba and Gullo, 2023).

Figure 1: Map: municipalities that voted on a municipal merger in Switzerland, 1999-2019



Note. Municipal boundaries of the year 2000.

Figure 2: The pathway to merging: treatment and control groups



Swiss municipalities are not the only ones to experience voluntary, bottom-up, processes that are decided on in popular votes. While the majority of local territorial reforms are implemented top-down (Baldersheim and Rose, 2010), several countries have experi-

enced voluntary bottom-up merger processes since the new millenium – for example Finland, Japan, Iceland, or Norway – and in many cases, these mergers were accompanied by consultative or binding referendums in the involved municipalities (Miyazaki, 2014; Folkestad et al., 2021; Karlsson and Eythórsson, 2022; Karv, Backström and Strandberg, 2022). The Swiss case, thus, clearly fits in with this trend towards voluntary territorial reforms.

Swiss municipalities are also key actors in the multilevel structure of the Swiss federal state (Linder and Mueller, 2021, 74-79). First, they are central for the implementation of higher tier policies – be it in the areas of social assistance, education, or elderly care. Local governments, thus, also account for one third of total public spending in Switzerland. Second, they have a substantive discretion in policy-making (Ladner et al., 2019). For instance, Swiss municipalities can set their own tax rates and they can make naturalization decisions concerning foreigners living in the municipality. Finally, Swiss municipalities are also important focal points for citizens' place attachment and local identities as well as for collective will-formation and participation processes, through elections, popular votes, as well as the widespread reliance on lay politicians in Swiss local government.

Studying the impact of municipal mergers on citizens' political disaffection in Switzerland is, thus, relevant both because municipal mergers are a salient topic that citizens can pronounce themselves on and because municipalities are an important tier of government in the Swiss multilevel system. We use data on all municipal merger projects that have been voted on between 1999 and 2019. For each of these merger projects, we have collected data on all the involved municipalities, the year and the outcome of the local popular votes, as well as the year the merger was implemented – if it passed the popular vote stage. This data allows us to conduct a fine-grained analysis of the effect of territorial reforms on citizens' political disaffection.

3.2 Combining municipal merger data with the Swiss Household Panel

To measure citizens' levels of political disaffection, we use data from the Swiss Household Panel (SHP) (Tillmann et al., 2022). The SHP is a panel survey that is fielded on a yearly basis since 1999 and involves a total of 22,236 households. For our study period, 1999 to 2019, the SHP comprises of three samples, the original sample of 1999, a first refreshment sample in 2004, and a second refreshment sample in 2013. The SHP, together with the German Socio-Economic Panel and the British Household Panel, figures among the longest running panel studies in the world and provides high-quality data to measure social and political change. As our dependent variables, we rely on SHP survey items tapping citizens' political trust, satisfaction with democracy, political interest, and feeling

of political influence.[5]

A crucial feature of the SHP for our study is that it records the municipality where respondents live. Upon signing a data protection agreement, researchers can obtain access to the official municipality codes for each household and year that is present in the SHP. This allows us to combine the information on municipal mergers with the SHP data. To combine the two datafiles, we have matched the municipal mergers and the SHP data based on the municipality code and the year. For each municipality that was involved in a municipal merger, the year the merger was voted on, as well as all subsequent years prior to the merger, contain the information on the merger project. In this way, all respondents that were either present in a survey wave in which a merger project was voted on or in subsequent survey waves prior to the implementation of the merger, obtained the information on the merger – and hence end up in our "treatment" group. For these respondents, we then add the information on the merger project to all other years they lived in the respective municipality and participated in the SHP.

While this is a straightforward way of combining the municipal merger with the SHP data, there are a number of challenges that required consequential decisions, i.e. the removal of respondents from the sample (see Table 1). Most of these challenges relate to the fact, that only 10% of all respondents (N=3,005) participated in all 20 panel waves between 1999 and 2019. Table A.1 gives an overview of some types of respondents that we encountered in the data. First, there respondents living in a merged municipality that entered the panel only *after* the merger was implemented (e.g. respondent 3 in Table A.1). We, thus, do not have information on them for the pre-merger period – particularly not on their place of residence. We therefore exclude these respondents from our sample, since they cannot serve as a viable control group. This concerns 2,002 out of 30,169 respondents.

Second, there are respondents that experienced more than one municipal merger project (e.g. respondent 7 in Table A.1). This can be the case, because the municipality they lived in participated in a merger project several times – for example because a first merger project the municipality voted on was cancelled due to a lack of popular support and then a second attempt succeeded. Another possibility is that the respondent moved from one municipality to another municipality that was involved in a merger project. Since it is difficult to decide in such situations, which years after the first merger are to be treated as post-merger years of the first merger and which years as pre-merger years for the second one, we equally exclude these respondents from the sample (N=316).

[5]The question wording for each item used is as follows: Political trust = "How much confidence do you have in the Federal Government (in Bern), if 0 means "no confidence" and 10 means "full confidence"?"; Satisfaction with democracy = "Overall, how satisfied are you with the way in which democracy works in our country, if 0 means "not at all satisfied" and 10 means "completely satisfied"?"; Political interest = "Generally, how interested are you in politics, if 0 means "not at all interested" and 10 means "very interested"?"; Feeling of political influence = "How much influence do you think someone like you can have on government policy, if 0 means "no influence" and 10 means "a very strong influence"?"

Table 1: Overview of respondents in-/excluded in sample

Respondent type	N	In sample?
All SHP respondents	30,168	–
Post-treatment only	2,002	No
Multiple mergers	316	No
Participation gaps	547	No
Single-year/pre-treatment only	4,769	No
Municipality rejected merger	434	No
Municipality in Glarus	79	No
Study sample	22,021	Yes
Control group 1	20,418	Yes
Control group 2	357	Yes
Treatment group	1,246	Yes

Third, there are respondents with panel participation gaps (e.g. respondent n in Table A.1). We might, for instance, have a respondent that participated from 1999-2001, and then again from 2005-2009. While such participation gaps are not necessarily a problem, they pose one for our assignment of municipal mergers. If in the example just mentioned, a merger project was voted on in 2003 and implemented in 2004, we would miss this information and wrongly assign the respondent to the control group. For this reason, we exclude all respondents from the sample that have lived in a municipality that was involved in a merger project and whose first and last year in the panel encompass the years of the merger, but where the matching procedure does not result in a match, because the respondent did not participate in the relevant years (N=547).

Fourth, we also exclude the panel years in which the respondents that belong to the treated group – i.e. those living in a municipality involved in a merger while the merger process took place – were not living in the respective municipality that was affected by a merger. For example, if a respondent lived in a municipality from 1999 to 2006, and the municipality merged in 2003, it experienced the merger there. But if the household then moves to another municipality in 2007 and remains in the panel until 2009, we exclude the years 2007-2009 from the data. We do so, because we cannot be sure whether potential changes in citizens' perceptions in the post-treatment period are due to the merger experience or to the move. This concerns 3,660 out of 192,466 respondent-years.

Fifth, we also cannot include those respondents in our analysis that were either only present in the panel in one year – and hence we do not have a time-series – or where we only have observed pre-treatment years. This concerns 4,442 respondents that belong to the control group, i.e. live in municipalities that were not involved in a merger project, and 327 treated respondents, i.e. those that experienced a merger project while living in a particular municipality.

Sixth, and finally, we exclude two types of respondents from the sample based on their

experiences with municipal mergers. On the one hand, there are 434 respondents living in municipalities where a merger got rejected in a popular vote ("merger rejected" in Figure 2). These respondents have experienced a merger process, but a majority of their fellow citizens did not approve of it and hence they cannot be included as a control group. On the other hand, we exclude 79 respondents from the canton of Glarus because it is a case of top-down and not a bottom-up merger (see also 4). Here, municipalities themselves did not have a possibility to refuse to merge, since the authoritative decision was made by the cantonal citizens assembly and hence a higher level. Respondents from Glarus, thus, experienced a top-down and not a bottom-up merger like the rest of the respondents in the treated group.

After removal of all these respondents, we are left with a sample of 22,021 respondents, 1,246 of which belong to the "treatment" group, i.e. lived in a municipality that was involved in a municipal merger project. The vast majority of the respondents live in municipalities that never experienced a merger process between 1999 and 2019 (control group 1). Finally, a third group of respondents (control group 2) lives in municipalities that experienced a cancelled merger (see 2).

3.3 Estimation strategy

To assess how territorial reforms impact political disaffection, we rely on a difference-in-differences (DiD) design (Angrist and Pischke, 2014). These are widely employed to study the impact of municipal mergers and territorial reforms (Blesse and Rösel, 2017; Gendźwiłł, Kurniewicz and Swianiewicz, 2020; Rodrigues and Tavares, 2020). The logic underpinning this approach is that for the treated individuals (i.e. individuals living in municipalities that have implemented a merger), we construct the counterfactual change in political disaffection as if these individuals would have lived in a municipality that has not merged. Here, we rely on the change in political disaffection from individuals in the control group (i.e. individuals living in municipalities that have not implemented a merger). Then, this design should yield a reliable causal estimate of municipal mergers on political disaffection, provided the parallel trends assumption is met (Angrist and Pischke, 2014, pp.184-186). In the present context, this would mean that pre-treatment levels of political disaffection follow a similar trajectory across all individuals in the treatment and control group and only diverge after a respective merger was implemented.

Studying the impact of Swiss municipal mergers with a DiD design poses two challenges: municipalities self-select into treatment and municipalities do not all merge at the same point in time, and we can hence not identify one moment in time where all treated respondents' treatment status changes from pre- to post-treatment. Regarding the self-selection into treatment, one can argue that the problem is less severe in our case, because we are not interested in the causal effect of the merger at the aggregate level,

but at the individual level. Individual respondents, thus, can only influence to a limited extent whether they will be exposed to a merger or not, since mergers are collective decisions and the individuals in our data might have diverging opinions from the majority of their municipality. In this sense, although municipalities do self-select into treatment, the individuals living in these municipalities do not (necessarily).

However, due to the design of municipal merger processes in Switzerland we also have the unique opportunity to circumvent the self-selection problem and compare the treatment group – respondents living in a municipality that implemented a merger – to another control group than those that live in municipalities that did not participate in a merger project. Recall the pathway to mergers in Figure 2. We have two groups of respondents that live in municipalities that accepted a merger, but only one group of respondents has experienced the implementation of a merger. The other group of respondents did not experience a merger implementation – but not because their municipality of residence rejected a merger, but because *another* municipality did. This second group, thus, experienced an exogeneous *de*-selection from being treated. We use respondents that live in municipalities that had their merger cancelled as an alternative control group to address the problem of self-selection.

The second problem concerns the asynchronous treatment timing of merged municipalities. Between 1999 and 2019, municipalities can experience a merger in any given year and hence respondents are treated in different years. In such a setting including multiple time periods and units, the standard way to obtain DiD estimates is by means of a two-way fixed effects regression (TWFE):

$$y_{it} \quad = \quad \alpha_i + \lambda_t + \delta^{DD} \mathrm{D}_{it} + \epsilon_{it},$$

where α_i and λ_t, represent unit and period fixed effects respectively, D_{it} denotes a treatment indicator that switches to 1, when treatment occurs, and δ can be interpreted as the average treatment effect on the treated (ATT) under the parallel trends assumption. While a TWFE estimator yields reliable DiD estimates, when treatment occurs for all units at one single point in time, recent advances in econometrics have suggested that this is not the case when units receive treatment in different time periods (i.e. when treatment is staggered) (e.g., Baker, Larcker and Wang, 2022; Callaway and Sant'Anna, 2021; Goodman-Bacon, 2021). Here, the major problem is that the DiD estimates obtained via TWFE regressions are essentially many singular, variance-weighted DiD regressions, where two units (one treated, one untreated) are observed over two time periods (pre-treatment and post-treatment). When treatment then occurs at different time periods, in some of these DiD regressions units that are already treated might act as control units, thereby biasing the ATT uncovered by the TWFE DiD regression. To circumvent this

problem, instead of facilitating a standard TWFE DiD regression, we rely on a DiD estimator as presented in Callaway and Sant'Anna (2021), estimating DiD regressions by treatment cohort. Using the R package `DiD`, this means that for each year in which treatment occurs, we estimate a separate DiD regression, and then subsequently aggregate these cohort estimands to form an overall measure of the ATT.

4 Results

Above, we have argued that bottom-up territorial reforms – where the affected jurisdictions decide themselves whether or not they want to integrate with or separate from other jurisdictions – will not translate into political disaffection. The driver behind political disaffection after territorial reforms would thus be the way the reform was conducted and not the change that comes with the reform itself.

Table 2: DiD estimates: different samples and methods

	Control group 1		Control group 2		Glarus	
	CS (10y)	CS	CS (10y)	CS	Merger 2011	Control group 1
Political trust	0.148	0.195	0.259	0.347*	-0.027	-0.226
	(0.101)	(0.135)	(0.141)	(0.167)	(0.235)	(0.190)
Satisfaction	0.083	0.178	0.19	0.365*	-0.291	-0.374***
with democracy	(0.094)	(0.125)	(0.125)	(0.166)	(0.213)	(0.138)
Political interest	0.317*	0.656*	0.301*	0.507+	-0.298	-0.332*
	(0.087)	(0.277)	(0.141)	(0.277)	(0.243)	(0.199)
Political influence	0.267	0.273	0.077	0.009	0.013	0.234
	(0.141)	(0.159)	(0.165)	(0.209)	(0.335)	(0.270)

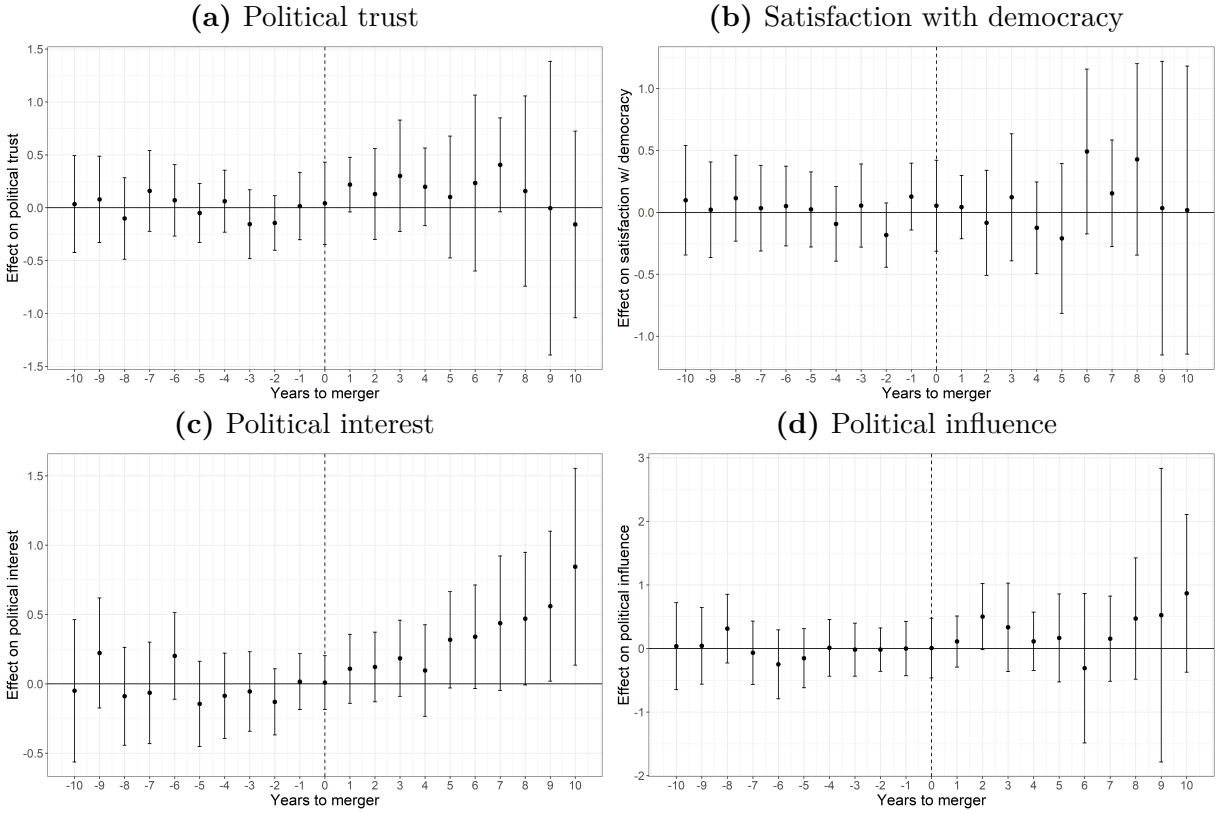
Note. +p<0.1 *p<0.05 **p<0.01 ***p<0.001 Displayed are average treatment effects on the treated; clustered standard errors in parentheses; CS (10y)=Callaway and Sant'Anna (2021) event-study estimator for +/-10 year bandwith from treatment, CS=Callaway and Sant'Anna (2021) event-study estimator for full sample; the estimator for Glarus subsample is a standard TWFE DiD estimator.

Columns 2 and 3 in Table 2 show the ATT when compared to those respondents living in municipalities that were never involved in a merger project (control group 1) – once focusing on the 10 years prior/after the merger (column 2) and once for the full sample (column 3). We can clearly see that merging did not increase respondents' political disaffection. If anything, political trust, satisfaction with democracy, and feeling of political influence increases among respondents living in merged municipalities – but these three effects fail to reach conventional levels of statistical significance in the both specifications. However, we find a statistically significant and positive effect of merging

on political interest: respondents in merged municipalities report a slightly higher level of political interest after the merger compared with respondents in municipalities that were never involved in a merger process. While the substantive effect is small (11% of the standard deviation), this result contrasts with existing studies: respondents experiencing a bottom-up merger apparently become somewhat more and not less politically interested. This is support for our hypothesis$_1$.

Figure 3 shows the time trends of of the DiD estimator for the four dependent variables 10 years prior and after the merger. From these four subfigures, we can see that the parallel trend assumption holds: there are no significant differences in the trends of the treatment and the control group prior to the merger. We also do not find statistically significant treatment effects for the estimates of individual years after the merger on any of the four dependent variables. This somewhat contrasts with the results for political interest from columns 2 and 3 in Table 2, where the overall ATTs are statistically significant. Yet, we clearly see that all post-treatment estimates are in the positive.

Figure 3: DiD estimates with staggered treatment: control group 1

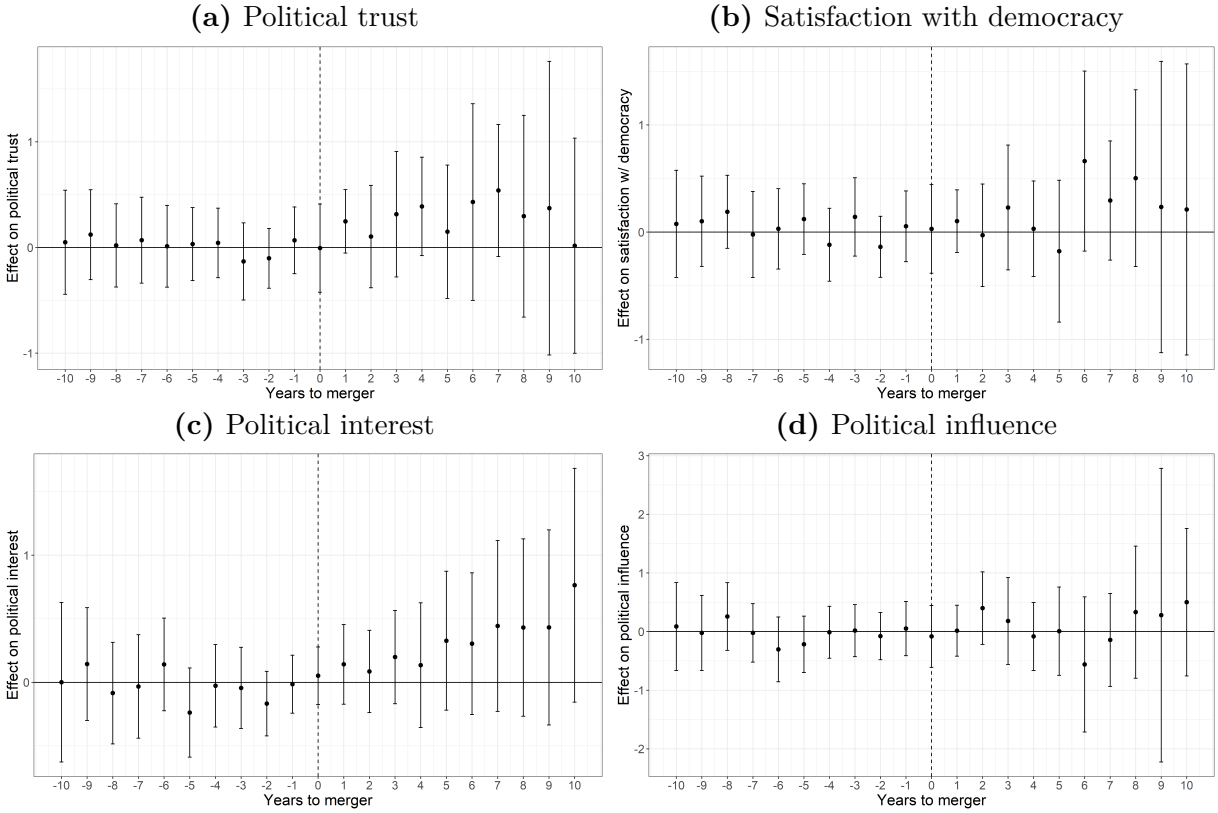


Note. Callaway and Sant'Anna (2021) estimators with individual-year two-way fixed effects. Error bars represent 95% confidence intervals.

Do these results hold when we change the control group to address the problem of self-selection into treatment by the merged municipalities? Column 4 and 5 of Table 2 show the ATTs when we compare the treated respondents to those respondents living in municipalities that accepted a merger, but where the merger was not implemented

due to a rejection of another municipality. The *de*-selection of the respondents in the control group from the treatment group was thus exogeneous. The results are stable for this alternative specification. Again, we find non-significant positive effects for political trust, satisfaction with democracy, and political influence for the 10-year bandwidth, but significant positive effects for political trust and satisfaction with democracy for the full sample. Moreover, the positive and statistically significant effect for political interest persists – even if only at the 10% level in the full sample. Finally, Figure 4 shows the time trends of these effects and again the results are very similar to those from Figure 3.

Figure 4: DiD estimates with staggered treatment: control group 2



Note. Callaway and Sant'Anna (2021) estimator with individual-year two-way fixed effects. Error bars represent 95% confidence intervals.

4.1 Mechanism: bottom-up vs top-down mergers

How can we explain the absence of a merger effect in Switzerland when scholars have found significant effects on citizens' political support? The results reported so far put a question mark behind the established story that an increase in jurisdiction size deteriorates citizens' perceptions of democracy, their involvement with politics, and their perceptions of political influence.

Above we suggested that the effects observed in other studies might not have to do with an increase in jurisdiction size, but with the reform process itself – namely that mergers are imposed "top-down" on jurisdictions by higher government tiers. Indeed, it

might be this reform approach that triggers a negative response on the part of the citizens and not the change in jurisdiction size.

We provide tentative evidence for this interpretation by focusing on the case of Glarus. Glarus is the only canton in Swiss history that has implemented a large-scale municipal merger reform top-down, that is where the municipalities themselves could not decide on the issue (see footnote 4). The final decision on the reform was made in 2007 and in 2011, the 25 Glarus municipalities were merged into 3 new ones – a reform by which all municipalities were affected. This case, thus, provides us with a valid comparison point in the Swiss context to assess whether mergers implemented top-down indeed have different effects than bottom-up merger processes.

To assess whether the Glarus mergers increase citizens' political disaffection, we compare the few respondents from the canton of Glarus (see Table 1 with respondents from other cantons that experienced a bottom-up merger in 2011 (column 6) and with respondents from municipalities that never experienced a merger (column 7). Because the mergers all took place in the same year, we can rely on standard TWFE DiD estimators. The results are in line with our argument. We find negative effects of the Glarus merger on three out of the four dependent variables – only for political influence we find (marginally) positive effects that are not statistically significant. Moreover, for the comparison of the Glarus respondents with respondents that never experienced a merger, we find statistically significant and negative effects on satisfaction with democracy and political interest. The lack of statistical significance for the results comparing Glarus respondents to respondents that experienced a bottom-up merger in the same year is likely due to the low number of respondents and the resulting lack of statistical power.

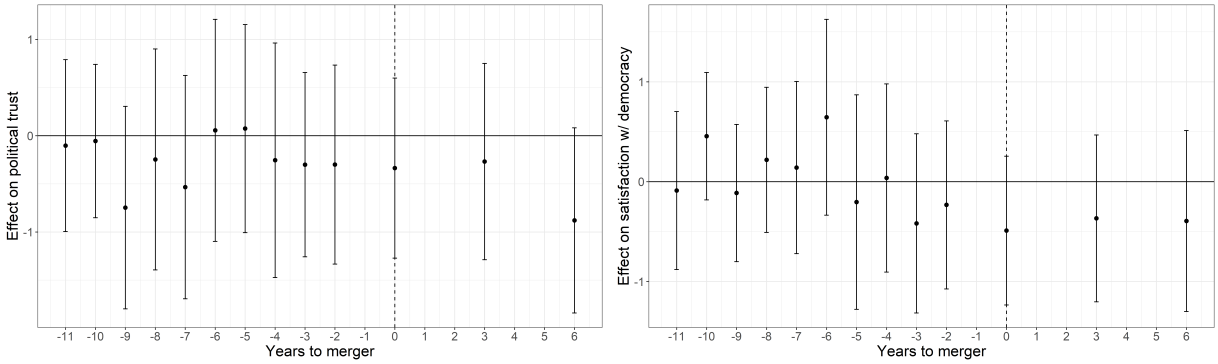
Figure 5 displays the time trends for Glarus respondents compared with respondents from control group 1, i.e. those that did not experience a merger process. Displayed are interaction effects between a dummy variable indicating belonging to the treatment group or not and a time variable indicating time pre-/post 2011, with 2010, one year prior to the merger, as a baseline year. As we can see, the yearly estimates are again not statistically significant, but they all point in the same direction.[6]

While these results for the Glarus case have to be taken with a grain of salt – due to the small number of treated respondents – they provide support for our argument: the negative impact of municipal mergers on citizens' political support does not necessarily stem from the experienced increase in jurisdiction size, but rather from the way the reform is implemented. In sum, we find support for hypothesis H_1 – bottom-up mergers do not have a negative impact on citizens' political support – and our results even suggest that bottom-up mergers might have a positive impact on citizens' political interest.

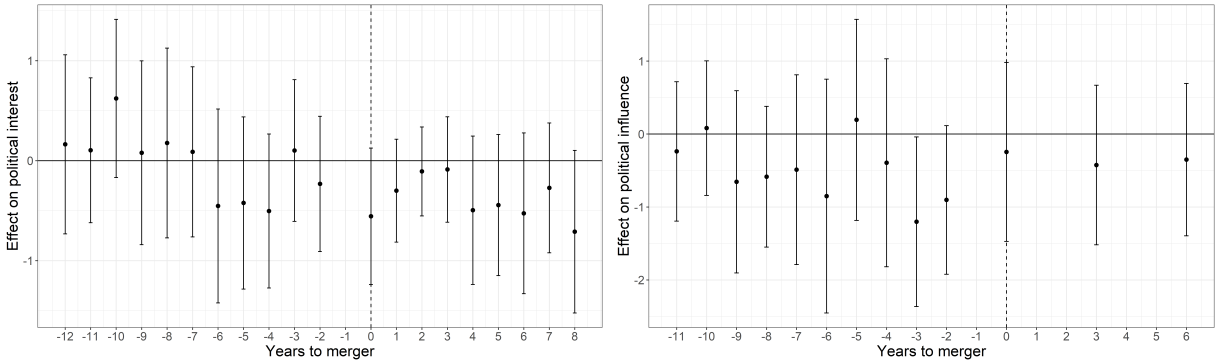
[6]The missing coefficients for the years +2 (2013), +4 (2015), and +5 (2016) for political trust, satisfaction with democracy, and political influence are due to the fact that these three questions were not asked to panel participants in these years. For political interest, there are no such gaps as the question was fielded in every panel wave.

Figure 5: DiD estimates for Glarus merger: control group 1

(a) Political trust **(b)** Satisfaction with democracy



(c) Political interest **(d)** Political influence



Note. DiD estimator with individual-year two-way fixed effects. Error bars represent 95% confidence intervals.

5 Conclusion

Within the literature on the political consequences of territorial reforms, there has been a general shortage on studies investigating the causal effects of municipal mergers at the individual-level. The vast bulk of existing work has looked at aggregate-level outcomes such as local turnout (e.g. Koch and Rochat, 2017; Heinisch et al., 2018; Lapointe, Saarimaa and Tukiainen, 2018; Bhatti and Hansen, 2019; Rodrigues and Tavares, 2020; Allers et al., 2021) or support for radical right parties (e.g. Rösel, 2017; Blesse and Rösel, 2019), while the few studies that look at individual-level outcomes (e.g., Lassen and Serritzlew, 2011; Hansen, 2013, 2015), suffer from limitations in terms of the data they use.

By combining original data on Swiss municipal mergers with geo-coded individual-level panel data from the Swiss Household Panel (SHP) over a time period of 20 years, we presented novel evidence on the causal effects of municipal mergers on citizens' political attitudes, leveraging the power of a new dataset with over 70,000 individual-year observations. In contrast to most existing studies which focus on jurisdictional reforms implemented top down, mergers in the Swiss context are decided on bottom-up in local referendums and allows us to probe into the scope conditions of existing studies. As argued, we do not find a negative effect of municipal mergers on citizens' political trust, satisfaction with democracy, and political influence, and we uncover a positive effect on

citizens' political interest. This result is robust when we address the problem that Swiss municipalities self-select into reform processes. Moreover, we provide tentative evidence for the mechanism we propose. The effect of jurisdictional reform is not (only) an effect of size, but also an effect of the reform process: in the case of the top-down reform implemented in Glarus in 2011, we find negative, and statistically significant, effects on citizens' satisfaction with democracy and political interest.

How do these findings square with existing studies that have been conducted on bottom-up mergers? Lapointe, Saarimaa and Tukiainen (2018) study the political consequences of bottom-up municipal mergers in Finland and find a negative effect on turnout as well as a negative effect on perceived political efficacy which is based on aggregate-level results from repeated cross-sections. Moreover, Koch and Rochat (2017) find a negative effect on turnout in merged municipalities from the Swiss canton of Ticino. One possible explanation for these contrasting results might be the level of citizen involvement in these bottom-up merger processes. In Finland, it is local councils that decide on municipal mergers and decision are not made in local referendums. In the canton of Ticino, referendums on municipal mergers are held, but the results are not legally binding and hence only of consultative nature – even though they are respected in most cases.

In a future iteration of this paper, we will try to further probe into the mechanism that is behind our findings and to address some limitations of the current version of the paper. A first, straightforward, further test is to assess whether focusing on respondents from the canton of Ticino yields different results – because their vote was only consultative and not binding.

Second, our study needs to address the problem of treatment anticipation. Currently, we use the moment a merger was implemented as the moment of treatment. However, respondents are possibly aware of the pending merger from the moment of the popular vote. Since we consider the process to be important for the political consequences of a reform, an important additional analyses is to study changes not only in the merger- but also in the vote year. Moreover, we can also further leverage data from the merger referendums. It might, for instance, be conceivable, that in a municipality with a close race, there is more polarization around the issue and hence citizens might have less positive views on politics and democracy as a result of the merger process.

Third, we want to provide evidence on the role of the change in size by separating respondents into different groups depending on the "shock" in jurisdiction size that their municipality experienced (living in a relatively small or a relatively large municipality). While preliminary results (not shown) do not suggest differences depending on the size change respondents were subject to, this needs to be studied in more detail.

Fourth, we will further leverage the group of respondents that live in a municipality that accepted the merger but where the merger was cancelled due to another municipality rejecting the merger. If having a voice in the process is important, we should see that

respondents in this group become *more* disaffected with democracy than respondents that did not experience a merger process, because a majority in their jurisdiction voted in favor of a reform that is in the end nevertheless not implemented. In case this frustration materializes at the individual level, this would be further evidence for the relevance of the merger process.

Despite its preliminary nature, we consider that our study can make several contributions to existing research. First, our results suggest that research on jurisdictional reform should pay closer attention to the reform process and not only to the impact of a reform on jurisdiction size – particularly when studying its political consequences.

Second, our study is innovative when it comes to causal identification. The Swiss case provides us with the unique opportunity to address the self-selection issue in the study of voluntary jurisdictional reforms. While the decision of municipalities to engage in jurisdictional reform might be endogeneous to citizens' perceptions of democracy, the implementation of the reform does not lie in one municipality's hands alone. Given that all municipalities need to agree to a reform, municipalities might be involuntarily deselected from implementing a merger and thus from being treated.

Finally, and most importantly, we provide the first study that uses individual-level panel data on an entire country to study the political consequences of jurisdictional reforms. Unlike many existing studies, we do not find a "backlash" of jurisdictional reform on citizens' perceptions and we provide a basis for a more nuanced understanding of the effects of jurisdictional change – and policy-making more generally – on citizens' political attitudes and behavior.

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Appendix

Table A.1: Illustration: types of respondents

Year	...	2005	2006	2007	2008	2009	2010	...	Group	In sample?
Respondent 1	...	-2	-1	X	1	2	3	...	Treated	Yes
Respondent 2	–	–	-2	-1	0	1	–	–	Control	Yes
Respondent 3	–	X	–	2	3	4	5	...	Treated	No
Respondent 4	–	–	–	-1	X	1	2	...	Treated	Yes
Respondent 5	...	-1	0	1	–	–	–	–	Control	Yes
Respondent 6	...	-2	-1	0	1	2	–	...	Control	Yes
Respondent 7	...	-1	X	1	2	X	1	...	Treated	No
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
Respondent n	...	-2	–	X	–	–	3	...	Treated	No

Note. X = treatment year, 0 = counterfactual treatment year, – = year, in which respondent is not observed/did not participate in panel wave.