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Original Article

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Ne me quitte pas! School closures and electoral outcomes in France

Marli Fernandes[1,*], and José Tavares[2]

[1]Department of Economics and Management "Marco Fanno," Università Degli Studi di Padova, Padova, 35123, Italy
[2]Nova School of Business and Economics and Centre for Economic Policy Research (CEPR), Carcavelos, London, 2775-405, United Kingdom

*Corresponding author. Department of Economics and Management "Marco Fanno," Università Degli Studi di Padova, Via del Santo 33, 35123, Padova, Italy. Email: marli.fernandes@unipd.it

Abstract

This article analyzes the causal impact of school closures on electoral outcomes in France between 1995 and 2022. Using a difference-in-differences design, we show that the closure of the only school in a given municipality leads to an increase in 0.527 percentage points in votes for the populist far right and 0.968 percentage points for the left in presidential elections. Voters prefer the populist far right when their pre-existing levels of trust in mainstream parties are low. The identified electoral effects are absent in municipalities with multiple schools, suggesting that citizens are particularly concerned with the lack of access to public education.

Keywords: **elections; far-right; populism; public services; schools.**

JEL classifications: **D72, D91, H41.**

1. Introduction

Voting behavior and political attitudes in Western democracies increasingly reveal strong spatial patterns rooted in geographic inequalities between urban and rural areas (Rodríguez-Pose et al. 2023). Territorial inequalities are evident as regards access to public infrastructure and public services. Rural locations, as well as midsize urban areas, are prime examples of places that have been or feel left behind by central governments. An easily perceived demonstration of local decline is when access to a given public service is discontinued. Education, as well as health, is an area where lack of local access is likely to be of high relevance to the electorate. In this article, we explore how the closure of the last school in a given municipality affects presidential electoral outcomes in France.

The economic literature has highlighted how voters attribute considerable importance to the provision and quality of public services. Examples include contributions by Ajzenman and Durante (2023), Huet-Vaughn (2019), and Rogger and Somani (2023). This is far from surprising, as the consumption of public

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services has contributed to around 20 per cent of the total reduction of global poverty since 1980, as noted by Gethin (2023). In particular, school access positively impacts education and wages (Duflo 2001).

A growing literature has connected the loss of access to public services and electoral resentment in rural areas. Cremaschi et al. (2024a, b), Dickson et al. (2024), and Fetzer, Edenhofer, and Garg (2025) have documented how such resentment has fueled the appeal of populist right-wing parties. Far-right populist parties are particularly well positioned to benefit from these grievances, as they have been effective at attributing rural decline to urban elites and central government decision makers, as shown in Margalit et al. (2025). In contrast, left-wing parties, especially social democratic parties, have traditionally been associated with the defense of universal access to public services.

In this article, we analyze the electoral consequences of public-school closures in France. While the existing literature has primarily examined how public service retrenchment benefits the populist far right, we study, to our knowledge for the first time, whether and when such closures can also increase support for left-wing parties. In particular, we investigate the conditions under which the loss of access to public services leads voters to support far-right populist parties rather than parties of the left.

Given France's central role in the European Union, understanding the dynamics of French politics in relation to school closures and the concomitant rise in populism is relevant in its own right. However, school closures are not unique to France. School consolidation policies, which involve school closures, have been favored in several OECD countries, as documented in Abalde (2014). This policy, though cost-effective due to economies of scale—as suggested in Andrews, Duncombe, and Yinger (2002) and Duncombe and Yinger (2007), impacts student outcomes in ways that research has not been able to definitively unravel.[1] In China, for instance, school closures appear to boost grades for older students but reduce them for younger students—see Liu et al. (2010). In contrast, in the Netherlands, De Haan, Leeven, and Oosterbeek (2016) found a small positive effect in primary school students. In Denmark, Beuchert et al. (2018) identified a short-term negative effect due to the psychological cost of adjusting to a new environment. Berry and West (2010) examine the case of the USA, where over 120,000 schools were closed through consolidation between 1930 and 1970, resulting in an increase in the average school size from 87 to 440 students. These authors find that students educated in smaller schools saw higher returns to education and completed more schooling years.

The controversy surrounding school closures extends beyond their effects on children. In rural areas, schools serve as a site for social gatherings and a community hub, and they are relevant local employers. The loss of public services may lead citizens to feel abandoned and resentful toward the government.[2] In addition, a school closure generates additional use costs, for example, transportation or congestion costs. Previous research shows how, in rural communities, a strong sense of place-based identity, in tandem with the associated loss of communal gathering spaces, makes far-right appeals more attractive, as documented in Fitzgerald and Lawrence (2011) and Bolet (2021).

France provides an ideal setting to test the significance of school closures on electoral outcomes. Since 1995, and despite a relatively stable birth rate, over 10,000 schools have been closed in the country. Through panel data analysis, we investigate the role of public service closures on electoral outcomes, crossing information on school closures and presidential election outcomes between the years 1995 and 2022. In France, decisions on school closure is centralized at the national level, with little discretion afforded by municipalities, thus providing a valuable laboratory to assess responses to feelings of abandonment by a central authority. We find that closing the last remaining school in a municipality

1. Engberg et al. (2012) and Brummet (2014) find positive effects on student outcomes when low-performing high schools are targeted. This article focuses on kindergarten and primary schools.
2. As a response to the Yellow Vests movement, between January and April 2019, the French government organized a "Great National Debate," where citizens all over the country were invited to discuss and give their opinions on several topics, including state organization of public services. One of the conclusions was that citizens demanded closer public services. In the words of former Prime Minister Edouard Philippe, "[closer public services] is a requirement of fraternité, proximity, daily contact. Isolation, abandonment, indifference, lack of consideration come up in many words. The answer to this deep uneasiness probably consists in restoring the balance between the metropolis and the municipalities."

positively affects the share of votes of the far-right populist candidate from the Rassemblement Nationale (RN), but also the vote share of left-wing parties. In contrast, the votes for the far left and the right are negatively affected. We focus our analysis on the positive impact of school closures on the far-right populist and the left-wing. Our methodology employs a reweighted difference-in-differences strategy with a staggered adoption design, relying on spatial and temporal variation to causally identify the impact of closing a school in a municipality on electoral outcomes. We find no evidence of pre-existing trends for voting in the far-right populist and left. We compare presidential election results in municipalities affected by school closures with those in non-treated municipalities before and after the closure.

In those municipalities, primarily rural, which lose their only school, voting for the populist far-right increases, on average, by 0.52 percentage points in the following election, with the effect vanishing after four elections. In the case of left-wing parties, we find a positive effect of 0.97 on the vote share, with the impact growing over time. A similar effect is found for municipalities without a school that neighbor the municipality that suffered the closure. This may be explained by the fact that neighboring municipalities are likely to have some of their children commuting to the municipality directly affected by the closure. On the other hand, we do not find significant electoral effects of a school closure for municipalities with more than one school, nor in municipalities with one school whose neighboring municipality lost its last school. Our results thus suggest that the electoral response through voting for the left or the populist far right is associated with the end of proximate access to education, not just the closure of one among several existing schools.

Additional analysis shed light on the driving forces behind our findings. Municipalities that are more than 2 km from the closest school drive our results. We find that votes for the far right are significant only for municipalities where abstention was higher and the vote shares for the traditional left and right-wing parties were initially relatively low. Therefore, we conclude that the populist radical right benefits most from the mobilization of politically disaffected voters not inclined to vote for more centrist parties. On the other hand, the left sees its vote share increase most among the municipalities that initially voted relatively more for the left and less for the far right. In other words, school closures activate different responses, in accordance with the political history of the municipality. Our results, for both the populist far right and the left, are driven by municipalities with a share of immigrants above the median, suggesting the central government's failure in providing public schools combines with immigration to trigger voters for the left and the populist far right.

The article is structured as follows: Section 2 provides an overview of the related literature, Section 3 describes the institutional context, Section 4 presents the data, Section 5 outlines the methodology, Section 6 reports the results, and Section 7 concludes.

2. Support for pro-redistribution parties and public service deprivation

Public goods aim to provide universal access, but their provision is inherently place-based. For example, children need to travel a distance to school, as do patients who want to access a hospital. Thus, accessibility depends on distance. Using Belgian data, Castanheira et al. (2025) find that public goods are unequally distributed in space, favoring the upper income quintiles, and that this allocation increases inequality by 20 per cent to 50 per cent. Over the past 20 years, economic change has led to greater interterritorial disparities, resulting in "left-behind places." The closure of public services can widen the gap between rich and dynamic areas, usually urban, and poor or declining rural regions. Redistribution in the form of public services is progressive and quantitatively substantial, and, unsurprisingly, voters attribute importance to the provision and quality of public services when deciding how to vote. Ajzenman and Durante (2023), Huet-Vaughn (2019), and Rogger and Somani (2023) suggest a strong link between the redistributive impact of public goods and the vote.

This paper contributes to the emerging literature on the relationship between populism and rural resentment. Far-right populist parties may benefit from rural resentment, as they promise to restore

fairness and sovereignty, which can be viewed as an emotional form of retrospective voting. Margalit, Raviv, and Solodoch (2025) highlight how rural voters who feel neglected and believe they are not receiving a fair share of public services tend to blame urban elites and the mainstream political system, and respond accordingly. The closure of public services is interpreted by citizens as evidence of neglect by the central government, stirring up resentment. Communities that suffer from a lack of access to local public services are especially receptive to far-right rhetoric, as shown in Stroppe (2023). This holds even for economic shocks not directly related to the provision of public services, as pointed out in Cremaschi et al. (2024a, b). Stroppe (2023) concludes, for the case of Germany, that a long-term lack of access to public services contributes to geographically polarized discontent. Cremaschi et al. (2024a, b) focus on Italy and, specifically, the closure of local police stations, garbage collection, and public registers, and conclude that votes for the far right and concerns about immigration increase after a decrease in access to a public service. Dickson et al. (2024), by contrast, examine the closure of local healthcare facilities in the United Kingdom and find that closures affect the support for right-wing populist parties. For Denmark, Nyholt (2024) finds that right-wing populist parties increase their votes in both local and national elections by about 0.5 percentage points after a local school or hospital closes. We find the same average effect in our article.[3]

We also, to our knowledge, document when and how service closures increase support for left-wing parties, suggesting which mechanisms drive voters' choice between the populist far right and the left. In line with retrospective voting theory, voters punish the political mainstream, especially on visible issues such as public service availability.[4] Previous research has shown that local contextual factors influence voter attitudes and behavior (Newman et al. 2015). Voters might reinforce the vote for traditional parties that have a reputation for favoring redistribution, such as social democratic parties, as these are associated with policies that promote universal access to key public services, especially education and healthcare. Retrospective voting is also present when citizens with decreased access to public services resort to supporting social democratic parties, which credibly represent a break from austerity and a promised return to state-led service provision. These voting dynamics depend on the importance of the diminished public service provision and the perceived commitment of the party to universalism. While far-right populist parties interpret the loss of public services as an elite betrayal, social democratic parties view it as a regression in economic justice and a failure of the welfare state. These are parties which traditionally attract the support of workers, lower- and middle-income groups, as well as public sector employees (Benedetto, Hix, and Mastororocco 2020), the citizens most affected by inaccessible public services.

We argue that populist far-right populist parties gain an advantage over left-wing parties among politically disaffected citizens who harbor deep-seated political grievances. Algan et al. (2019) and Bo' et al. (2023) document how far-right voters exhibit lower levels of trust in comparison to left-wing voters. Bellodi et al. (2023) and Bellodi, Morelli, and Vannoni (2024) show how, in environments with low levels of trust, citizens demand simple commitments that are easy to monitor, including the maintenance of public services.

3. Institutional context

3.1 The French municipalities

In January 2021, France was composed of 34,918 municipalities—named *communes*, the lowest level of government, with an average population size of 1998, and a median size of 457, according to data from French National Institute for Statistics and Economic Studies (INSEE). There were 25,065 municipalities with a population below 1,000 inhabitants, and 53 municipalities with a population over 100,000

3. The decline of private services can also affect electoral outcomes. Martín-Cadenas (2025) finds that bank branch closures increase support for regionalist parties.
4. See Healy and Malhotra (2013) for a literature survey on retrospective voting.

inhabitants. This fragmentation corresponds to a large number of observations and the concomitant substantial variation in exposure to school closures, allowing us to estimate the effects of school closures with greater precision. Municipalities are the lowest of the three levels of local government.

Communes are responsible for local urban planning, social housing, the provision of primary schools, daycare services, municipal roads, public transport, and social, sports, and cultural facilities. *Commune* resources come mainly from local taxes that are directly determined by the municipal council and direct transfers from the State. The *communes*' responsibilities in education are limited, related to the ownership of the buildings, their construction, renovation, expansion, significant repairs, equipment, and operation, under Article L.212-4 of the Education Code. Decisions on school location, classroom size, teachers' recruitment and assignment, and learning programs are assigned to the central government. Secondary schools are managed at the national and departmental levels.

Electoral rules vary at the municipal level, depending on the population size of the municipality. In the case of municipalities above 1,000 inhabitants (3,500 prior to 2014), municipal councilors are elected from among lists of candidates, selected through a two-round proportional system where voters choose among lists of candidates, and the winning list receives a bonus seat. Once the municipal council is formed, council members elect the mayor as one among the elected councilors, so that the elected mayor tends to be the first candidate on the winning list.

In municipalities with fewer than 1,000 inhabitants, where most of the school closures in our sample occur, the system is candidate-based rather than list-based. Candidates can either run alone or appear on a ballot, where voters can freely select from. The number of candidates selected by a voter cannot exceed the total number of available seats in the council. To be elected in the first round, a candidate must obtain an absolute majority. If some seats remain vacant, a second round is organized, and a relative majority is sufficient to win. This system is called *Panachage*. As in larger municipalities, the newly elected council then elects one of its members to serve as mayor (Lippmann 2023). Given the small size of these municipalities, most candidates run as independents.[5]

3.2 Closing schools

In 1995, there were 65,673 schools in France, while by 2022, this number had fallen to 44,974. On average, 758 schools closed each year, with only 184 new schools opening. As shown in Fig. 1, schools closed continuously between 1995 and 2022; the highest numbers were between 1995 and 2002, and the lowest were in 2020 and 2021, related to the COVID-19 period. There appears to be no direct relation between the number of school closures and presidential elections, since the years with the highest or lowest number of school closures do not always coincide with election years. Supplementary Appendix Fig. B.1 illustrates the geographical distribution of all school closures in France, which are spatially distributed and not concentrated in a specific region.

Schools can close for three primary reasons:

1. Demographic changes: A decline in student enrolment is the most common reason for closure. This decline may result from a decrease in the local population, driven by lower birth rates or internal migration.
2. Consolidation and optimal size: Many schools have fewer than three classes, which is especially common in rural municipalities due to smaller populations, but also occurs in medium and large cities at the preschool level, where local positioning can reduce family commute. Consolidation may occur within a single municipality or between several municipalities. In the first case, merging elementary, preschool, or primary schools generally involves closing at least one of the schools, and municipal consent is required. In the second, municipal consent is unnecessary if one of the schools has fewer than fifteen

5. We could have tested the hypothesis of whether voters punish incumbents for the closure of a school. However, most part of the candidates are not affiliated into any party and many of the candidates do not run in more than two elections, therefore testing for potential pre-trends would be difficult.

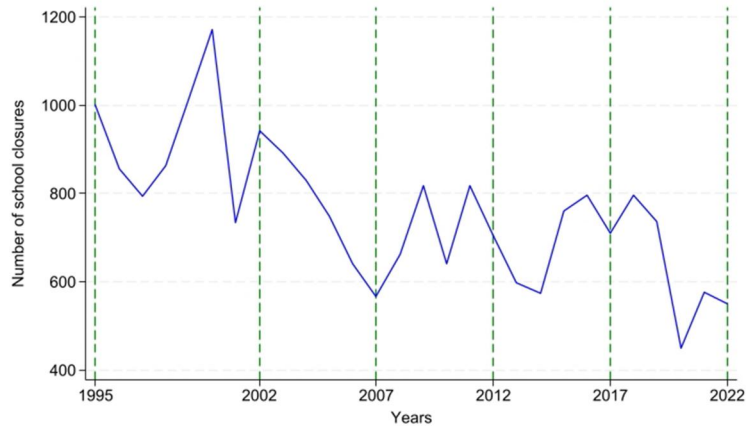

Figure 1. School closures and presidential election dates in France between 1995 and 2022.
Source: French Ministry of Education. *Notes*: Vertical lines represent presidential election–years.

students and the municipalities are within 3 km of each other; otherwise, it is required. These two factors are the primary reasons for school closures. Economic considerations also play a role, as operating a small school entails significant fixed costs, such as catering services and facilities like computer labs and libraries. Tricaud (2025) finds that municipalities required to join inter-municipal cooperatives (ICs) did not experience changes in the number of schools, as school locations are nationally determined and not influenced by IC membership.

3. Building condition: When older school buildings are deemed unable to meet current quality standards.

3.3 Elections in France

We analyze presidential elections, which in France operate under a two-round plurality voting system. The French Fifth Republic is a semi-presidential system. The President holds significant power, particularly in matters of national security and foreign policy, and appoints the Prime Minister. Focusing on presidential elections allows for consistency, as the same candidates run across all municipalities. When, in the first round, no candidate receives more than 50 per cent of the votes, a second round is held 2 weeks later between the two candidates with the highest vote shares.

3.4 Party rhetoric

France's most prominent far-right party is the RN, initially known as the Front National. Jean-Marie Le Pen led the party until 2011 when his daughter Marine Le Pen succeeded him. The RN positions itself as a defender of rural communities against urban elites, as illustrated by Marine Le Pen's 2012 speech: "*Together we will break away from the disdain of a small Parisian elite who believe themselves to be superior. And we will reintegrate rural France into France. If public services are deserting our rural areas to this extent, it is because the UMP and the PS have allowed it*."[6] This sentence vividly illustrates the rural resentment that feeds the far-right populist vote. The economic decline of rural residents is further activated by a change in the way agriculture and the countryside are included in the national ethos and embraced by

6. Europe1. (2012, February) Marine Le Pen, héraut de la ruralité. https://www.europe1.fr/politique/Marine-Le-Pen-heraut-de-la-ruralite-356998

urban residents—as argued by Margalit, Raviv, and Solodoch (2025). The RN is also the only far-right party that runs in all presidential elections in our sample. Other far-right parties, such as the *Mouvement pour la France* or *Debout la France*, on average, are less in favor of pro-redistribution, according to the Chapel Hill Expert Survey (Jolly et al. 2022).

Left-wing parties are generally associated with policies aimed at providing universally accessible public services, such as education, through more State intervention and promoting social inclusion, as suggested in Benedetto, Hix, and Mastrorocco (2020) and Wiedemann (2024). Our classification of left-wing parties comprises mostly social democratic parties, as we exclude from this lot green and far-left parties. The most successful left-wing party, present in all elections in the sample, is the *Socialist Party*, followed by *Mouvement des Citoyens*, also a social-democratic party, which was present in only one election. The other two presidential candidates have only acquired 1 per cent of the votes, approximately. According to the Chapel Hill Expert Survey (Jolly et al. 2022), the French Socialist Party scores high in the pro-redistribution platform. Indeed, the Socialist party usually campaigns on public services provision, as illustrated by Benoît Hamon's 2017 manifesto: "I will be the candidate for public services, the heritage of those who have none. I will create a universal public service guarantee: every French citizen will have the right to the guaranteed presence of a basket of public services—school, hospital, post office … , within 30 minutes. This guarantee will be enforceable against any closure."

We collected data on presidential political platforms, which are available from Cevipof.[7] We decided to explore which political families give more salience to the subject of public services. We create a specific dictionary with words related to public services and estimate the share of these words in the whole manifesto.[8] On average, left-wing presidential candidates write 1.14 per cent of their manifesto using public service words, while the remaining parties only write 0.76 per cent.

4. Data

4.1 Data on votes

Data on electoral outcomes is available for 1995, 2002, 2007, 2012, 2017, and 2022 presidential elections. Each dataset records the number of registered voters, abstentions, cast votes, valid and invalid votes, and the votes for each candidate in each municipality. The electoral data for French elections are sourced from the Ministry of the Interior.[9] We calculate a candidate's or party's vote share as the number of votes cast for the candidate divided by the total number of valid votes. Supplementary Appendix Table A.1 lists the main candidates, their parties, and their corresponding ideology, where the latter refers to the candidate party's ideological family as categorized in the Chapel Hill Expert Survey, see Jolly et al. (2022). The six political families are: far left, left, green, liberal, right, and far right.

4.2 Demographic controls

We collect municipal-level demographic data from the INSEE, available for the census years 1990, 1999, 2006, 2011, 2016, and 2021. We use the census data to compute the share of the population by age group, economic sector, and education level. We also use the unemployment rate, population, population density, population growth, and the share of vacant housing. For each measure, we interpolate the data between census years. We also use data from the total community income tax (Direction Générale des Finances Publiques, DGFIP IRCOM) to obtain the average resident income in each municipality.

7. https://archive.org/details/archiveselectoralesducevipof
8. For each manifesto, we start by removing punctuation, stop-words, numbers, and lowercase all words. Our dictionary is the following: "désert," "desertification," "deserts," "école," "écoles," "service public," "services publics," "service proximité," "services proximité," "education," "enseignants," "rural," "ruraux," "fermetures."
9. It is publicly available at data.gouv.fr.

4.3 Data on schools

Data on schools, including year of opening and closing, type of school, and geographic coordinates, come from the French Ministry of Education, and it is publicly available at data.education.gouv.fr. The website provides a list of the establishments that closed and those that are still open. The two data sets are originally from an administrative data set called RAMSESE—academic and ministerial register of educational establishments, a register that covers all establishments providing initial general, technical, or vocational training, from preschool to higher education, in the public or private sector, whether these establishments are under the supervision of the Ministry of National Education or not.

4.4 Sample restriction

Our analysis focuses on preschools, elementary schools, and schools encompassing both levels, the categories for which most school closures occurred. As noted earlier, schools can close due to poor conditions in buildings, in which case the closure could be associated with opening a new school. In this case, voters might perceive this as an investment rather than a reduction in the availability of public services, which is the focus of this study. To avoid misinterpreting our results, we exclude municipalities where a school opened between 1995 and 2022. In addition, we exclude municipalities treated between 1988 and 1995, as we cannot observe pre-treatment voting behavior for these cases. Further, we restrict our analysis to metropolitan France, excluding overseas territories and Corsica.

4.5 Descriptive statistics

This article analyzes the effects of closing the only school in a one-school municipality, as well as the impact of closing one of the schools in a multi-school municipality. Sixty-four percent of school closures occurred in municipalities with only one school. Supplementary Appendix Table C1 presents the static differences between municipalities that closed their only school and the control group—municipalities with one school that did not close. Both treated and control municipalities tend to be small and rural, in places with a high proportion of the total population working in the agriculture sector. The most striking difference between the treatment and the control group is population size, followed by population density.

For municipalities with more than one school, we restrict the analysis to those with two to four schools. This restriction improves the comparability between the municipalities in the analysis. Municipalities with school closures are generally smaller in population and more rural.

5. Methodology

We test two hypotheses: the effect of closing the only school in the municipality, and the impact of closing one of the schools in the municipality. In the first case, the treatment group is municipalities with one school whose school closed permanently and no school opening, and the control group is municipalities with one school but without any school closure or opening during the period of analysis. In the second case, the treatment group is municipalities with two to four schools, where one of the schools closed permanently, and there was no school opening, while the control group is municipalities also with two to four schools, but without any closing (or opening) during the period.

We rely on a staggered difference-in-differences strategy to assess the impact of school closures on electoral outcomes. The strategy is to compare the before and after difference in outcomes between municipalities where a school was permanently closed, as compared to municipalities where there was no school closure. Our specification is an event-study that implements the procedure suggested by Sun and Abraham (2021), which estimates treatment effects in groups as they enter treatment, without assuming homogenous

treatment effects[10]: The parameters δ_t and θ_m represent election–year and municipality fixed effects, respectively. Election–year fixed effects control for time-specific, municipality-invariant confounders, while municipality fixed effects account for time-invariant, municipality-specific factors. Standard errors are clustered at the municipality level. We also report robustness checks using alternative estimators (TWFE and Callaway and Sant'Anna 2021 estimators), which yield consistent results.

We assume that, in the absence of treatment—a school closure, the electoral outcomes of treated and untreated municipalities would have evolved along parallel trends. We estimate a fully dynamic version of Equation (1) and check for potential pre-trends. Our electoral outcomes are the share of votes for the RN or the left-wing as a share of total votes, excluding blank and null votes.

A primary concern is whether the treated and control units are systematically different. For instance, if municipalities losing a school are in economic decline, far-right voting patterns may respond to economic hardship rather than school closure. To address this, we employ weighting on observables, ensuring that treated and control municipalities share similar demographic and economic characteristics pre-treatment. Specifically, we construct a comparable control group using entropy balancing to reweight observations and achieve balance across observed characteristics from 1995 (following Hainmueller 2012).[11] Municipalities are balanced across demographics (population, density, population growth, age distribution by cohort, education levels, and housing vacancy rates), as well as local labor market indicators (unemployment rate, employment shares in agriculture, industry, construction, and tertiary sectors, income), rural status and school characteristics (driving distance to the closest school, number of kindergarten schools, number of elementary schools, and number of schools with both levels). Supplementary Appendix Table D1 presents descriptive statistics for the reweighted sample. Pre-trend analysis results are shown in Fig. 2.

6. Results

6.1 All political ideologies

Table 1 presents the average effect of closing a school on the voting for parties across the ideological spectrum. We classify parties as far-left, left-wing, liberal, right-wing, and far right—the RN (a populist far-right party), and consider separately other far-right parties. We find evidence of a statistically significant and positive impact for left-wing parties and the RN, 0.968 and 0.527 percentage points, respectively. In contrast, far-left and right-wing parties tend to lose votes. We do not find any significant effect on liberal parties or far-right parties. This suggests that the RN is the far-right party benefiting from public service deprivation, potentially because they have a more pro-redistribution discourse than other far-right parties.

Our results are in line with our expectations. Left-wing parties, also referred to as social democrats or pro-redistribution parties, advocate for providing universally accessible public services, especially education, as pointed in Benedetto, Hix, and Mastrorocco (2020). At the same time, the effects found for the RN are in line with the recent literature that associates local decline with far-right populist voting

10. Goodman-Bacon (2021), De Chaisemartin and d'Haultfoeuille (2020), Sun and Abraham (2021), and Callaway and Sant'Anna (2021)) show that the TWFE regressions deliver consistent estimates only with strong assumptions about the homogeneity of treatment effects and may be biased when treatment effects vary over time or by treatment cohort (We use the Stata package *eventstudyinteract*.).

$$Y_{mt} = \alpha + \sum_{g\in\{1,2,3,4\}} \sum_{k=-5,\neq -1} \beta_{k,g} 1\{G_m = g\} \cdot Closed^k_{mt} + \delta_t + \theta_m + \varepsilon_{mt} \quad (1)$$

where G_m denotes the election–year when municipality m experiences the school closure. $Closed^k_{mt} = 1\{t - G_m = k\}$ is an indicator for municipality m in election–year t being k elections away from the initial exposure to the school closure. For the never-treated municipalities, we set $G_i = \infty$ and $G^k_{mt} = 0$ for all k and t. The pre-period reference is the election before the initial treatment. To obtain the average treatment effect of a school closure on electoral outcomes, we follow Sun (2022) to calculate a linear combination of these post-treatment coefficients. The dependent variable Y_{mt} stands for electoral outcomes.

11. We use the Stata package *ebalance* (Hainmueller and Xu 2013).

Table 1. Average impact on votes in presidential elections of closing a school across the political spectrum.

	Far-left	Left	Liberal	Right	RN	Far-right
Average effect	−0.526***	0.968***	−0.0313	−0.743***	0.527**	0.394
	(0.198)	(0.214)	(0.232)	(0.261)	(0.233)	(0.248)
Observations	44,523	44,523	44,523	44,523	44,523	44,523

Treated municipalities only had one school in 1995, and control municipalities never had a school. Reweighting is performed using entropy balancing. Estimations were obtained using the estimator of Sun and Abraham (2021). Standard errors are clustered at the municipality level in parenthesis. *$p < .1$. **$p < .05$. *** $p < .01$.

(Cremaschi et al. 2024a, b). Given that our theoretical conjectures only expect positive effects on the left and populist far right, we concentrate the rest of the article on the impact on these ideologies.

6.2 Event-studies

Figure 2 shows the reweighted difference-in-differences results concerning the vote for the *Rassemblement National*. Panel (A) displays the results for municipalities with only one school that experienced a school closure, thus losing access to this public service. In event-time 0, meaning the first election after the school closure, the vote for the RN increases on average by 0.444 percentage points, statistically significant at 1 per cent. The average estimated effect on the RN's vote share rises in the next three elections, standing between 0 and over 1 percentage point. The effects are statistically significant at 1 per cent, except for the third election, which is significant at 10 per cent. Four elections after the closure of the school, the effect on the vote disappears. Our estimates are consistent with the assumption of parallel trends, as the coefficients for left-wing candidates and the RN before the school closure are close to zero, statistically insignificant, and exhibit no discernible pre-trends.

Regarding the effect on left-wing parties, panel (C), we find that the effect grows over time. In event-time 0 and one election after, the effect is not statistically different from 0; however, two elections after, we find that a school closure leads to an increase in votes for left-wing parties by 1.100 percentage points, statistically significant at 1 per cent, and three and four elections after, the effects are approximately between 0.9 and 2.5 percentage points. In summary, the vote for RN candidates responds immediately to a school closure, increases, and then subsides. In contrast, the vote for left-wing candidates responds with a lag but then grows to a higher quantitative threshold than the vote for the RN.

As for municipalities with more than one school, presented in panels (B) and (D), results indicate no significant effect on voting, suggesting that the closure of the only school in a municipality is the most politically relevant. In sum, closures that can be accommodated by other schools in the same municipality have no significant electoral impact.

6.3 Robustness checks

We test the robustness of our results across several specifications. In Supplementary Appendix Fig. E.1, we present estimates using the traditional two-way fixed effects. We also implement the Callaway and Sant'Anna (2021) estimator, suitable for (a) cases where the parallel trends assumption holds only after conditioning on covariates, (b) cases using different comparison groups (the never-treated and not-yet-treated), and (c) when units anticipate treatment and adjust their behavior before the treatment is implemented. Supplementary Appendix Fig. E.2 presents the results, which do not significantly differ from benchmark estimates.

We also address the effect of potential spillovers by excluding neighboring municipalities from the control group affected by a school closure. If there is an effect of school closures on neighboring municipalities,

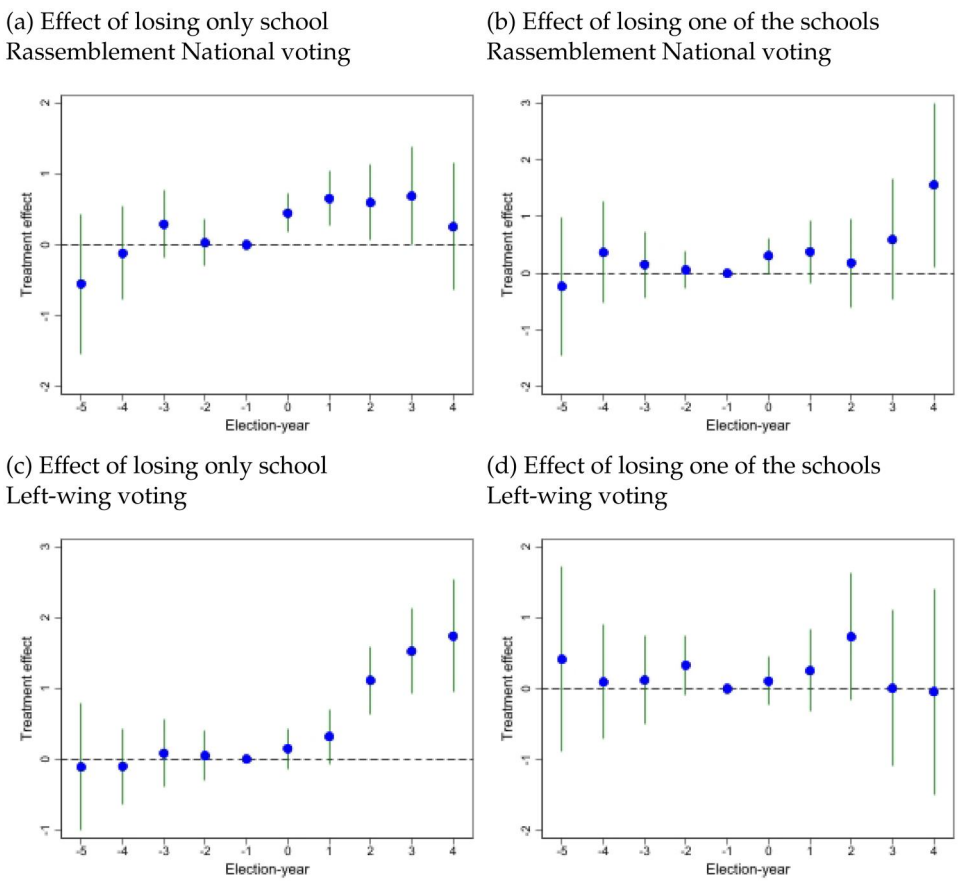

Figure 2. Treatment dynamics—Effect of a school closure on voting in Presidential elections. *Notes*. In the figure, each point and the 95% confidence interval represent the treat-control difference from estimating Equation (1). Panel (a) reports event study estimation results for treated municipalities with one school who closed and control municipalities with one school that did not close, (b) for municipalities with two to four schools. Reweighting is performed using entropy balancing. Standard errors are clustered at the municipality level. Graphs obtained using the estimator of Sun and Abraham (2021).

our results above may be an underestimate. We retain 1,908 treated municipalities and 1,253 control municipalities. In Supplementary Appendix Fig. E.3, we present our estimates. We now estimate that closing a school increases votes on the RN by 0.632 percentage points and 1.088 percentage points on left-wing parties. The comparison of these with previous results leads us to conclude that we slightly underestimate the effect of closing schools on RN and left-wing voting. However, because in the new specification we rely on a lower number of municipalities as controls, our standard errors are now larger.

School closures are often naturally associated with population decline, so that population changes may drive the vote shifts. We test the robustness of our results by adding population levels and the share of the population between 20 and 40, 40 and 60, and over 60 years old in the 1968, 1975, 1982, and 1990 censuses as reweighting variables. We find that our results do not change significantly, and we now estimate the change in the vote for the RN and the left, respectively, at 0.484 and 0.892 percentage points.

The expansion of private schooling could possibly offset public school closures; however, private schools comprise only 13.78 per cent of the schools in our original dataset. We excluded municipalities

from our treatment group that had a private school opening in a neighboring municipality, and our results barely changed.

Our results are also robust when standard errors account for spatial correlation (Supplementary Appendix Fig. E.4). We estimate spatial HAC standard errors following Conley (1999), which allow for contemporaneous spatial correlations between voting across municipalities whose schools lie within a certain cutoff distance. As suggested in Conley (2010), weights in this matrix are uniform up to that cutoff distance. We set the cutoff distance to 2 km. Our results are insensitive to variations of the cutoff distance.[12]

6.4 Results by driving distance

Given that we find statistically significant effects only for municipalities whose only school is closed, in the rest of the article, we focus on these municipalities. This is not a limitation, as almost two-thirds (64per cent) of school closures occurred in municipalities with only one school. Our results in Fig. 2 suggest that citizens value access to public services. If this is indeed the case, we expect the effects on the vote to be weaker in municipalities with nearby schools. We calculate the driving distance of each school to the nearest school by first identifying the three closest schools using Euclidean distance, and then calculating the driving distance using Radar and retaining the shortest distance.[13]

Table 2 shows how our results depend on the distance to the nearest school. First, we find no significant effects of school closures on the presidential vote when the distance to the closest school is smaller than 2 km, reinforcing the idea that citizens' concerns about access drive our results. The distance of 2 km or less to the alternative school seems to be, in the perception of voters, equivalent to no closure. We find stronger results when the distance is between 2 and 3 km, especially for the vote on the RN. When two or more schools merge, the government requires the agreement of the municipality if the municipality that loses the school is more than 3 km away from the closest school and has fewer than fifteen students. Our data does not allow us to identify these situations. Nonetheless, we find significant effects when the alternative schools are more than 3 km distant from the school being closed. The estimated effects are quantitatively similar to the average impact reported in Section 6.

Table 2. Effect of a school closure on voting in Presidential elections depending on the distance to the closest school.

	Less than 2 km		Between 2 and 3 km		More than 3 km	
	RN	**Left**	**RN**	**Left**	**RN**	**Left**
Treated	−0.474	0.795	0.965**	0.998**	0.589**	0.967***
	(0.677)	(0.557)	(0.477)	(0.425)	(0.287)	(0.277)
Observations	5,615	5,615	11,501	11,501	27,383	27,383

Treated municipalities only had one school in 1995, and control municipalities never had a school. Reweighting is performed using entropy balancing. Estimations were obtained using the estimator of Sun and Abraham (2021). Standard errors are clustered at the municipality level in parenthesis. *$p < .1$. **$p < .05$. ***$p < .01$.

12. This procedure is implemented in Stata 18 using the "reg2hdfespatial" command written by Thiemo Fetzer.
13. It is available at www.radar.com. We could have calculated the driving distance of each closed school and each school in our sample and selected the nearest one. However, this procedure would consume more time, be more costly, and not be considerably more effective.

6.5 Spillover effects

School closures can also affect neighboring municipalities, especially those without a school themselves. As such, studying the effect of school closures on the presidential vote of neighboring municipalities is especially interesting. As the latter municipalities do not participate in the school closure decision, the treatment is more exogenous than for the municipalities that suffer a school closure themselves. Note that, while in Section 6 we estimate the treatment-effect-on-the-treated, in this case, we estimate the intention-to-treat-effect as our dataset does not allow us to identify which schools the children in each municipality are attending.

We drop all the municipalities with a school closure from our sample and use the same reweighting procedure described above, in Section 5. In Fig. 3(a) and (c), we use as the treatment group those municipalities without a school but whose neighboring municipality suffered a school closure. We only retain municipalities with only one school closure in a neighboring municipality during the whole period to avoid several treatments; otherwise, the estimates are not robust to heterogeneous effects and may be contaminated by other treatments' effects (De Chaisemartin and D'haultfœuille 2023). The control group

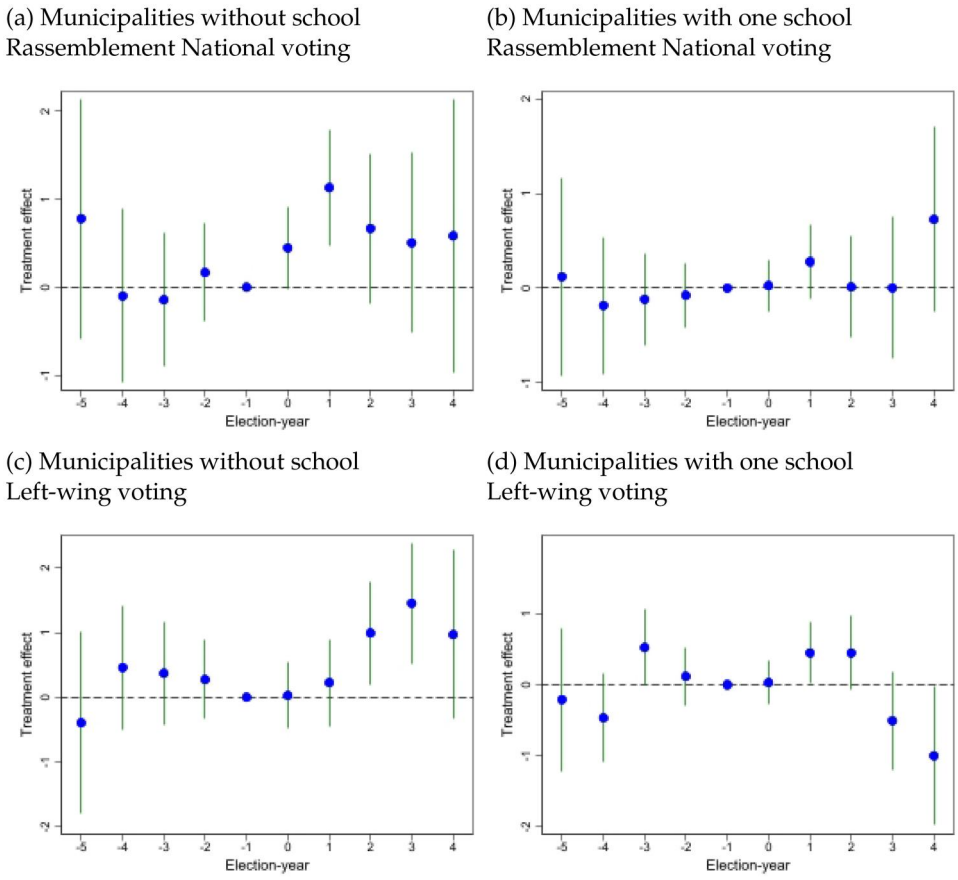

Figure 3. Treatment dynamics—Effect of a school closure on voting in neighboring municipalities.

Notes. In the figure, each point and the 95% confidence interval, represent the treat-control difference from estimating Equation (1). Reweighting is performed using entropy balancing. Standard errors are clustered at the municipality level. Graph obtained using the estimator of Sun and Abraham (2021).

consists of municipalities without a school and without a school closure in a neighboring municipality. Our estimation uses 1,038 treated municipalities and 1,233 control municipalities. Our results are quite similar to those in Section 6. Following a school closure in a neighboring municipality, votes for the Rassemblement National initially increase by 0.447 percentage points—statistically significant at the 10 percent level—and rise by 1.132 percentage points in the next election, which is significant at the 1 per cent level. However, the increase drops to 0.668 percentage points in the subsequent period, losing statistical significance. In the case of presidential candidates for left-wing parties, we uncover a smaller immediate effect, but the effect grows to statistical significance after two elections. In period 2, votes for the left increase by 0.992 percentage points—statistically significant at 5 per cent, and four elections on, by 1.450 percentage points—significant at 1 per cent.

We also test our results for the municipalities unlikely to be affected by the policy, those with one school, no school closure within the municipality, and a closure in a neighboring municipality. The control group is made up of municipalities with one school and no closure in their own or neighboring municipality. Importantly, we do not find any evidence of an impact on the vote for a municipality with continued access to a school, even when there is a school closure in a neighboring municipality.

6.6 Opening a school

A natural question that arises is what happens if, conversely, a municipality benefits from a school opening? We test for this, focusing on municipalities with one or no school. One should note that the number of school openings is significantly smaller than school closures, at only 211, after excluding municipalities that had both a school closure and an opening during the period of interest. Thus, given the considerably smaller number of observations, the standard errors for the effect of a school opening on voting are larger than those for school closures. In Fig. 4(A), we present our results for the RN, and find that none of the leads or lags are statistically significant. For panel (B), we show the results for the left and find an impact symmetric to the results found in Section 6, with votes moving away from left-wing presidential candidates.

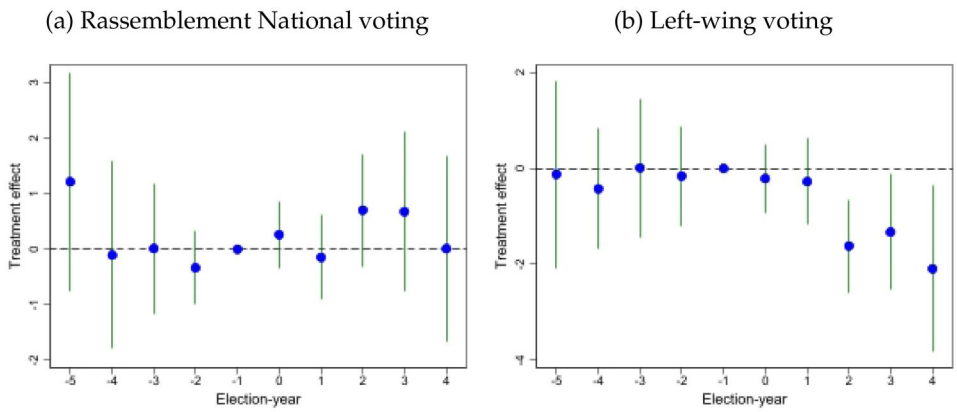

Figure 4. Treatment dynamics—Effect of opening a school on voting in Presidential elections.

Notes. In the figure, each point and the 95% confidence interval represent the treat-control difference from estimating Equation (1). Treated and control groups have, at the beginning of the period, 1 to 0 schools. Matching is performed using entropy balancing. Standard errors are clustered at the municipality level.

7. Potential mechanisms

7.1 Trust in mainstream parties

We investigate the mechanisms underlying the relationship between school closures and support for left-wing parties or the RN. We argue that voters value access to public services, and if affected by the closure of a public school, they will consider voting for the parties that promise public services redistribution. Far-right populist parties are more likely to attract votes among social groups who have previously felt unrepresented by the political establishment (Mudde and Kaltwasser 2017). If our argument is correct, we should observe more substantial effects for the RN in municipalities that distrusted established parties, and we measure it through exploring the possibility of heterogeneous effects of school closures on vote share across different political parties. In Fig. 5, we investigate whether the increase in voting for the RN or the left after the closure of the only school is more pronounced in municipalities that historically voted more for the far-left, left, liberal, right, or RN candidates.[14] To assess this, we split the sample of treated municipalities in relation to the median vote share of voting for candidates from the different parties' ideologies in 1995. For example, the median vote share in the RN in 1995 in municipalities that had a school closed between 1995 and 2017 is 13.33 per cent. We define "High" as a sample of municipalities with a vote share in 1995 higher than 13.33 per cent, and "Low" as a sample of municipalities with a vote share lower than 13.33 per cent. We find that the estimated effect of a school closure is stronger in municipalities that voted less for mainstream parties, left or right. In municipalities where abstention was already high in 1995, the effect of a school closure drives a 0.759 percentage points increase in votes for the RN—statistically significant at 5 per cent, while for municipalities where abstention rates were low, the effect is statistically insignificant.

In stark contrast, we find that closing a school has stronger electoral effects on the left vote in municipalities where the vote share for the left was higher than the median, and votes for the RN and abstention rates were lower. These results strongly support the hypothesis that, after the loss of an essential public

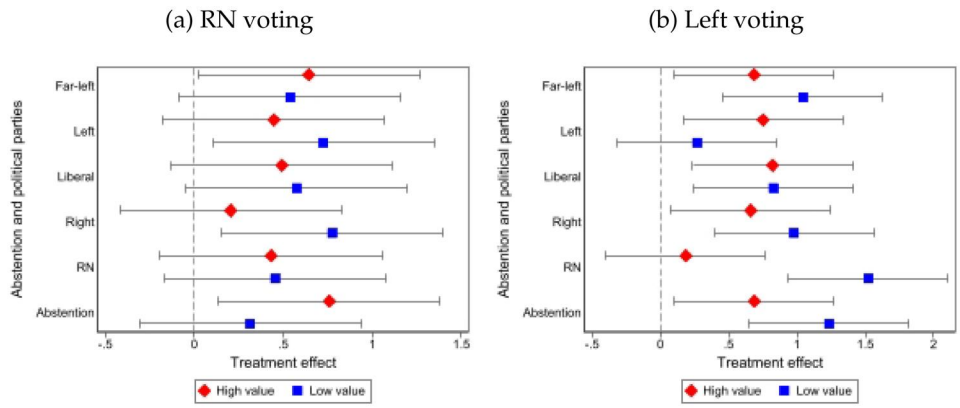

Figure 5. Treatment heterogeneity by political ideology vote share in 1995—Average effect of closing a school on RN and left-wing voting.

Notes. The incertitude of each point is asserted with 95% confidence intervals. Estimated β from Equation (1) in the full sample specification. For (a), the dependent variable is the expressed votes on the RN at the presidential election's first round, for (b) the expressed votes on the left-wing parties. Standard errors are clustered at the municipal level.

14. We do not include green parties, given that in 2017, they did not present a candidate.

service, voters turn to the left when initial levels of trust in politics were high, and to the RN when there were early signs of alienation of voters from the mainstream parties.

7.2 Immigration

Another possible mechanism, as suggested in Cremaschi et al. (2024a, b) and Dickson et al. (2024), is that the populist far-right benefits electorally from diminished access to public services associated with cultural grievances related to the presence of immigrants. Far-right populist parties often rely on a chauvinist rhetoric, and are able to frame welfare and public services under threat by the inflow of migrants, presented as usurping access to services by "native" citizens (Mudde 2019).

With this mechanism in mind, we test whether voter alignment with far-right populist parties is more prevalent when immigrants might be perceived in direct competition for access to public services. We compare the electoral effects of school closures in municipalities with a higher versus a lower than the median share of immigrants, in 1995, which stands at 9.43 per cent according to source data from Piketty and Cagé (2023). As shown in Fig. 6, we find that indeed the effects of school closures on the far-right vote is insignificant for municipalities with a lower than the median share of foreigners, but are stronger than the impact estimated in Fig. 2 for municipalities with a higher than the median share of foreigners. For the latter, closing the only school increases the RN's and the left's vote share by 0.883 and 1.572 percentage points, respectively. Our results on the effect of school closures on RN support are in accordance with the existing literature, suggesting a distaste for sharing public resources with immigrants who are culturally, ethnically, or racially different, in line with Cavaillé and Van Der Straeten (2023).

The mechanism driving voting for left-wing parties is less established in the literature. However, the literature offers mixed evidence on the electoral effects of immigration. On the other hand, the contact hypothesis suggests that long-term exposure to immigrants can reduce prejudice and increase support for inclusive

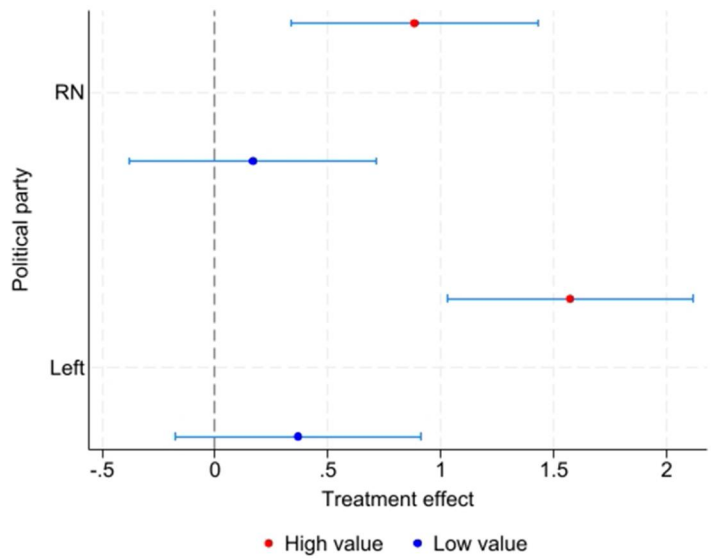

Figure 6. Treatment heterogeneity by share of foreigners in 1995—Average effect of closing a school on RN and left-wing voting.

Notes. The incertitude of each point is asserted with 95% confidence intervals. Estimated β from Equation (1) in the full sample specification. The dependent variable is the expressed votes on the RN/left at the presidential election's first round. Standard errors are clustered at the municipal level.

policies (Allport 1954, Bursztyn et al. 2024). Unfortunately, our data does not allow us to determine the exposure time to migration and whether this can affect voters' preferences when public services close.

7.3 Compositional changes

A possible alternative mechanism explaining an increase in voting for the RN and the left is changes in the demographic compositions, namely those caused by the out-migration of non-RN and non-left voters, as the closure of a school might lead a subset of citizens to move from treated municipalities to other municipalities, where the public schools are still available. Suppose, for example, those citizens tend to be those not voting for the RN—because of different income, education, or other. In that case, the vote share for the RN in the municipality losing the school will naturally increase.

We test whether population movements might explain our results. We focus on municipalities without a school but with a school closure in a neighboring municipality, since we find no evidence of pre-event trends for all population dynamics studied, while we do have pre-event trends when we focus on municipalities with only one school. In Fig. 7, we show that the number of enrolled voters in treated municipalities drops, on average, by 3.09 per cent. This drop is driven by a 5.49 per cent decrease in the slice of the population between 20 and 29 years old, precisely those we would deem most affected by the closure of a school for young infants, as they fall within the age interval where people tend to care for young children. Indeed, and revealingly, the magnitude of out-migration decreases through the age cohorts. For the population between 40 and 59 years old, there is a statistically significant effect in the first two elections, and not later, and we do not find any significant impact for the population 60 years old or older.

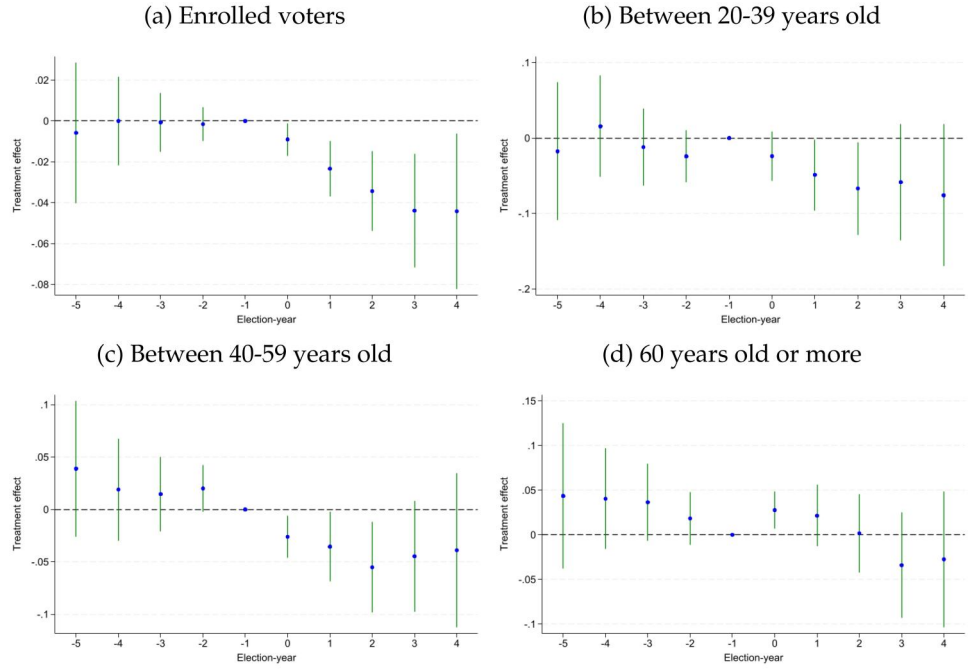

Figure 7. Effect of closing a school on population dynamics.

Notes. Treated municipalities do not have any school but there was a school closure in a neighboring municipality, and control municipalities do not have any school and neither there was a school closure in a neighboring municipality. All the dependent variables are in logarithmic terms. In the figure, each point and the 95% confidence interval, represent the treat-control difference from estimating Equation (1). Reweighting is performed using entropy balancing. Standard errors are clustered at the municipality level. Graph obtained using the estimator of Sun and Abraham (2021).

Our data does not allow us to determine which voters migrated from the municipality, and, even if all voters leaving the municipality traditionally voted for other parties than the RN or left-wing, we cannot rule out that some of the voters that stayed have transferred their votes from non-RN/non-left-wing to these two political blocs. Thus, we cannot wholly exclude the hypothesis that compositional changes drive our results. On the other hand, we might interpret these results as an explanation of why public service loss leads to an increase in pro-redistribution parties. The closure of a school decreases the attractiveness of a municipality and leads to out-migration of the young population, motivating the remaining population to vote for parties that are platforms for discontent, either because they highlight the importance of public services or because they voice concerns of local marginalization.

In addition, we also test whether the impact of the policy might work through increased or decreased voter participation in the affected municipalities. If non-RN and non-left-wing voters are the ones who abstain, votes for the RN and the left will rise. Supplementary Appendix Fig. F.5 presents event-study estimates for municipality-level abstention in national elections. We find an average increase in abstention by 0.469 percentage points, which is smaller than the one found for the RN and the left-wing parties, implying that our results can only be partly driven by an increase in abstention.

8. Conclusion

We study the electoral impact of school closures, particularly the last remaining school in a municipality, which serves as a proxy for public service deprivation at the municipal level. Our estimates employ a reweighted difference-in-differences design. While for municipalities with more than one school, a school closure does not seem to impact voting, the vote for the left and the far-right RN party does increase significantly in the case when the school was the last remaining school. This suggests the politically relevant issue is one of absolute access, rather than relative access density. In municipalities with one school, located mostly in rural areas, losing access to this public service increases votes for *Rassemblement National*, the most successful far-right party in France, by 0.527 percentage points in the following election. In the case of left-wing parties, the effect stands at almost double, at 0.968 percentage points on average.

Our results depend on the historical local level of trust in political parties, with votes for the RN responding more substantially in municipalities with an initial high share of politically disaffected voters, high abstention levels, and a low share of votes for mainstream left- and right-wing parties. On the other hand, votes for the left respond to school closures only in municipalities with an initial low abstention level and a high share of votes for mainstream parties. In other words, there seems to be a market for discontent, which leads to votes for the far-right or mainstream left parties, depending on the initial local political conditions. Further, there is evidence that the presence of immigrants compounds this effect, with both the vote for the RN and for the left responding most to places that have a higher-than-average migrant population.

Our results have significant political economy implications for the electoral dynamics of discontent, as they uncover strategic responses from voters to different ideological families. In particular, policymakers should consider more carefully how policies that support the long-term viability of rural communities by maintaining access to public services improve political inclusion and voter satisfaction. A swift political response and a rerouting of investment toward these regions might be a matter of political survival for centrist political actors, as well as a channel to increase the welfare of low-density regions in advanced democracies.

Supplementary material

Supplementary material is available at *Journal of Economic Geography* online.

Conflicts of interest

None declared.

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References

Abadie, A. (2005) 'Semiparametric Difference-in-differences Estimators.' *The Review of Economic Studies*, 72, 1–19.

Abalde, M. A. (2014) 'School Size Policies: A literature review'. *OECD Education Working Papers*, (106), 0_1.

Ajzenman, N., and Durante, R. (2023) 'Salience and Accountability: School Infrastructure and Last-minute Electoral Punishment', *The Economic Journal*, 133, 460–76.

Algan, Y., Beasley, E., Cohen, D., and Foucault, M. (2019) *Les origines du populisme*. Média Diffusion.

Allport, G. W. (1954) 'The Nature of Prejudice.' Addison-Wesley.

Andrews, M., Duncombe, W., and Yinger, J. (2002) 'Revisiting Economies of Size in American Education: Are We Any Closer to a Consensus?' *Economics of Education Review*, 21, 245–62.

Bellodi, L., et al. (2023) 'The Shift to Commitment Politics and Populism: Theory and Evidence'. BAFFI CAREFIN, Centre for Applied Research on International Markets Banking.

Bellodi, L., Morelli, M., and Vannoni, M. (2024) 'A Costly Commitment: Populism, Economic Performance, and the Quality of Bureaucracy', *American Journal of Political Science*, 68, 193–209.

Benedetto, G., Hix, S., and Mastrorocco, N. (2020) 'The Rise and Fall of Social Democracy, 1918–2017', *American Political Science Review*, 114, 928–39.

Berry, C. R., and West, M. R. (2010) 'Growing Pains: the School Consolidation Movement and Student Outcomes', *The Journal of Law, Economics, & Organization*, 26, 1–29.

Beuchert, L., et al. (2018) 'The Short-term Effects of School Consolidation on Student Achievement: evidence of Disruption?' *Economics of Education Review*, 65, 31– 47.

Bo', E. D., et al. (2023) 'Economic and Social Outsiders but Political Insiders: Sweden's Populist Radical Right', *The Review of Economic Studies*, 90, 675–706.

Bolet, D. (2021) 'Drinking Alone: Local Socio-cultural Degradation and Radical Right Support—the Case of British Pub Closures', *Comparative Political Studies* 54, 1653–92.

Brummet, Q. (2014) 'The Effect of School Closings on Student Achievement', *Journal of Public Economics*, 119, 108–24.

Bursztyn, L., et al. (2024) 'The Immigrant Next Door', *American Economic Review*, 114, 348–84.

Callaway, B., and Sant'Anna, P. H. C. (2021) 'Difference-in-differences with Multiple Time Periods,' *Journal of Econometrics*, 225, 200–230.

Castanheira, M., Mariani, G. P., and Tricaud, C. (2025) 'Do Public Goods Actually Reduce Inequality?' (No. 2025-011). ULB-Universite Libre de Bruxelles.

Cavaillé, C., and Van Der Straeten, K. (2023) 'Immigration and Support for Redistribution: Lessons from Europe', *Journal of Economic Literature*, 61, 958–76.

Conley, T. G. (1999) 'GMM Estimation with Cross Sectional Dependence', *Journal of Econometrics*, 92, 1–45.

Conley, T.G. (2010) 'Spatial Econometrics'. In *Microeconometrics* (pp. 303–13). London: Palgrave Macmillan UK.

Cremaschi, S., Bariletto, N., and De Vries, C.E. (2024a) 'Without Roots: The Political Consequences of Collective Economic Shocks', *American Political Science Review*, 119, 1963–82.

Cremaschi, S., et al. (2024b) 'Geographies of Discontent: Public Service Deprivation and the Rise of the Far Right in Italy', *American Journal of Political Science* 69, 1581–99.

De Chaisemartin, C., and d'Haultfoeuille, X. (2020) 'Two-way Fixed Effects Estimators with Heterogeneous Treatment Effects', *American Economic Review*, 110, 2964–96.

De Chaisemartin, C., and d'Haultfoeuille, X. (2023) 'Two-way Fixed Effects and Differences-in-differences Estimators with Several Treatments', *Journal of Econometrics*, 236, 105480.

De Haan, M., Leuven, E., and Oosterbeek, H. (2016) 'School Consolidation and Student Achievement', *The Journal of Law, Economics, and Organization*, 32, 816–39.

Dickson, Z. P. et al. (2024) 'Public Service Delivery and Support for the Populist Right: Evidence from England's National Health Service' *American Political Science Review* (Conditionally Accepted).

Duflo, E. (2001) 'Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment', *American Economic Review*, 91, 795–813.

Duncombe, W., and Yinger, J. (2007) 'Does School District Consolidation Cut Costs?' *Education Finance and Policy*, 2, 341–75.

Engberg, J., et al. (2012) 'Closing Schools in a Shrinking District: Do Student Outcomes Depend on Which Schools Are Closed?' *Journal of Urban Economics*, 71, 189–203.

Fetzer, T., Edenhofer, J., and Garg, P. (2025) 'Local Decline and Populism', *Economics Letters*, 112360.

Fitzgerald, J., and Lawrence, D. (2011) 'Local Cohesion and Radical Right Support: the Case of the Swiss People's Party', *Electoral Studies*, 30, 834–47.

Gethin, A. (2023) 'Revisiting Global Poverty Reduction: Public Goods and the World Distribution of Income, 1980–2022', in *World Inequality Lab*, Working paper.2023/24.

Goodman-Bacon, A. (2021) "Difference-in-differences with Variation in Treatment Timing', *Journal of Econometrics*, 225, 254–77.

Hainmueller, J. (2012) 'Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies', *Political Analysis*, 20, 25–46.

Hainmueller, J., and Xu, Y. (2013) 'Ebalance: A Stata Package for Entropy Balancing', *Journal of Statistical Software*, 54, 1–18.

Healy, A., and Malhotra, N. (2013) 'Retrospective Voting Reconsidered', *Annual Review of Political Science*, 16, 285–306.

Huet-Vaughn, E. (2019). 'Stimulating the Vote: Arra Road Spending and Vote Share', *American Economic Journal: Economic Policy*, 11, 292–316.

Jolly, S., et al. (2022). 'Chapel Hill Expert Survey Trend File, 1999–2019', *Electoral Studies*, 75, 102420.

Lippmann, Q. (2023). 'Persistence of Incumbents and Female Access to Political Positions', *Journal of Economic Behavior & Organization*, 206, 327–49.

Liu, C., et al. (2010) 'The Effect of Primary School Mergers on Academic Performance of Students in Rural China', *International Journal of Educational Development*, 30, 570–85.

Margalit, Y., Raviv, S., and Solodoch, O. (2025) 'The Cultural Origins of Populism', *The Journal of Politics*, 87, 393–410.

Martín-Cadenas, P. (2025) 'Communities without Credit: The Political Implications of Deprivation in Access to Banking Services'.

Mudde, C. (2019) *The Far Right Today*. Cambridge, UK: Polity, 2019, 205 pp.

Mudde, C., and Rovira Kaltwasser, C. (2017) *Populism: A Very Short Introduction*. Oxford: Oxford UP.

Newman, B.J., et al. (2015) 'Are Citizens "Receiving the Treatment"? Assessing a Key Link in Contextual Theories of Public Opinion and Political Behavior', *Political Psychology*, 36, 123–31.

Nyholt, N. (2024). 'Left Behind: Voters' Reactions to Local School and Hospital Closures', *European Journal of Political Research*, 63, 884–905.

Piketty, T., and Cagé, J. (2023) *Une Histoire du Conflit Politique: é 'Lections et InéGalités Sociales en France, 1789–2022*. Seuil.

Rodríguez-Pose, A., Terrero-Dávila, J., and Lee, N. (2023) 'Left-behind versus Unequal Places: Interpersonal Inequality, Economic Decline and the Rise of Populism in the USA and Europe', *Journal of Economic Geography*, 23, 951–77.

Rogger, D., and Somani, R. (2023) 'The Persistent Impact of Electoral Incentives on the Quality of Infrastructure', *Journal of Public Economics*, 222, 104880.

Stroppe, A-K. (2023) 'Left Behind in a Public Services Wasteland? On the Accessibility of Public Services and Political Trust', *Political Geography*, 105, 102905.

Sun, L. (2022) 'EVENTSTUDYINTERACT: Stata Module to Implement the Interaction Weighted Estimator for an Event Study'.

Sun, L., and Abraham, S. (2021) 'Estimating Dynamic Treatment Effects in Event Studies with Heterogeneous Treatment Effects', *Journal of Econometrics* 225, 175–99.

Tricaud, C. (2025) 'Better Alone? Evidence on the Costs of Intermunicipal Cooperation', *American Economic Journal: Applied Economics*, 17, 160–207.

Wiedemann, A. (2024) 'Redistributive Politics under Spatial Inequality', *The Journal of Politics*, 86, 1013–30.