



# Empowering the next generation: The role of direct democracy in youth enfranchisement

Anna Maria Koukal<sup>a,b</sup>, Patricia Schafer<sup>a,\*</sup>, Reiner Eichenberger<sup>a,c</sup>

<sup>a</sup> University of Fribourg, Bd. de Pérolles 90, 1700 Fribourg, Switzerland

<sup>b</sup> Swiss Distance Learning University, Schinerstrasse 18, 3900 Brig, Switzerland

<sup>c</sup> Center for Research in Economics, Management, and the Arts, Südstrasse 11, 8008 Zürich, Switzerland

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## ABSTRACT

When are voters willing to enfranchise a new group? In this paper, we analyze whether and how the extent of direct democracy affects the willingness of the electorate to extend suffrage to young people. We exploit a new municipality-level dataset from two Swiss federal referendums that concerned lowering the voting age from 20 to 18. Based on a Difference-in-Differences (DiD) design, we demonstrate that support for lowering the voting age is lower within the context of direct democracy but that the negative effect disappears and even becomes positive if the youth population is already enfranchised at the local level at the time of the federal vote. This finding is consistent with the interpretation that voters react systematically to the expected power loss resulting from suffrage extensions, which is larger under a direct-democratic setting. However, once the new group is enfranchised on the local level, direct democracy can foster contact between the old and new electorate and can increase support for further suffrage extensions. In addition, we provide evidence of socio-demographic factors that affect the electorate's willingness to lower the voting age.

## 1. Introduction

Over the past two centuries, suffrage has been gradually extended to all male citizens, all ethnic groups, all genders, and, more generally, all adult citizens. This evolution has engendered interest in studying the drivers of, and barriers to, the enfranchisement of new groups. Today, many democracies are home to ongoing debates about lowering the voting age and extending suffrage to younger citizens. While the effects of a lower voting age have gained scholarly attention (e.g. Bertocchi et al., 2019; Wagner et al., 2012; Stockemer and Sundström, 2018; Zeglovits and Zandonella, 2013), little is known about what conditions accelerate the enfranchisement of the young.

Starting in the late 1960s, many Western democracies lowered the voting age to 18. The United Kingdom was the first in 1969, followed by the United States, Canada, and many other countries in the ensuing years (Larsen et al., 2016). Strikingly, the timing of suffrage extensions between representative- and direct-democratic contexts has differed significantly. Switzerland, which is renowned for its direct-democratic institutions, was not only among the last Western democracies to enfranchise women but also was one of the last democratic countries to lower the age threshold to 18. While the Swiss parliament voted in favor of lowering the voting age to 18, the Swiss electorate overruled this decision in 1979 in a referendum vote. Similar patterns were observed in Denmark in 1969 for a voting age of 18 (Nielsen, 1970) and in Luxembourg in 2015 for a voting age of 16 (Dumont and Kies, 2016).

\* Corresponding author.

E-mail addresses: [annamaria.koukal@unifr.ch](mailto:annamaria.koukal@unifr.ch) (A.M. Koukal), [patricia.schafer@unifr.ch](mailto:patricia.schafer@unifr.ch) (P. Schafer), [reiner.eichenberger@unifr.ch](mailto:reiner.eichenberger@unifr.ch) (R. Eichenberger).

This paper sheds light on the conditions for extending suffrage to younger citizens by analyzing the effects of direct democracy on the electorate's willingness to lower the voting age. We exploit new municipality-level data from two Swiss federal referenda regarding lowering the voting age from 20 to 18 in 1979 and 1991. This setting is interesting because the role of institutions can be analyzed through the lens of three specific characteristics of Switzerland. First, suffrage extensions can only be granted by the current electorate via direct-democratic referendums. Second, Switzerland is known for its high degree of decentralization, which also applies to extending federal, cantonal, and municipal voting rights. Thus, lowering the voting age from 20 to 18 was a protracted process, involving a large number of cantonal referendum votes for extending the franchise at the cantonal level and two federal votes for extending the franchise at the federal level, the first of which was rejected in 1979 and the second of which was accepted in 1991. Third, Swiss municipalities differ with respect to the extent of direct-democratic instruments. The municipalities' primary legislative power relies upon either a municipal town meeting (direct democracy) or a municipal parliament (representative democracy).

The institutional variations and the staggered lowering of the voting age at the cantonal level enable us to disentangle the role of direct democracy in youth enfranchisement in a Difference-in-Differences framework. We analyze the effects of local direct democracy compared to local representative democracy on the electorate's willingness to lower the voting age at the national level in contexts with and without local youth suffrage. We contribute to the literature about extending suffrage, and we add to the debate about whether direct democracy is harmful to outsiders (e.g. [Gamble, 1997](#); [Frey and Goette, 1998](#); [Hainmueller and Hangartner, 2019](#)).

According to our results, voters within direct-democratic municipalities are more reluctant to extend suffrage to the youth compared to voters within representative-democratic municipalities if the youth is not yet enfranchised at the local level. This aligns with the idea that voters react systematically to the anticipated power loss associated with suffrage extensions, particularly in direct-democratic settings where citizens wield more power. Complementing previous studies about the stifling role of direct democracy in relation to extending suffrage to women and non-citizens (e.g. [Koukal and Eichenberger, 2017](#); [Stutzer and Slotwinski, 2021](#)), our paper hints at a more general effect of direct democracy. However, as soon as the youth population is enfranchised at the local level, voters from direct-democratic municipalities are more willing to lower the voting age at the federal level compared to voters from representative-democratic municipalities. This positive effect is more pronounced for municipalities that have experienced local youth suffrage for a longer period of time. The increased interaction between the established and new electorate in direct-democratic settings may explain this effect. Our estimates also shed light on socio-demographic variables that we used as controls, reinforcing prior findings that older voters and those from rural areas tend to be more hesitant to lower the voting age ([Birch et al., 2015](#); [Svensson, 1979](#)).

The remainder of this paper is organized as follows: The next section summarizes the literature regarding catalysts behind suffrage extensions in general and in relation to the lowering of the voting age in particular, and it delineates our theoretical considerations. Section 3 discusses the institutional context and the process of youth enfranchisement in Switzerland. Section 4 describes our data and presents our descriptive statistics. Section 5 explains the empirical methodology. In Section 6, we present and discuss the results by focusing on the variable of interest and taking a glance at the effects of the controls. Section 7 summarizes our main findings and provides an outlook for future research.

## 2. Literature and theoretical considerations

Lowering the voting age can exert various effects, such as shifting the median voter's position and thus political outcomes ([Funk and Gathmann, 2015](#)), supporting the formation of habits related to the formal political participation of the young ([Gidengil et al., 2016](#); [Wagner et al., 2012](#)), increasing interest in politics among the affected group ([Zeglovits and Zandonella, 2013](#)), or reducing the average age of the members of parliaments ([Stockemer and Sundström, 2018](#)). However, the (recent) empirical literature elucidating the conditions that influence the enfranchisement of young citizens is rather scarce.

The conditions of suffrage extensions to all men, women, and non-citizens have garnered substantial attention in the empirical and theoretical literature. Compared to females' or non-citizens' enfranchisement, at least two important differences arise when analyzing the conditions for lowering the voting age. First, the group to be enfranchised is smaller, and its members are less likely to make use of their political rights ([Blais and Dobrzynska, 1998](#); [Franklin, 2004](#); [Rekker, 2022](#)). Second, the mechanisms might vary if voters share their political rights with their own offspring.<sup>1</sup>

In the economic literature, a commonly discussed barrier impeding suffrage extensions is divergent preferences between the old and new electorate. If the new electorate shifts the median voter's position, political outcomes can change.<sup>2</sup> Preferences differ based on socio-demographic factors, such as gender, income, and nationality ([Abrams and Settle, 1999](#); [Aidt and Franck, 2015](#); [Bertocchi, 2011](#); [Conley and Temimi, 2001](#); [Gonnot, 2022](#)). The literature also highlights a generation gap in politics, as younger voters generally harbor more leftist political preferences and exhibit a tendency to vote for younger politicians ([Fraga and Holbein, 2020](#); [Leighley and Nagler, 2014](#); [Rekker, 2022](#)). Moreover, [Bertocchi et al. \(2019\)](#) demonstrate that the responsiveness of politicians to the needs of the youth (e.g., through investments in education) increases with their enfranchisement. Therefore, the more the preferences differ between young and old voters, the more the new electorate can shift the median voter's position and thereby alter

<sup>1</sup> [Rattsø and Sørensen \(2010\)](#) or [Kamijo et al. \(2020\)](#) provide evidence for family and parental altruism.

<sup>2</sup> See for instance [Meltzer and Richard \(1981\)](#) or [Jensen and Yntiso \(2019\)](#) for a discussion about the redistributionist hypothesis.

political outcomes. In line with this notion, the willingness to lower the voting age is negatively associated with age (Bergh, 2013; Birch et al., 2015; Svensson, 1979), income (Birch et al., 2015), rurality (Svensson, 1979), and conservatism (Svensson, 1979).<sup>3</sup>

However, preference heterogeneity between the old and the new electorates can also be regarded as a contributor to suffrage extensions, as the lack of suffrage increases the risk of social unrest. In the literature, this is referred to as the “threat of revolution hypothesis” (Acemoglu and Robinson, 2001; Aidt and Franck, 2013, 2015; Aidt and Jensen, 2014), according to which the mobilization of the masses has the potential to threaten the political elite (Acemoglu and Robinson, 2000; Collier, 1999). This hypothesis posits that the young can use protests, demonstrations, or riots to articulate their preferences when they do not feel represented in the formal political process. Today, the youth frequently use political demonstrations and school protests to express their preferences (Boulianne et al., 2020). However, whether the threat of revolution plays a role in lowering the voting age is unclear, as the group to be enfranchised is smaller compared to other groups that have benefited or could benefit from suffrage extensions. Moreover, the demands of the youth for formal voting rights might be missing (Beck and Jennings, 1969).<sup>4</sup>

The extent of the political power loss induced by suffrage extensions depends not only on preference heterogeneity but also on the institutional background. Anecdotal evidence suggests that direct democratic instruments may hinder the enfranchisement of new groups (Nielsen, 1970; Dumont and Kies, 2016). While some scholars attribute this to discrimination against minorities under direct democracy (Gamble, 1997; Hainmueller and Hangartner, 2019), a political economy-based explanation would emphasize that the political power loss in the context of direct democracy is higher. In the case of Swiss women’s enfranchisement, Koukal and Eichenberger (2017) demonstrate that local direct democracy, compared to local representative democracy, hinders franchise extension at the federal level, but only if a municipality has not introduced local female suffrage and if the present voters still fear losing power at the local level. A similar pattern has been uncovered in relation to the enfranchisement of foreign residents in Switzerland (Koukal et al., 2021). Whether the same mechanisms apply to the lowering of the voting age remains an empirical question.

### 3. Swiss political institutions and youth enfranchisement

In Switzerland, citizens can influence and overrule the policies and decisions of the parliament and government via referenda and initiatives. Popular votes are frequently held at all federal levels (i.e., several times per year) and complement representative democracy in the broader universe of policy dimensions (Frey, 1994, 2005; Ladner, 2012). Therefore, in contrast to most other democratic countries, suffrage extensions are not decreed by the national parliament. Instead, the current electorate decides on concrete proposals for extending the franchise via popular votes. These proposals are either initiated by the parliament or by a group of citizens who start a popular initiative by collecting a certain number of signatures (on the Swiss federal level, 100,000 signatures, which is about 2 percent of the electorate). All popular votes are conducted as secret ballots. Due to the federal structure, suffrage extensions are instituted separately at the cantonal and federal levels. In each canton, the current electorate determines whether to enfranchise young adults at the cantonal and municipal levels. There were popular votes concerning lowering the voting age specifically at the cantonal level, specifically at the municipal level, at both levels (integral), and on delegating the decision to lower the voting age to the municipalities (opt-in). In all of these votes, the proposal to extend the franchise is accepted if the majority of eligible voters are in favor of the extension.

#### 3.1. Youth enfranchisement

We focus on two federal referendums to lower the voting age from 20 to 18. The first popular vote was conducted in 1979 and was narrowly rejected, with a yes share of 49.2%. The most important arguments forwarded by the opponents of youth enfranchisement were the following: (i) The resulting difference between the voting age and the legal age of maturity (20 years) was deemed to be problematic; (ii) the 18-to-20-year olds had no clear demand for being enfranchised; and (iii) the youth population neither had the time for nor interest in participating in politics.<sup>5</sup> The second vote was held in 1991 and was clearly accepted, with a majority of 72.7%. As a result, starting in 1991, young adults aged 18 and 19 could participate in federal elections and popular votes.

In contrast to the joint implementation of a lower voting age at the federal level in 1991, the situation on the cantonal level was different. Three cantons (Schwyz, Neuchâtel, and Jura) lowered the voting age for cantonal and municipal elections and referendums before the first federal vote in 1979; 13 cantons did so between the two federal votes (Berne, Basel-City, Basel-Country, Geneva, Glarus, Obwalden, Nidwalden, Schaffhausen, Ticino, Uri, Vaud, Zug, and Zurich), and ten cantons did so after the second federal vote (Appenzell Outer-Rhodes, Appenzell Inner-Rhodes, Argovia, Fribourg, Grisons, Lucerne, Solothurn, St. Gallen, Thurgovia, and Valais).<sup>6</sup> An illustration of the geographical and chronological distributions of youth enfranchisement is provided in Fig. 1. All ten latecomer cantons lowered the voting age at the cantonal and local levels within one year after the second federal vote in 1991 (see Table A.1).

<sup>3</sup> Larsen et al. (2016) reveal a positive effect of mock elections in relation to introducing a lower voting age. Although the authors cannot disentangle a causal link, experience with the new group might play a role.

<sup>4</sup> Using survey data from U.S. high school seniors (12th graders), Beck and Jennings (1969) attribute the initial failure to lower the voting age in specific states to a lack of demand from the affected group. However, Wagner et al. (2012) find that 16 and 17-year-olds are not systematically less motivated or less able to participate in the political process in Austria compared to the current electorate.

<sup>5</sup> For more information on pro and contra arguments, see the voting booklet on <https://swissvotes.ch/vote/293.00>.

<sup>6</sup> The information about enfranchisement at the cantonal level stems from the cantonal archives. Unfortunately, it was not possible to gather detailed information about the exact number of referendum votes in each canton. Opt-in rules that delegate decisions regarding enfranchising the 18- and 19-year-olds at the local level have been introduced in Lucerne (1986) and Grisons (1989).

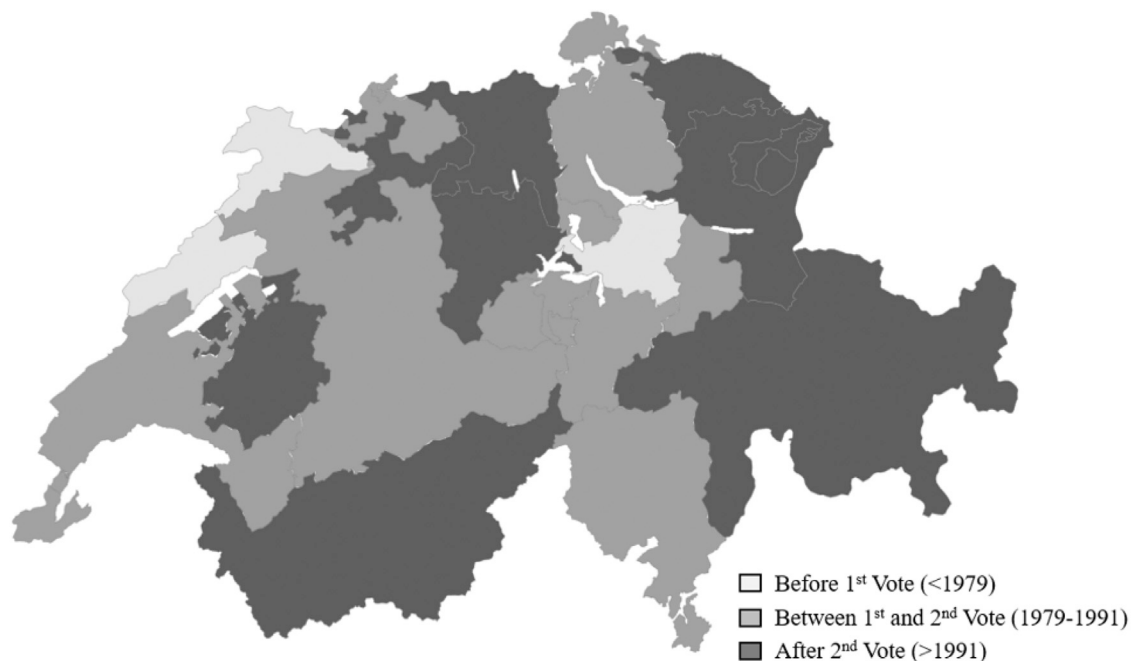


Fig. 1. Chronological and geographical distribution of lowering legal voting age 18.

### 3.2. Institutions at the local level

The legislative branch of Swiss municipalities is either organized as a town meeting or as a parliament. In municipalities with a town meeting, all eligible voters meet one to four times per year to discuss and determine the most important municipality issues. In these town meetings, participants can participate in the public discourse, articulate the intensity of their preferences, establish the agenda by advancing new proposals, and observe both the discussion and voting behavior of other participants. In contrast, in municipalities with local parliaments, voters delegate part of their democratic rights to the politicians. Therefore, town meetings constitute a direct-democratic institution, and parliaments constitute a representative-democratic one. In 1988, approximately 17 percent (i.e., 493) of the municipalities organized their legislative as a parliament (Ladner, 2008). Table A.2 in the Appendix indicates the distribution of municipalities with town meetings and with parliaments. Notably, citizens of municipalities with a parliament as their legislative branch also possess different direct-democratic instruments.

## 4. Data and variables

The empirical analysis is based on a panel of municipal results for two federal votes regarding lowering the voting age to 18 in 1979 and 1991. A salient advantage of this context is that the current electorate voted twice about the identical question.<sup>7</sup> We collected and digitized municipal-level voting data provided by the federal or cantonal statistical offices and matched it with federal decennial census data as well as data regarding municipal institutions provided by Ladner (1988). We only keep those municipalities in our dataset for which all control variables were observable, resulting in a fully balanced panel of 4122 municipal observations stemming from 2061 municipalities.<sup>8</sup> However, in our base estimations, we have excluded the first mover cantons, as they introduced local youth suffrage before the first federal vote. The descriptive statistics for the observations used in our base estimations for the full list of variables are listed in Table 1.

### Dependent variable

The endogenous variable *yes share* denotes the yes share in municipality  $m$  at time  $t$  in favor of lowering the voting age from 20 to 18. The two federal votes were held in 1979 and 1991, respectively.

### Explanatory variables

<sup>7</sup> This setting allows us to control for potential unobserved local preferences in relation to lowering the voting age that may have been prevalent in the first federal vote.

<sup>8</sup> Without data cleaning, we would end up with a dataset stemming from 2561 municipalities. Most observations were lost because information about the institutional setting was missing. Since the data quality for the canton of Fribourg was poor, some observations for this canton had to be excluded from the sample. The canton of Ticino had to be dropped entirely from the sample, as no data was available.

**Table 1**  
Descriptive statistics.

Variable	N	Mean	SD	Min.	Max.
Yes share	3,840	58.38	17.17	0	100
Direct democracy	3,840	0.89	0.31	0	1
Local youth suffrage	3,840	0.24	0.43	0	1
Experience	3,840	0.21	0.40	0	1
Population	3,840	2726.65	11,853.61	19	369,522
Population (log)	3,840	6.78	1.37	2.94	12.82
Agriculture	3,840	16.29	14.98	0	96.88
Foreigner	3,840	8.34	7.51	0	51.20
Pensioner	3,840	13.80	4.53	0	39.81
Young (<20)	3,840	28.32	4.77	3.85	64
Women	3,840	49.15	2.51	32.56	63.35
Married	3,840	48.17	4.02	25.64	62.50
Catholics	3,840	43.50	32.48	0	100
German	3,840	66.80	38.90	0	100
Unemployed	3,840	1.07	1.16	0	21.57

**Table 2**  
Mean Yes Shares in Federal Votes.

Ø Mean Yes Share	Town Meeting	Parliament
vote 1979	44.68%	50.19%
vote 1991	72.61%	76.09%

We use data provided by the municipality survey by [Ladner \(1988\)](#) to operationalize the extent of direct democracy at the municipal level. The variable *direct democracy* indicates whether the legislative branch of a municipality consists of a town meeting (direct democracy) or a parliament (representative democracy). In our observation period, the municipal institutional setting was stable. Transitions from a town meeting to a parliament (or vice versa) were rare. Based on information provided by [Funk and Litschig \(2020\)](#), we identified 20 municipalities that changed their institutional settings in the observation period, which is too little for a specific switcher analysis. Therefore, we excluded these observations, making the variable direct democracy a time-invariant variable.

The variable *local youth suffrage* captures whether the youth is already (*local youth suffrage* = 1) or not yet (*local youth suffrage* = 0) enfranchised in the municipality *m* at time *t*. As explained in Section 3, three cantons introduced local suffrage before the first vote, 13 cantons did so between the two federal votes, and ten cantons did so after the second vote. We provide graphical illustrations of the development of the yes shares separately for municipalities with town meetings or parliaments among (i) all cantons that lowered the voting age before 1979 or after 1991 (Figure B.2) and (ii) all cantons that lowered the voting age between 1979 and 1991 (Figure B.3). Moreover, we introduce a dummy variable *experience* that indicates, for the in-between mover cantons, whether they had introduced local youth suffrage shortly after the first federal vote in 1979 (*experience* = 1) or only shortly before the second federal vote in 1991 (*experience* = 0).

### Control variables

We control for several socio-demographic variables, which are both mentioned in the economic and political literature about suffrage extensions and that are available at the municipality level. Following [Svensson \(1979\)](#), we account for the degree of rurality and urbanity by controlling for *population* size, the share of *agriculture*, and the share of *foreigners* present in a municipality. We also control for the demographic characteristics of the municipalities. Since the expected change in the size of the future electorate has been found to affect the timing of suffrage extensions ([Braun and Kvasnicka, 2013](#); [Koukal et al., 2021](#); [Stutzer and Slotwinski, 2021](#)), we control for the share of *young* residents (under 20 years old). We further include the *pensioner* share to control for the electorate's demographic composition, as the literature indicates a negative correlation between the age of the current electorate and the willingness to enfranchise the youth ([Birch et al., 2015](#); [Svensson, 1979](#)). Furthermore, we control for further population characteristics, such as the share of women or married inhabitants. Moreover, we control for culture by introducing the share of *Catholics* and the share of *german* speakers. The *unemployment* rate reflects the economic situation in a municipality. As discussed in Section 3, preference heterogeneity between the current and the old electorate may affect the decision regarding whether to enfranchise a new group. Some of these control variables, such as agriculture or pensioner share, are also proxies for the differences in the preferences between the old and the new electorates.

### A look at the raw data

[Table 2](#) provides a first descriptive picture of the yes share in the votes on lowering the voting age, separated for municipalities with local town meetings as opposed to local parliaments. The willingness to lower the voting age was smaller in municipalities with town meetings in both federal referendums, which seemingly supports the hypothesis that direct democracy results in discrimination ([Gamble, 1997](#)). The average yes share increased from the first to the second federal vote by about two percentage points more in the direct-democratic municipalities compared to the representative-democratic municipalities.

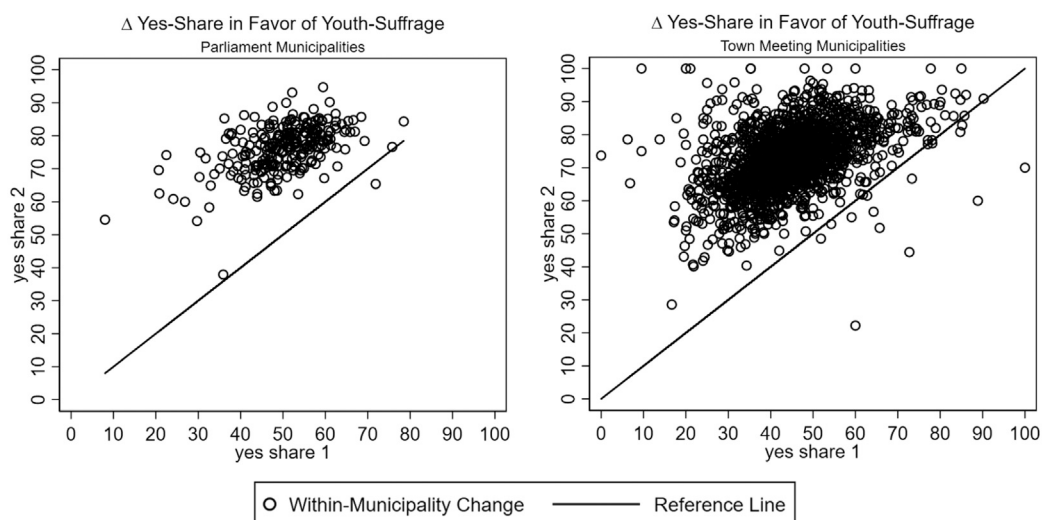


Fig. 2. Development of yes share in town meeting and parliament municipalities.

Fig. 2 illustrates the inter-municipal development of the yes share between the first and the second referendum within different institutional contexts. Overall, Fig. 2 underscores a positive time trend: The willingness to lower the voting age increased over time both in municipalities with direct-democratic institutions and municipalities with representative-democratic institutions, as is also evident in the density plots in Figure A.1 in the Appendix.

## 5. Empirical strategy

Based on our theoretical considerations and previous empirical findings, we expect the institutional context and the extent of preference heterogeneity to affect the willingness of the current electorate to enfranchise the young. In this section, we explain how our data structure enables us to disentangle different mechanisms at play in direct-democratic environments as opposed to representative-democratic environments in the process of lowering the voting age.

### Disentangling institutional channels

The Swiss context, characterized by its institutional variation and the staggered introduction of cantonal youth suffrage, allows the exploitation of the following differences:

- Municipalities with town meetings vs. municipalities with parliaments (i.e., direct-democratic vs. representative-democratic).
- Municipalities from cantons that lowered the voting age vs. municipalities from cantons that did not lower the voting age for municipal decisions between the vote in 1979 and the vote in 1991.

We observe the effects of local direct democracy compared to local representative democracy on voters' willingness to enfranchise the youth population at the federal level before and after local youth suffrage has been introduced. In cantons without youth suffrage at the local level, the (expected) power loss of the citizens when lowering the voting age at the federal level encompasses two elements:

- They lose power at the federal level.
- They are likely to also lose power at the local level, as the lower voting age at the federal level increases the pressure on the cantons to reduce the voting age for municipal and cantonal issues. The fact that all cantons lowered their voting age within a year after the accepted federal vote in 1991 supports this assumption (see Table A.1 in the Appendix).

While the first element of the expected loss of power is independent from the local institutions, the second element is dependent upon the local institutions. The voters from direct-democratic municipalities face a larger expected loss of power than those from representative-democratic municipalities. Therefore, we expect the behavior of voters in the second federal vote to depend upon whether their canton has decreased the voting age before this vote. If the canton has not done so, the voters endure a fear of a loss of power at the local level, which is more substantial if they are from municipalities with direct-democratic institutions. In contrast, in cantons that have lowered the voting age before the second federal vote, there is no reason for a differential effect between the two institutional types of municipalities. Consequently, we expect a negative effect of municipal direct democracy on the *yes share* for lowering the voting age at the federal level in cantons that have not lowered the voting age before the second federal vote. Regarding the effect of direct democracy in cantons that have already lowered the voting age before the second federal vote, we have no firm hypothesis. It could be positive, as local youth suffrage allows the electorate to gain experience with younger citizens in politics.

We observe the institutional variation of interest (direct- vs. representative-democratic) on the municipal level. In contrast, the decision to lower the voting age at the local level is made at the cantonal level and is therefore exogenous to the preferences mapped within an individual municipality.<sup>9</sup>

At the time of the first federal referendum in 1979, three Swiss cantons had already lowered the voting age on the local level.<sup>10</sup> To compare municipalities under similar enfranchisement conditions, we exclude these three pioneer cantons in our main estimations. Therefore, local youth suffrage is equal to zero for all municipalities in our data set at the time of the first federal referendum vote. At the time of the second federal referendum, 13 more cantons had already introduced local youth suffrage, whereas in the remaining 10 cantons, a lower voting age had not yet been introduced.

### Empirical strategy

We analyze how *direct democracy* affects the willingness of the current electorate to lower the voting age when the youth is or is not yet enfranchised at the local level. Therefore, we estimate Model (1) and interact *direct democracy* and *local youth suffrage* and add cantonal and year-fixed effects:

$$\begin{aligned} \text{yes share}_{mt} = & \beta_0 + \beta_1 \text{direct democracy}_m + \beta_2 \text{local youth suffrage}_{ct} \\ & + \beta_3 \text{direct democracy}_m * \text{local youth suffrage}_{ct} \\ & + \theta X_{mt} + \delta \text{canton}_c + \gamma \text{year}_t + \epsilon_{mt} \end{aligned} \quad (1)$$

where  $X_{mt}$  is a vector of controls at the municipal level  $m$  in referendum year  $t$ . By examining the interaction between *direct democracy* and *local youth suffrage*, we shed light on the potential ambiguous effects of direct democracy in the process of enfranchising the youth population. Since *direct democracy* is a time-invariant variable, its base effect could not be displayed when using municipal fixed effects. We, therefore, introduce cantonal fixed effects  $\delta$  in our model to at least be able to control for cantonal differences and to display the base effect.<sup>11</sup> The introduction of cantonal fixed effects, however, limits the available variation as not all cantons dispose of the same institutional variation. To address this issue, we use municipal fixed effects in the robustness checks. By doing so, we can take advantage of the variation between different cantons.

For a causal interpretation, one must rely on the common trend assumption, meaning that in the absence of the treatment (local youth suffrage = 0), the difference in the outcome between the town meeting municipalities and the parliament municipalities would remain constant over time. Unfortunately, this assumption cannot be formally tested, as it is not possible to observe the counterfactual trend in the yes shares. Nevertheless, we apply different approaches to assess the plausibility of the common trend assumption. As we use cantonal fixed effects in our base model, town meeting and parliament municipalities are embedded in the same geographical, economic, and linguistic contexts.

First, we look at municipalities that experienced no changes in their treatment status during our period of observation (see Section 3). This is the case for two groups of municipalities: (i) the municipalities of the three first-mover cantons, which lowered the voting age to 18 before 1979 (local youth suffrage always 1), and (ii) the municipalities of the ten latecomer cantons, which lowered the voting age at the local level after 1991 (local youth suffrage always 0). Graphical illustrations of the trends for town meeting and parliament municipalities, which have not undergone changes in the treatment status, are presented in the Appendix in Figure B.2. The graphs support the notion of common trends for the two institutional types. In most cantons with no changes in the local voting age, the willingness to lower the voting age evolved similarly from 1979 to 1991. Figure B.3 maps the time trend of our core treatment group, which consists of municipalities that granted local voting rights between the first and the second national votes, where we did not expect common trends between the two institutional types. Figure B.3 indeed reveals different time trends for town meeting and parliament municipalities; slopes are steeper for municipalities with town meetings compared to municipalities with a parliament in the same canton. Two cantons (Grison and Lucerne) introduced opt-in rules between the first and second national votes. These opt-in rules delegate the decision to lower the voting age for municipal matters to the respective municipality. With such an opt-in rule in place, different municipalities of the same canton may be subject to different voting ages for local politics. Unfortunately, we could not obtain detailed information about which municipalities opted into the lower voting age.<sup>12</sup> However, we received the information from the cantonal chancellery of Lucerne that most municipalities applied the opt-in rule, which would shift them to the treatment group.

Second, we provide a graphical illustration of cantonal votes regarding the lowering of the voting age in the canton of Zurich. From an empirical perspective, Zurich is an insightful canton, since voters in Zurich voted twice about this issue at the cantonal level before the second federal vote (see Figure B.4). Again, trends do not differ systematically between the town meeting and parliament municipalities.

Third, we analyze how the vote share of the Christian Democratic People's Party (CVP) evolved in the two different institutional types. We interpret this vote share as a measure of conservatism present in a municipality. As shown in Figure B.5, there were no systematic differences in its development in the direct-democratic and representative-democratic municipalities.

<sup>9</sup> As a robustness check, we will exclude municipalities with "extreme" opinions from our sample (see Table C.6). We perform robustness checks, in which we exclude the cantons that introduced opt-in rules, meaning that the decision to grant voting rights to the youth has been delegated to the individual municipalities (see Table C.4).

<sup>10</sup> The three cantons were Schwyz, Jura, and Neuchâtel. See Section 3 for details about the enfranchisement process of the youth population in Switzerland.

<sup>11</sup> The introduction of *local youth suffrage* is, in most cases, determined at the cantonal and not the municipal level. Therefore, the variable *local youth suffrage* is exogenous to the differences between the individual municipalities. We exploit this difference when introducing cantonal fixed effects.

<sup>12</sup> As a robustness check, we will therefore exclude these two cantons from our analysis.

## 6. Results and discussion

### 6.1. The ambiguous role of direct democracy

Table 3 provides the estimations of Model (1). From Specifications (1) to (4), we insert cantonal and year-fixed effects and successively our control variables. The base effect of direct democracy is time-invariant and can only be displayed in estimations with cantonal fixed effects. The results remain robust when estimated in a model using municipal fixed effects (see Table C.3). The base effect of *direct democracy* reflects the differences in the yes shares between municipalities holding town meetings compared to municipalities with parliaments, given that the voting age is not lowered from 20 to 18 on the local level (*local youth suffrage*=0). The coefficient for *direct democracy* is negative, statistically significant, and robust at  $-1.329$  to  $-1.575$  percentage points in Specifications (1) to (4). While this effect is small in absolute terms, it is fairly sizeable compared to the effects of other variables, such as the *population (log)* or the *pensioner* share, which is an established barrier impeding youth enfranchisement (see e.g. Svensson, 1979; Birch et al., 2015).<sup>13</sup>

As discussed in Section 2, if the present electorate can more effectively affect politics in a direct-democratic setting compared to a representative-democratic setting, it also loses more power when sharing voting rights with new groups. Indeed, Table 3 indicates a negative effect of direct democracy when no local youth suffrage is installed, which is when the price of direct democracy matters. Theoretically, the additional power loss induced by direct democracy at the local level is eliminated when the young are enfranchised at the local level. Our estimates in Table 3 align with this notion: With local youth suffrage installed, the negative effect of direct democracy disappears and even transforms into a positive effect. To some extent, this interpretation discharges direct democracy from the claim of systematically resulting in the discrimination of outsiders (Gamble, 1997; Hainmueller and Hangartner, 2019; Koukal and Eichenberger, 2017), as the “discriminatory behavior” we observe might be related to a greater power loss. However, this power loss mechanism does not yet explain the positive coefficient of direct democracy when local youth suffrage is implemented.

As presented in Table 3, when the youth population is enfranchised at the local level, direct democracy seems to exert the opposite effect. Given that the voting age is already lowered at the local level, the voters of municipalities with town meetings (*direct democracy* = 1) are, on average, 1.300 percentage points more willing to enfranchise younger citizens at the federal level compared to municipalities with local parliaments (*direct democracy* = 0).<sup>14</sup> For a better understanding of the interaction, the predictive margins are plotted in Figure C.6. In the specifications with municipal fixed effects (see Table C.3), the coefficient for the interaction term remains robust but is somewhat larger than in the estimations with cantonal fixed effects. Potential mechanisms behind this finding will be discussed in the Section 6.1.2.<sup>15</sup>

#### 6.1.1. Robustness of the results

We perform several robustness exercises to test the robustness of our results.<sup>16</sup> Most importantly, we start with different sample restrictions, such as excluding opt-in cantons, population outliers, and extreme proponent and opponent municipalities. As the cantons of Lucerne and Grison introduced an opt-in rule for lowering the voting age between 1979 and 1991, municipalities in these cantons could independently opt to lower the voting age at the municipal level. As we do not dispose of precise information about all municipalities that have used this possibility, we exclude these cantons from our data set. The results remain robust in terms of size and significance (see Table C.4 in the appendix). As our measure of direct democracy at the local level is correlated with municipality size, we exclude population outliers from the sample. In doing so, we ensure that we include only municipalities for which both types of institutional design are realistic options. We change the municipal thresholds for the exclusion of outlier municipalities (1%, 5%, and 10% smallest and largest municipalities were excluded) and find no meaningful variations in terms of size and significance (see Table C.5). Furthermore, we aim to rule out the possibility that our results are driven by “extreme” municipalities, hence the ones with very high or very low acceptance rates in the first federal vote. We exclude the outlier municipalities in terms of yes shares in the first vote (5% and 10% lowest and highest yes shares) from our analysis (see Table C.6). Again, the results remain robust in terms of size and significance. Interestingly, Specifications (1) and (2) in Table C.6 now indicate a statistically significant positive coefficient for *local youth suffrage*. Therefore, installing local youth suffrage is also positively associated with the willingness of the current electorate to enfranchise the youth at the federal level in representative-democratic municipalities. However, the coefficient is still larger for direct-democratic municipalities compared to representative-democratic municipalities.

In further robustness tests (Table C.7), we cluster our standard errors at the cantonal level (Spec. 1 in Table C.7) and perform the same estimations without cantonal and municipal fixed effects (Spec. 2) and thus make use of the variations across different cantons. Furthermore, we include the three pioneer cantons in the analysis to evaluate whether the exclusion of early movers drives our results (Spec. 3). We add a control for the local party share in national elections (Spec. 4). This ensures that our results are not driven by changes in the local party environment. Finally, we restrict the sample to the cantons for which we dispose of at least ten observations (each) of parliament and town meeting municipalities (Spec. 5). This reveals that our findings are not driven by a

<sup>13</sup> The variable *population (log)* has a coefficient of  $-0.758$  and a standard deviation of 1.37. The *pensioner share* exhibits a coefficient of  $-0.211$  and a standard deviation of 7.51.

<sup>14</sup> This effect results from extracting the base effect of *direct democracy* ( $-1.575$ ) from the interaction effect (2.875). Joint significance tests of the base and the interaction effects reveal that the equality of the coefficients can be rejected at the 5 percent level.

<sup>15</sup> See also (Koukal and Eichenberger, 2017) for a discussion of the boost effect in female enfranchisement.

<sup>16</sup> As shown in Table C.3, the results remain robust when estimating Model (1) with municipal effects rather than cantonal fixed effects.



**Table 3**  
Direct democracy and other conditions for youth enfranchisement.

Variables	(1) yes share	(2) yes share	(3) yes share	(4) yes share
<b>Explanatory variables</b>				
Direct democracy	-1.329* (0.774)	-1.479* (0.767)	-1.561** (0.709)	-1.575** (0.708)
Local youth suffrage	0.575 (0.668)	0.616 (0.671)	0.565 (0.662)	0.454 (0.672)
Direct democracy * Local youth suffrage	2.531*** (0.655)	2.528*** (0.652)	2.767*** (0.630)	2.875*** (0.640)
<b>Urbanity</b>				
Population (log)	-0.482** (0.223)	-0.570** (0.229)	-0.765*** (0.218)	-0.758*** (0.216)
Agriculture	-0.178*** (0.019)	-0.156*** (0.021)	-0.156*** (0.022)	-0.155*** (0.022)
Foreigner	0.061** (0.030)	0.041 (0.031)	0.127*** (0.033)	0.124*** (0.033)
<b>Population background</b>				
Pensioner		-0.241*** (0.058)	-0.212*** (0.057)	-0.211*** (0.057)
Young (<20)		-0.107 (0.070)	-0.123* (0.068)	-0.119* (0.068)
Women		0.156* (0.085)	0.158* (0.086)	0.157* (0.086)
Married		-0.055 (0.058)	-0.011 (0.058)	-0.004 (0.059)
<b>Culture</b>				
Catholics			0.009 (0.012)	0.009 (0.012)
German			0.075*** (0.010)	0.075*** (0.010)
<b>Economic situation</b>				
Unemployed				0.150 (0.196)
Cantonal FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Observations	3,840	3,840	3,840	3,840
R-squared	0.766	0.768	0.776	0.776

Note: Robust standard errors in parentheses are clustered at the municipal level. The variable direct democracy is a dummy variable, the population is in logs, and the remaining variables are in shares of the municipality's total population.

\*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

few cantons with exceptional institutions.<sup>17</sup> A summary of these robustness tests is presented in Table C.7; notably, all coefficients of interest remain robust.

### 6.1.2. Direct democracy: Enhancing contact?

Our estimation results suggest that direct democracy only negatively affects the willingness to enfranchise the young at the national level when the young are not yet enfranchised at the local level. In contrast, it positively affects power-sharing at the national level when the young are already enfranchised at the local level. Several mechanisms might explain these observations. In the remainder of this paper, we discuss the possibility of collecting experience in politics with the newly enfranchised group.

One possible explanation for the positive interaction term is the potential for more intensive and more frequent contact between different groups in direct democracy contexts compared to representative democracy settings. In town meetings, the electorate discusses political topics and can better assess the political tastes, behaviors, and intentions of other voters. Hence, direct-democratic institutions increase the possibilities of contact and interaction with other voters. Contact theory suggests that increased contact can mitigate prejudices (Allport, 1954; Yehuda, 1998); therefore, interactions with young voters in politics on the local level could lead to a higher willingness to grant suffrage at the national level. This interpretation is underlined by the findings of Larsen et al. (2016), who attribute a positive effect of mock elections to the willingness of the electorate to lower the voting age. Moreover, social interactions in local politics between the new and the old electorates may increase the in-group feeling. The previous literature has also suggested that in-groups evolve quite rapidly (Goette et al., 2012).

<sup>17</sup> As not all cantons exhibit the same distribution of institutions between the municipalities (see Table A.2), we also made sure that some cantons with skewed distributions do not drive our findings. We therefore performed a jackknife analysis, where we excluded one canton after the other from the sample. We performed these estimations with cantonal and municipal fixed effects. The results remained robust in both exercises and are available upon request.

**Table 4**  
Experience as an explanation for the positive interaction term.

Variables	Long experience		Short experience	
	(1) yes share	(2) yes share	(3) yes share	(4) yes share
Direct democracy	-1.262 (0.906)	-1.391* (0.809)	-1.468 (1.052)	-1.933** (0.945)
Local youth suffrage	1.168 (0.742)	0.765 (0.757)	0.765 (1.085)	1.049 (1.036)
Direct democracy * Local youth suffrage	3.133*** (0.844)	3.793*** (0.824)	1.498 (1.079)	1.493 (1.022)
Urbanity	✓	✓	✓	✓
Population background		✓		✓
Economic situation		✓		✓
Culture		✓		✓
Cantonal FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Observations	2,772	2,772	3,028	3,028
R-squared	0.751	0.764	0.741	0.755

Note: Robust standard errors in parentheses are clustered at the municipal level. Spec. (1) and (2) look at the in-between movers with a long duration of local youth suffrage and Spec. (3) and (4) at the ones that only introduced it shortly before the 2nd federal vote. The experienced cantons are BL, GE, GL, NW, OW, VD, and ZG. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

If such an experience mechanism explains our results, we would expect that the longer a municipality has experienced local youth suffrage, the stronger the positive effect should be. We therefore estimate Model (1) for two different sub-samples: for municipalities that have already gained long experience with local youth suffrage and for municipalities that have introduced local youth suffrage only shortly before the second federal vote.<sup>18</sup> The results are presented in Table 4. Indeed, the positive effect of the interaction term is larger in terms of size for the sample of the cantons with extensive experience (Spec. 1 & 2 in Table 4). Moreover, the effect is statistically significant only for the sample with the lengthy experience, which supports the idea that joint democratic experiences of the old and the new electorates can explain parts of our findings.

We perform robustness checks in which we introduce municipal instead of cantonal fixed effects and interact *experience* directly with *direct democracy* and *local youth suffrage*. The results of these additional tests are depicted in Table C.8. The estimates of the triple interaction support the notion of the split sample analysis; the coefficient of the triple interaction is positive and significant at the 10 percent level and indicates that *direct democracy* and *local youth suffrage* exert a more positive effect on the electorate's willingness to enfranchise the youth when the municipality has had extensive experience with the youth population at the local level. However, when introducing municipal fixed effects, the results do not remain robust; in the split sample analysis (see Table C.8), both the more [Spec. (1)] and less [Spec. (2)] experienced municipalities exhibit positive and significant interaction terms, again pointing to the power-loss mechanism's importance.

Altogether, these findings provide support for local direct democracy to strengthen the contact between the former and the new parts of the electorate and to enhance the willingness of the older citizens to enfranchise the young also at the federal level, which inflates the size of the positive interaction term presented in Table 3.

## 6.2. Further conditions for youth enfranchisement

Our estimates in Table 3 also provide insights about the effects of our control variables, which prove to be important drivers of, and barriers to, youth enfranchisement. This section briefly discusses how the willingness to enfranchise the youth population relates to different municipal characteristics.

**Urbanity.** A more rural environment has been found to pose a barrier that impedes efforts to decrease the voting age. Table 3 depicts the coefficients for different measures of urbanity. We find that voters from areas with a larger share of people working in the agricultural sector are statistically significantly more reluctant to lower the voting age, which aligns with the results from previous studies (Birch et al., 2015; Svensson, 1979). A one percentage point larger share of people working in the agricultural sector corresponds to a 0.155 lower yes share for enfranchising the young. Concerning the size of a municipality, we expect larger municipalities to be more in favor of lowering the voting age, as municipality size can be viewed as a proxy for urbanity.<sup>19</sup> However,

<sup>18</sup> The cantons with long experience are BL, GE, GL, VD, NW, OW, and ZG, and the cantons with short experience are BS, BE, UR, SH, TI, and ZH. The cantons with extensive experience introduced the lower voting age between 1979 and 1983, and the cantons with minimal experience did so between 1988 and 1991 (see Table A.1).

<sup>19</sup> From a power-loss perspective, population size has no neat and simple effect. With an increasing number of citizens, the decision weight of an individual citizen decreases. However, at the same time, the size of the budget and the range of policies to decide on increase. Therefore, deriving a clear hypothesis from a power-loss perspective regarding population size is not possible.

we find that a municipality with a one percent larger population size is associated with a statistically significantly 0.00758 percentage point lower willingness to enfranchise the youth population. A potential explanation for this finding is the smaller probability of interaction between the old and the potential new electorates in larger municipalities (Allport, 1954), which might decrease the willingness to share voting rights with this group. Another proxy for urbanity is the share of foreign people in a municipality, which is positively associated with the willingness to enfranchise younger citizens (Table 3). A one percentage point larger foreigner share corresponds to a statistically significantly 0.124 percentage point higher willingness to lower the voting age.

*Population background.* Table 3 further reveals insights about the relevance of the population backgrounds in the enfranchisement of the young. First, the age structure matters. The share of pensioners in a municipality is negatively associated with the revealed preferences for lowering the voting age to 18. The stable estimates of Table 3 indicate that a one percentage point larger pensioner share is associated with a 0.211 percentage point lower willingness to enfranchise the young, which corroborates the results by Birch et al. (2015) and Svensson (1979). This effect is consistent with the interpretation that larger preference heterogeneity between the new and the old electorates poses a barrier to their enfranchisement (see discussions in Section 2). Moreover, Table 3 also reveals that a one percentage point larger share of young people in a municipality relates to a statistically significantly 0.119 percentage point lower willingness of the actual electorate to share the franchise with the young. A potential explanation is the cost for the actual electorate to enfranchise the young, which increases with a larger group to be enfranchised.<sup>20</sup>

In contrast to the findings of Birch et al. (2015), we find that a larger share of women in a municipality is associated with a higher willingness to lower the age threshold to become enfranchised. Our finding could be attributed to women behaving more altruistically than men (Eswaran and Kotwal, 2004; Simmons and Emanuele, 2007) or to the smaller preference heterogeneity between women and young people. While gender and the willingness to lower the voting age seem to be related, we do not find statistically significant relationships for the prevalence of married couples.

*Culture.* Cultural factors may play a role in decisions about suffrage extensions. For instance, Catholicism has been found to affect female voting rights (Bertocchi, 2011; Koukal and Eichenberger, 2017). However, the coefficient for the share of Catholics in Table 3 is close to zero and statistically insignificant. Another proxy for culture is the dominant language among the population (French vs. German). Specifications (3) and (4) in Table 3 reveal that a one percentage point larger share of German speakers relates to a statistically significant 0.075 percentage points higher willingness to lower the voting age. Although it is relatively small, the effect is interesting, as the French-speaking part of Switzerland was a first mover in enfranchising women and non-citizens but not in lowering the voting age.

*Economic situation.* In the case of non-citizen residents, it has been found that greater competition in the labor market is positively associated with anti-immigrant attitudes (Scheve and Slaughter, 2001) and negatively associated with natives' willingness to enfranchise foreigners (Koukal et al., 2021). In contrast, the unemployment rate does not appear to play a role in the electorate's decision to lower the voting age (see Table 3). However, the unemployment rate during our observation period was low, at least compared to the present, with a mean of 1.06 percentage points (see Table 1).

## 7. Conclusion

After the enfranchisement of women, lowering the voting age to 18 was the second significant extension of suffrage in the last century. Today, lowering the voting age further to 16 years is on the political agenda in many countries. To better understand why some states or jurisdictions are faster or slower in extending suffrage to the young, we can investigate historical cases. The Swiss case is particularly interesting since the citizens have revealed their preferences in many federal and cantonal votes concerning lowering the voting age from 20 to 18. Analyzing referenda data is especially insightful, as anecdotal evidence suggests that there are systematic differences between what parliaments decide and what voters desire with respect to the enfranchisement of new groups. We add to the literature about the catalysts behind youth enfranchisement by investigating how institutional variations in the extent of direct democracy relate to the willingness of the former electorate to share formal political voting rights with younger voters in Switzerland. Moreover, we provide insights into the effects of different socio-economic determinants of the enfranchisement process, such as demography, urbanity, culture, and the economy.

By exploiting a new dataset of two federal votes in Switzerland related to lowering the voting age from 20 to 18 years in 1979 and 1991, our DiD estimates provide evidence that the extent of direct democracy affects the decision to lower the voting age. We discern two effects of direct democracy on the acceptance of youth enfranchisement. First, when the voting age has not yet been lowered at the local level, local direct democracy has a negative effect on the current electorate's willingness to enfranchise younger people at the federal level compared to local representative democracy. This result is consistent with the former electorate fearing a loss of power (a cost or price), which increases with the extent of direct democracy. Second, when local youth suffrage is introduced, direct democracy may exert a positive effect on the willingness to grant voting rights to the youth at the federal level. Two mechanisms could explain these findings. First, the additional power loss due to direct democracy at the local level no longer matters as soon as youth enfranchisement is installed at the local level. As similar effects have been found for the enfranchisement of women and non-citizens, this paper suggests a more general nature of this mechanism. Second, the contact between the old and new electorates may be more intensive within a more direct-democratic setting and may thus increase the willingness of the current electorate to enfranchise the youth. This interpretation receives empirical support since the positive effect of direct democracy is

<sup>20</sup> See, for instance, Koukal et al. (2021) who find a negative relationship between the number of non-citizens and the willingness of the electorate to enfranchise non-citizens.

especially visible for municipalities with extensive experience with local youth suffrage. Additionally, we provide evidence that various socio-demographic variables are important for explaining the introduction of lower voting-age thresholds. In line with results from previous literature, we find the share of agriculture and the share of pensioners hinder the enfranchisement of the young, suggesting that the degree of preference heterogeneity between the old and the new electorates impacts the willingness to lower the voting age.

Overall, it is not astonishing that extending voting rights in direct democracies is characterized by seemingly contradictory observations. Although our results imply that direct democracy may initially hinder the lowering of the voting age, it does not appear to pose a general threat to the political integration of younger people. The comparatively late enfranchisement of the young is rather a consequence of the individual resistance to relinquish influence in the political process. Hence, our results suggest that there is a trade-off between equipping the current electorate with strong participation rights and extending voting rights to new groups. This potential conflict between the desirability of decision-making close to the people and the agility to reform institutions might fruitfully be tested more widely in the future.

### CRedit authorship contribution statement

**Anna Maria Koukal:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Patricia Schafer:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Reiner Eichenberger:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Conceptualization.

### Declaration of competing interest

The authors confirm that there is no financial or personal interest or belief that could affect their objectivity.

### Data availability

Data will be made available on request.

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### Appendix A. Supplementary data

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.ejpoleco.2024.102507>.

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