Direct Democracy and Discrimination: Lessons from Swiss Female Enfranchisement

Anna Maria Koukal* and Reiner Eichenberger†

This version: May 2020

Abstract

We analyze the discriminatory role of direct democracy by using novel panel data of Swiss referenda on female enfranchisement. As Swiss women were only enfranchised in 1971, Switzerland is often taken to illustrate that direct democracy fosters discrimination against weak societal groups. By exploiting municipality-level differences in direct-democratic institutions, we shed light on the conditions under which direct democracy becomes a barrier to enfranchising women. When compared to representative democracy, we find two countervailing effects of direct democracy: it boosts men's willingness to enfranchise women, but it also increases their price to do so.

Keywords: direct democracy, discrimination, female enfranchisement

*University of Fribourg, Email: annamaria.koukal@unifr.ch

†University of Fribourg, Boulevard de Pérolles 90, 1700 Fribourg and CREMA, Switzerland. Email: reiner.eichenberger@unifr.ch

1 Introduction

Throughout the world, there is a growing interest in direct democracy.[1] In addition to states with firmly established direct democratic institutions such as approximately one-half of the US states or Switzerland, many countries in Europe (Leininger 2015), Latin America (Barczak 2001) and Asia (Matsusaka 2005a) are increasingly applying direct democratic instruments. The academic literature attributes various positive effects to direct democracy.[2] However, a deep concern about direct democracy is that it may foster discrimination against outsiders and minorities. Already James Madison, a founding father of the United States, speaks about a tyranny of the majority (Madison 2009). The empirical literature remains controversial and incomplete. While some authors (e.g., Gamble 1997; Hainmueller and Hangartner 2019; Haider-Markel, Querze, and Lindaman 2007) find that minorities tend to fare worse in a direct democratic setting, others suggest that minority rights are not systematically jeopardized (e.g., Frey and Goette 1998; Donovan and Bowler 1998). One explanation for these ambiguous results is the challenge to identify the extent of discrimination and causal influences of direct democracy relative to representative democracy.

Along with the controversial literature, there is a prominent example. Switzerland, the world's most direct-democratic country, enfranchised its female citizens at the national level only in 1971. The contribution of this paper is fourfold: First, we provide a strictly comparative analysis of how direct and representative democracy shape discrimination against women's political rights. Second, we focus on an economic mechanism to understand the conditions under which direct democracy fosters discrimination against women. Third, we shed light on the drivers of female enfranchisement in general. Fourth, we construct a new municipality-level dataset. Currently, the share of politically excluded residents increases through globalization and migration. Thus, understanding the process of political power-sharing is of growing relevance. The introduction of Swiss women's suffrage was a democratic process that lasted almost for a century. In contrast to all other European countries, the decision to enfranchise women had to be taken by all Swiss men – not by male parliamentarians. Besides two referenda on enfranchising women for federal matters in 1959 (rejected) and 1971 (accepted), there were almost one hundred popular votes at the cantonal level in which male voters decided on enfranchising women

1. See Matsusaka (2005b, 2018) or Qvortrup (2014).

2. For the beneficial effects of direct democracy, see, e.g., Frey (1994); Kirchgässner, Feld, and Savioz (1999); Eichenberger (1999); Frey and Stutzer (2000, 2004); and Matsusaka (2005a, 2018).

for cantonal and municipal matters. While the first cantons enfranchised women for cantonal referenda and elections in 1959, the last canton was forced by the Federal Court to enfranchise women for cantonal and municipal matters in 1990. The enfranchisement of Swiss women happened late when compared to its neighboring countries Germany (1918), Austria (1918), France (1944) and Italy (1946), and other western countries, such as the United Kingdom (1928) and the United States (1920). This suggests that direct democracy prevented Swiss men from extending political rights to women.

Our setting allows to compare the enfranchisement of women in direct and representative democracy. We analyze the willingness of men to enfranchise women at the federal level by comparing voting data from two different types of municipalities: *direct-democratic* municipalities with local town meetings and *representative-democratic* municipalities with municipal parliaments. We argue that the political influence of enfranchised citizens is higher in municipalities with a local town meeting, since all important decisions are directly taken by the (male) citizens. This is in contrast to municipalities with a parliament, where part of the decision power is delegated to politicians. Thus, we hypothesize that direct democracy increases the price for men of granting suffrage to women. In other words, the more powerful the voice of the present voters is, the more they lose when extending the franchise. We collect an original municipality-level dataset that exhibits the following advantages: First, all Swiss municipalities voted twice on the identical question of enfranchisement. Second, the municipal institution did not affect the timing of the federal vote. Third, the enfranchisement question allows to analyze how the democratic environment shapes the preferences of men with respect to women's rights. Fourth, the setting allows to disentangle the marginal price effect of direct democracy from other potential mechanisms.

Applying a difference-in-differences approach, we compare municipalities with town meetings to municipalities with parliaments in two situations: (i) In cantons which have not yet introduced women's suffrage, the price for male voters to enfranchise women at the federal level consists of two components: men lose influence both at the federal and the municipal level. (ii) In cantons, which already enfranchised women at the local level, the price to enfranchise women at the federal level consists only of one component: men lose influence at the federal level. Therefore, the price to enfranchise women at the federal level is systematically higher in cantons which have not yet enfranchised women. Furthermore, our results provide evidence that the marginal price of enfranchising women is systematically higher in direct democratic

municipalities. This marginal price manifests itself in a six percentage point lower willingness to enfranchise women in direct democratic municipalities. However, in the absence of this marginal price, our results reveal that direct democracy fosters the enfranchisement of women, when compared to representative democracy.

To assess the relationship between discrimination and direct democracy, our results indicate that it is important to disentangle pure discriminatory effects from the reluctance of individuals to share influence with others. By discriminatory effects we mean a differential treatment of a particular group of people "especially in a worse way from the way in which you treat other people, because of their skin color, sex, sexuality, etc." (Cambridge dictionary 2008),

This paper is organized as follows. Section 2 briefly reviews the related literature. Section 3 provides a short overview of the process of enfranchisement in Switzerland, while Section 4 describes the structure of the dataset. Section 5 develops hypotheses on the role of direct democracy for enfranchising women. Section 6 introduces our estimation strategy and provides an overview of descriptive statistics. Section 7 discusses our results, and Section 8 summarizes our main findings and draws conclusions.

2 Determinants of Political Rights

This paper contributes to a controversial debate about whether direct democracy jeopardizes minority rights. Most empirical studies rely on counting how often minority rights have been weakened in popular votes. Gamble (1997) tests the hypothesis that popular votes are used to push back civil rights. Using data from 74 US civil rights ballots, she finds that 78% of these initiatives resulted in constraining minority rights. However, she explicitly excludes women's rights initiatives from her sample. Donovan and Bowler (1998) reassess Gamble's result. They find that education and population size are positively correlated with minority protection in direct democracy. Donovan and Bowler (1998) conclude that direct democracy does not per se jeopardize minority rights, but that it is more likely to happen in smaller municipalities. Working with Swiss data, Frey and Goette (1998) also challenge the results of Gamble (1997). They consider Swiss initiatives at different federal levels and find no innate tendency of initiatives to endanger civil rights. Additionally, they mention the importance to consider additional policy dimensions such as distributional concerns. Following this idea, Hajnal, Gerber, and Louch

(2002) point out that only 5% of initiatives in California are exclusively targeted at racial minorities. Their results suggest that there is only an anti–minority bias in a few racially targeted votes, but little evidence in favor of a general anti–minority bias. To the best of our knowledge only two studies apply a comparative analysis. Haider-Markel et al. (2007) compare direct democratic outcomes on gay rights to legislative outcomes. They find that minority rights are better off under representative democratic institutions. Analyzing naturalization decisions in Swiss municipalities Hainmueller and Hangartner (2019) exploit institutional variation at the municipality level and take advantage of an exogenous variation. Their results provide causal evidence that discrimination is more prevalent under direct democracy. They argue that legislators face higher costs of discrimination than voters do.

This paper is also closely related to the literature that analyzes the determinants of general suffrage extensions. Acemoğlu and Robinson (2000, 2001) established a theory of democratization, which explains suffrage extension as a strategic decision of the elite to prevent revolution or social unrest.[3] Also the role of wars for suffrage extensions is discussed in the literature (see e.g., Hicks 2013; and Polishchuk and Syunyaev 2015). Other papers study voluntary enfranchisement in the absence of threat and violence. Enfranchisement is more likely if the elites do not profit equally from the status quo (see e.g.,Lizzeri and Persico 2004 and Llavador and Oxoby 2005) or if men profit from enfranchising women (e.g., Doepke, Tertilt, and Voena 2012 and Geddes and Lueck 2002). Pittaluga et al. (2015) analyze how power of the parliament (not the electorate) impacts the enfranchisement decision. Considering ten European countries over the 1840 to 1922 period, they find that limited powers of parliament seems to foster universal suffrage for men.

We are only aware of three studies that have looked at the drivers of female enfranchisement specifically.[4] Bertocchi (2011) focuses on gender wage differentials. She analyzes a cross-country dataset and finds that a smaller gender wage gap increases the likelihood of enfranchising women. By contrast, the share of Catholics and the legality of divorce are negatively correlated with female enfranchisement. Braun and Kvasnicka (2013) analyze the enfranchisement of women in US states over the period 1870 – 1930. They identify the scarcity of women as a driving force for enfranchisement, as it reduces the potential costs of their enfranchisement and attracts potential spouses. To the best of our knowledge, we are the first to examine

3. Additional studies that include the following: Conley and Temimi (2001); Ellis and Fender (2011); or Aidt and Jensen (2014) and Aidt and Franck (2015).

4. The first is an unpublished document by Kenny (1999)

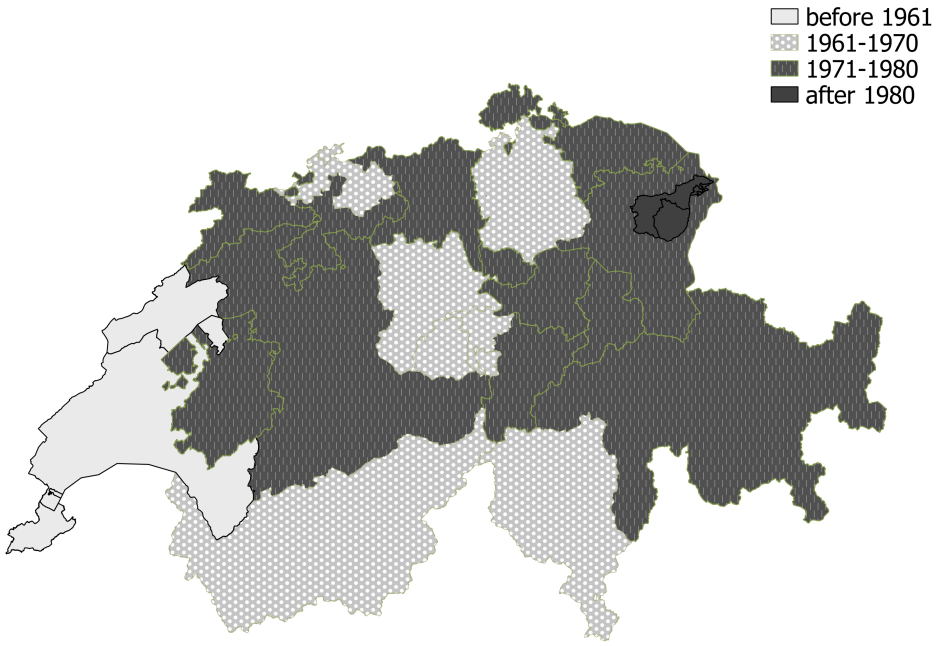
whether and how institutionally shaped influence of the actual electorate influences female enfranchisement. Despite the extensive literature related to women's suffrage, little is known about the drivers of female enfranchisement specifically. Most strikingly, little is known about men's political influence as voters. Finally, this paper further contributes to the literature on the protection of minority rights by causally identifying differences between direct and representative democracy.

3 Swiss Female Enfranchisement

Many authors have mentioned the political system as a main characteristic of the surprisingly late enfranchisement of Swiss women. (see e.g., Ruckstuhl 1986; Roten and Joris 2014; or Mesmer 2007). Switzerland has established a democracy in which popular referenda enable citizens to regularly influence the work and decisions of parliament and government. Popular votes frequently take place at all federal levels and complement representative democracy (see e.g., Frey 1994; Frey 2005; or Ladner 2012). In contrast to most other democratic countries women's suffrage was not granted by the national parliament. Instead, the entire male electorate decided via popular votes whether they wanted to enfranchise women. All these referendums were conducted as secret ballots. Due to the federal structure, suffrage was instituted at the cantonal and federal levels separately. In each canton, the male electorate decided about enfranchising women for cantonal and municipal decisions. There were votes on women's suffrage to be granted only at the cantonal level, only at the municipal level, or at both levels (integral), and on delegating the decision to enfranchise women to the municipalities (optional). In all these votes, the proposal to enfranchise women was accepted if a majority of male voters was in favor.

The first cantonal vote was conducted in 1919; it was followed by approximately 94 cantonal votes and two federal votes. A list of the entire sample is presented in Table A.1 in the appendix. Figure 1 depicts the sequence of women's suffrage implementation at the cantonal level. The French-speaking cantons were the pioneers of Swiss female enfranchisement. Latecomers were the cantons holding cantonal citizen assemblies in form of canton-wide town meetings. At the federal level, the entire Swiss male electorate voted twice on the identical proposal, i.e. whether women should be fully enfranchised for federal referenda and elections. While the first federal vote in 1959 was turned down with a yes share of only 33,1%, the second vote in 1971 was accepted with a yes share 65.7%. Once enfranchised at the federal level, women could enforce their enfranchisement at the cantonal level by a federal

Figure 1: Enfranchisement in cantons



initiative, and the judiciary was more likely to impose women's suffrage on the cantons (which actually happened in 1990, when Appenzell Innerrhoden was forced by the Federal Court to enfranchise women). Table A.2 in the appendix provides an overview of the introduction of mandatory municipal and cantonal suffrage.

4 Municipal Direct Democracy

To examine whether, how, and when direct democracy is harmful to women's enfranchisement and how direct democracy compares to representative democracy, appropriate data is needed. This paper focuses on municipal level institutions, which feature richer observations than the cantonal level. In approximately 80% of Swiss municipalities, the most important political decision-making body is the municipal town meeting. The size of these municipalities ranges from approximately 50 to 20,000 inhabitants (Ladner 2002). The town meeting constitutes the legislative power and is often characterized as the prototype of direct democracy (e.g. Mueller 2003). In the remaining municipalities there are no town meetings, but the legislative powers are delegated to a parliament. The citizens of both municipality types have identical political rights at the cantonal and federal levels. In municipalities with town meet-

ings, the government invites the electorate one to four times a year to discuss and vote on issues such as the budget, local taxes, infrastructure projects, cooperation or even mergers among municipalities and (at that time) the naturalization of foreigners.

In town meetings, each citizen can influence politics via several channels. Citizen can vote on policy proposals of the executive, propose amendments to the government's proposals, launch their own proposals, and decide on the regulations of the municipality (see Ladner 2002). During a town meeting, each citizen can influence the decision-making process in several ways: by making new proposals and thus setting the agenda, by formulating new arguments for or against a proposal, by expressing especially intense preferences and thus influencing the preferences of others, and finally by voting on specific issues. At least for Swiss citizens, town meetings may also be a source of procedural utility (see Frey and Stutzer 2004).

In contrast to parliamentary decision making, town meetings pose fewer agency problems to the electorate. Therefore, we assume that men from municipalities with town meetings incur higher costs for enfranchising women than do men from municipalities with parliaments. However, the total impact of town meetings also depends on other factors. The loss in personal influence becomes larger the more women's preferences differ from the preferences of men. Other drivers, such as different preferences for enlarging democracy and the lack of people who are politically committed to municipal work, also play roles.

Municipal direct democracy also increases the price of granting suffrage to women at the federal level. If men enfranchise women at the federal level, the probability of female enfranchisement at the local level increases, as the enlarged electorate at the federal level is expected to enforce women's suffrage at the municipal and cantonal levels.

5 Data

The empirical analysis is based on a self-collected municipality-level dataset. We focus on the two federal votes conducted in 1959 and 1971. To control for municipal characteristics, we collect and digitize federal decennial census data, data provided by the Swiss statistical yearbooks, and data provided by the cantons. We only keep those municipalities in our dataset for which all control variables are available. We are left with a fully balanced panel of 4,202 municipal observations stemming from

Table 1: Mean comparison town meeting versus parliament

	town meeting	parliament
∅ yes share 1959	22.52	38.19
∅ yes share 1971	56.58	74.45

2,101 municipalities.

5.1 Outcome Variable and Measure of Direct Democracy

The endogenous variable $Yes\ share_{mt}$ denotes the yes share in municipality m at time t in favor of enfranchising women. Figure A.1 and Figure A.2 illustrate the inter-municipal and intertemporal variance that will be analyzed in the main specification. To measure the extent of direct democracy at the municipal level, we use municipal survey data provided by Ladner (1988). We use a binary variable that measures the organization of municipal democracy, that is, whether the citizens themselves decide in a local town meeting (proxy for direct democracy) or delegate power to a municipal parliament (proxy for representative democracy). [5]. According to Ladner (2016), the municipal institutional setting has been stable in our observed period, and switches have been rare. Switching became more common after our data period. Relying on information provided in Funk and Litschig (2020), we exclude municipalities that changed their institutional setting. We only lose 35 municipalities due to this cleanup. Figure A.3 maps the geographical distribution of both institutions. Table 1 depicts the mean comparison of acceptance per municipal setting. In a purely descriptive view, the acceptance of women's suffrage is clearly lower in municipalities with town meetings. This is the starting point of our empirical analysis.

5.2 Controls

We control for several socioeconomic factors X_{mt} that have been mentioned in the economic literature and are available at the municipality level. Descriptive statistics thereof are listed in Table 2. The control variables are organized in three groups: indicators of urbanity, women in society, and cultural aspects. Due to a lack of data, we are not able to control for income or educational attainment.

5. The institutional information is missing for approximately 15 percent of Swiss municipalities

Table 2: Descriptive statistics

Variable	N	Mean	Sd	Min	Max
town meeting	4202	0.83	0.37	0	1
yes share	4202	42.52	23.56	0	100
population (log)	4202	6.59	1.28	2.99	12.26
foreigners (share)	4202	8.82	8.42	0	63.63
agriculture (share)	4202	12.07	9.13	0	75
women (share)	4202	48.93	3.62	14.14	72.90
married (share)	4202	35.92	11.24	3.25	69.23
working women (share)	4202	25.54	8.70	0	60
catholics (share)	4202	49.96	37.97	0	100
German-speaking (share)	4202	59.94	41.55	0	100
number of vote	4202	2.87	1.88	1	9

Indicators of Urbanity

As municipality size has been shown to impact votes on minority rights (Donovan and Bowler 1998), we control for population size (in logs). The share of foreigners in a municipality is included to proxy for the homogeneity of a municipal population. Finally, we control for the proportion of the labor force working in the agricultural sector (agriculture share). In addition to the rural character of a municipality, this variable should also proxy for a prevalence of traditional role models.

Women in Society

In the spirit of Braun and Kvasnicka (2013) we control for the gender ratio in a municipality. By considering female empowerment in the labor market, we also account for the share of working women in the respective municipalities. Following Geddes and Lueck (2002) we expect returns of human capital to increase with female labor market participation. Finally, we add the share of married persons to the list of our regressors, which proxies for the information men have about female political preferences.

Culture

Switzerland is a multilingual country with four official languages (German, French, Italian and Rhaeto-Romanic). The largest groups are the German speaking (approximately 60 percent) and the French-speaking (approximately 25 percent) populations. As the language borders are not fully congruent with cantonal borders, we control for the share of the German-speaking population on the municipal level. The decennial census also offers information about the religious composition of Swiss municipalities.

We control for the share of Catholics in a municipality. Finally, we control for the number of popular votes on female enfranchisement that have been cast in the run-up to the second federal vote.

6 Empirical Methodology

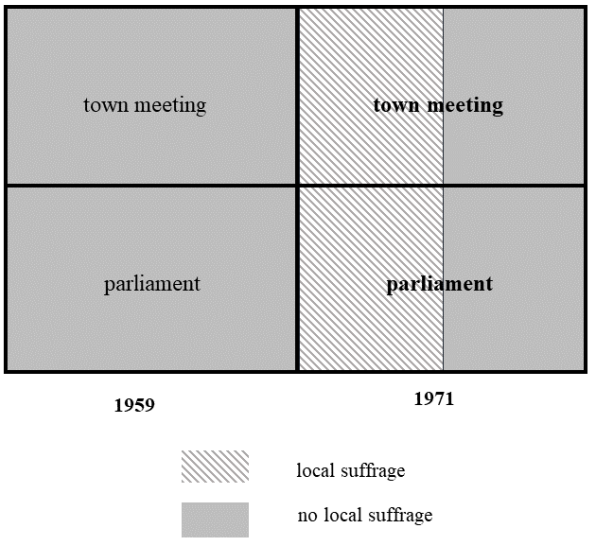
Our empirical strategy allows to disentangle the price to enfranchise women - in terms of power loss on the local level - from other potential impacts of local democratic institutions. At the time of the first federal vote in 1959, no Swiss canton had enfranchised women on the local level. Hence, men in all cantons voted on enfranchising women explicitly on the federal and implicitly on the local level. In contrast, at the time of the second federal vote in 1971, eleven out of 25 cantons had introduced women's suffrage on the local level. For men in eleven cantons their influence on the local level did not longer play a role, whereas men in the remaining 14 cantons again voted on enfranchising women explicitly on the federal and implicitly on the local level. When women already participate in local town meetings, the incremental price of enfranchising women at the federal level, which is specific to local institutions, turns irrelevant. Our identification relies on the assumption that men fear the enfranchisement of women at the municipal level, when they vote about female enfranchisement at the federal level. It is not tenable to keep women disenfranchised at the local level when women suffrage is reality at the federal level as women can launch an initiative at the federal level to enforce women suffrage at the local level. Our assumption is supported by the fact that most cantons introduced women suffrage within few years after 1971. Appenzell Innerrhoden, the only canton who withstood all political pressures, was forced by the Federal Court to enfranchise women in 1990. Our setting exploits the following features: we identify male support for enfranchising women in two types of municipalities (i) and two settings (ii):

(i) Municipalities with town meetings vs. municipalities with parliaments.

(ii) Municipalities from cantons that introduced mandatory women's suffrage for municipal decisions before 1971 vs. those that did not.

Our experimental setting is illustrated in Figure 2. 80 percent of observations (approximately 1750 municipalities) stem from town meeting municipalities, of which 37 percent had already enfranchised women before 1971. The remaining 20 percent of observations (approximately 350 municipalities) originate from municipalities with a parliament, of which 85 percent had already enfranchised women before 1971.

Figure 2: Empirical setting



6.1 Defining the Treatment

The binary variable *town meeting* measures whether a municipality has a town meeting (value 1) or a parliament (value 0). *No local suffrage* indicates whether a municipality has not yet enfranchised women for municipal and/ or cantonal matters (value 1). Thus, the variable *no local suffrage* is equal to 1 for all Swiss municipalities in 1959 and 0 or 1 in 1971. A crucial assumption for our treatment is to be exogenous to the share of yes votes in a municipality (relative to the other municipalities in the same canton) in the first federal vote of 1959. An important feature of our setting is, that *no local suffrage* varies at the cantonal but not at the municipal level, because a majority of the canton and not a majority of the municipality decides whether women are enfranchised at the municipal or cantonal level.

6.2 Specification

We estimate the following model:

$$\begin{aligned}\text{Yes share}_{mt} =& \alpha + \beta_1 \text{town meeting}_m + \beta_2 \text{no local suffrage}_{ct} \\ &+ \beta_3 \text{town meeting}_m * \text{no local suffrage}_{ct} \\ &+ \theta X_{mt} + \delta \text{year} + \gamma \text{canton} + \varepsilon_{mt} \end{aligned} \tag{1}$$

The coefficient β_1 measures the base effect of town meeting in a situation in which

women are already enfranchised at the local level (*no local suffrage* equals 0). The coefficient β_2 displays the base effect of *no local suffrage* if town meeting equals 0, i.e. it applies for municipalities with a parliament. In a situation without local suffrage, β_2 reflects the presence of a marginal price of losing influence at the local level when enfranchising women at the federal level. Thus, we expect $\beta_2 \leq 0$. The coefficient β_3 captures the differential effect of town meeting under the treatment; *no local suffrage* equals 1. We expect β_3 to be negative. Once women are enfranchised at the municipal level, the additional price of strong direct democracy (town meeting) vanishes. Therefore, the sign of β_1 can be either positive or negative. $\beta_1 \leq 0$ would point to a pure discriminatory effect of direct democracy. We estimate a linear regression model with canton-fixed and year-fixed effects, which also allows to further address omitted variable bias stemming from time-invariant cantonal characteristics (we also estimate a model with municipality fixed effects). Using a difference-in-differences strategy with many municipalities, we also have to worry about serial correlation at the municipality level (see Bertrand, Duflo, and Mullainathan 2004), therefore we cluster standard errors at the municipality level. Even though the treatment variable varies at the cantonal level, we are still able to exploit variations at the municipal level, as the institutional setup (town meeting versus parliament) varies between municipalities.

7 Results

We start by estimating a model including *town meeting*, *no local suffrage*, the interaction of both, and a control for *population in logs*. We proceed by sequentially adding further groups of covariates. From Specification (2) onward, we consider covariates capturing the urbanity of a municipality; from Specification (3) on, we control for the role of women in society, and in Specification (4), we add covariates capturing the cultural environment. Finally, we consider the variable *number of votes*. Together with the year-fixed effects, *number of votes* captures part of the underlying time trends.

The base effect of *town meeting* measures the difference in the yes share (for the votes at the federal level) between municipalities with town meetings and those with parliaments, given that women are enfranchised at the municipal level. The base effect of *town meeting* is positive and significantly different from zero in all specifications varying around four to five percentage points in Specifications (2) to (5). Given that women are enfranchised at the municipal level, the direct democratic

environment boosts men's preferences to enfranchise women at the federal level by additional 4.7 percentage points in Specification (5).

The stepwise inclusion of control variables does not invalidate the size and significance of the base effect of town meetings. When looking at *no local suffrage* the negative coefficient reflects the price effect for municipalities with a parliament. For Specifications (3) to (5), the coefficient varies around 3 percentage points. The variation of town meetings under the treatment *no local suffrage* allows us to disentangle the additional price from other effects related to town meetings. As our focus is on the interaction effect, a potential selection bias of the institutional setting poses less of a problem to our results.
The coefficient of *town meeting*no local suffrage* always has a negative sign and stays robust in all specifications. Specifications (2) to (5) indicate the following: Given that women are not enfranchised at the municipal level, the acceptance rate of men from municipalities with town meetings is approximately 6 percentage points lower when compared with men from municipalities with parliaments.

These results provide evidence for two countervailing effects of municipal direct democracy: a price effect and a boost of demand effect. When female suffrage is established at the municipal level and the price effect is thus irrelevant, men from municipalities with town meeting are more willing to enfranchising women at the federal level than men from parliamentary municipalities.

Turning to the controls, we find a robust and significantly positive effect of *population (logs)* on the yes share. This is consistent with our expectations, as population size is an indicator of urbanity and has, moreover, a negative impact on individual influence on municipal politics. Recalling Donovan and Bowler (1998), we would expect a positive effect of municipal size and heterogeneity (approximated by the share of foreigners) on the enfranchisement of women. An increase of the share of foreigners by one percentage point, increases the yes share by 0.14 percentage points. The agricultural share exhibits a significant negative effect, which was to be expected, as agriculture is often considered to proxy for conservative attitudes in general and towards women specifically.

As shown in Table 3, the share of women does not yield robust results. As the gender ratio plays a major role in the work of Braun and Kvasnicka (2013), this may be surprising at first sight. However, the variance of the women's share in

Table 3: Full sample

	(1)	(2)	(3)	(4)	(5)
Dependent variable	yes share	yes share	yes share	yes share	yes share
town meeting	2.405**	4.815***	5.358***	4.561***	4.763***
	(0.944)	(0.961)	(0.947)	(0.905)	(0.902)
no local suffrage	-6.023***	-3.991***	-2.499***	-3.625***	-2.668***
	(0.674)	(0.724)	(0.870)	(0.857)	(0.907)
town meeting*	-4.813***	-6.093***	-6.781***	-5.919***	-6.210***
no local suffrage	(0.784)	(0.842)	(0.883)	(0.848)	(0.851)
population (logs)	3.266***	0.544**	0.186	0.414*	0.394*
	(0.205)	(0.247)	(0.235)	(0.222)	(0.221)
foreigners (share)		0.231***	0.222***	0.146***	0.143***
		(0.038)	(0.036)	(0.035)	(0.035)
agriculture (share)		-0.462***	-0.425***	-0.429***	-0.428***
		(0.038)	(0.038)	(0.037)	(0.037)
women (share)			0.082	0.082	0.064
			(0.075)	(0.073)	(0.073)
married (share)			0.185***	0.155***	0.166***
			(0.027)	(0.026)	(0.027)
working women (share)			0.256***	0.239***	0.262***
			(0.034)	(0.034)	(0.035)
Catholics (share)				-0.034***	-0.033***
				(0.009)	(0.009)
German speaking (share)				-0.139***	-0.139***
				(0.010)	(0.010)
number of votes					0.830***
					(0.283)
Cantonal FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Observations	4202	4202	4202	4202	4202
R-squared	0.779	0.804	0.811	0.825	0.825

Robust standard errors in parentheses clustered at the municipality level

*** p<0.01, ** p<0.05, * p<0.1

yes share measures the municipal acceptance rate to enfranchise women at the federal level

our dataset is substantially smaller. The share of married couples exhibits a positive and significant impact on the yes share. We see several arguments to explain this result. It is plausible that married men expect their wives to double their own preferences at the ballot. Two other non-exclusive explanations are that men trust more in married women, or unmarried men distrust women more generally. Finally, the positive sign of the female workers' share fits the finding of Bertocchi (2011).

Regarding variables that consider the cultural environment, Catholicism influences the yes share negatively, which is consistent with the obtained cross-country results of Bertocchi (2011).[6] As expected, we also find the proportion of the German-speaking population to hinder the enfranchisement of women. Finally, Specification (5) indicates that with each additional vote held in the past, the acceptance of women's suffrage increases by approximately 0.8 percentage points.

7.1 Robustness

To evaluate the robustness of our results, we perform a large number of robustness exercises. Table 4 provides an overview.

Municipality Fixed Effects

A concern with our preferred estimation is, that results could be biased by unobserved time-invariant characteristics at the municipality level. Therefore, in Table 4 and Table A.4 we estimate a model with municipal fixed effects. The results for the full sample without municipality fixed effects (1), which are identical to those in (5) in Table 3, are robust to dropping cantonal fixed effects (2) and including municipality fixed effects (3). The interaction term remains significant at the 1% level, and its size remains with 6.3 percentage points unaffected. Due to the time-invariance of the municipal institution it is not possible to make statements about the base effect of *town meeting*.

Excluding French-speaking Switzerland

In many popular votes, there is a systematic difference between the French-speaking part of Switzerland and the rest of the country. Specification (4) of Table 4 and Table A.4 in the appendix list the corresponding estimates excluding the French-speaking cantons. Again, the effect is robust.

6. Koukal (2017) presents a more in-depth analysis of the role of religion.

Excluding early and late accepters

To rule out the possibility that our results are purely driven by the pioneer cantons, we present estimates excluding cantons enfranchising women early (before 1968) or late (after 1973). The results are listed in Table 4 and Table A.5. This exercise also helps to understand whether the effect is more driven by those cantons that experienced women in politics for a longer period. We find no evidence for this possibility.

Municipality Size and Institutions

A potential concern about our institutional identification is, that municipality size correlates with the institutional setting. Although town meetings are prevalent in municipalities with up to 20,000 inhabitants (e.g. Ladner 2002), the average municipality size for those with a parliament is substantially larger (5,600 inhabitants versus 1,350 inhabitants). Controlling for municipality size is therefore essential. Moreover, the dataset contains a rich mixture of municipalities with and without town meetings. To ensure an overlap of both institutional settings, we limit the sample to a medium range of municipalities by varying the included lower and upper bounds of the municipality sizes. Our estimates remain robust and are represented in specification (5) of Table 4 and in Table A.6 in the appendix.

Endogeneity concerns of the treatment

As discussed in Section 6.1, an important feature of our treatment variable is that *no local suffrage* varies at the cantonal and not at the municipal level. To further mitigate qualms of a potential endogeneity bias, we rule out the possibility that the yes share (of a municipality m) in the first federal vote in 1959 is highly correlated with our treatment *no local suffrage*. We restrict our sample to municipalities of both groups (no local suffrage equals 0 or 1), that did not vote significantly different in 1959 but received different treatments in 1971. Again, the results stay robust and are presented in Table A.7.

Table 4: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: yes share	Full sample	Without Cantonal Effects	Municipality Effects	Excluding French speakers	Excluding early & late accepters	Size percentiles 5th-95th
town meeting	4.763***	4.615***		6.831***	6.627***	5.560***
	(0.902)	(0.907)		(1.359)	(1.361)	(0.979)
no local suffrage	-2.668***	-5.786***	-3.270***	-1.569	-5.125***	-3.317***
	(0.907)	(0.951)	(1.031)	(1.556)	(1.656)	(0.977)
town meeting*no local suffrage	-6.210***	-5.791***	-6.248***	-8.097***	-6.791***	-5.792***
	(0.851)	(0.929)	(0.900)	(1.272)	(1.289)	(0.913)
urbanity	✓	✓	✓	✓	✓	✓
women in society	✓	✓	✓	✓	✓	✓
culture	✓	✓	✓	✓	✓	✓
number of vote	✓	✓	✓	✓	✓	✓
Cantonal FE	✓			✓	✓	✓
Municipal FE			✓			
Time FE	✓	✓	✓	✓	✓	✓
Observations	4202	4202	4202	3574	3064	3820
R-squared	0.825	0.780	0.896	0.810	0.828	0.835

Robust standard errors clustered at the municipality level in parentheses:
*** p<0.01, ** p<0.05, * p<0.1

Notes: In specification (5) cantons accepting before 1968: Basel City, Geneva, Neuchatel, Vaud, and cantons accepting after 1973 are excluded from the sample: Solothurn, Grison, and Appenzell I.Rh. (6) are municipalities between the 5th and 95th percentile in terms of size.

7.2 Discussing mechanisms - demand boost effect

Thus far, we have not thoroughly discussed reasons for the observed demand boost effect. We mention three non-exclusive channels which could explain this result.

In-Group Dynamic

In social psychology and economics, it is well established that group membership affects the behavior of group members in various ways such as norm enforcement, altruistic or prosocial behavior. Drivers of these effects are group identification through labeling and the formation of social ties via individual interactions of group members (e.g., Akerlof and Kranton 2000, 2005 or Goette, Huffman, and Meier 2012). When comparing the institutional characteristics of town meetings to those of parliaments, their respective group environments differ substantially. In town meetings, the electorate regularly discusses common topics, interact, and are members of the same "town meeting club". In municipalities with a parliament, the potential to identify as an electoral group are much smaller. Moreover, group identity may evolve rather quickly and based on minimal group labels (e.g., Yamagishi and Kiyonari 2000 or Chen and Li 2009). If women are enfranchised at the municipal level, they can participate in local town meetings, which might lead to a faster integration of women into the political in-group. Transferring the idea of increased prosocial behavior towards in-group members, local enfranchisement might boost the willingness of men to enfranchise their new in-group members (women) on the higher federal level. Due to different in-group environments, we expect a much stronger boost for the direct democratic environment. However, if in-group formation would drive our results, we should see an increasing effect over time. Regarding our robustness checks in Table A.5, this seems not to be occurring.

Direct Democracy as Information Tool

A feature of direct democracy is its potential to accumulate and transmit information. When the electorate discusses (municipal) topics, a joint understanding of different positions, arguments and political opinions is generated (e.g., Frey and Kirchgässner 1993; Kirchgässner, Feld, and Savioz 1999; Matsusaka 2005a or Frey and Stutzer 2006). When women participate in local town meetings, their political behavior and positions are easily observable by men and offer additional information about women's political preferences. In the representative democratic environment, learning is more complex, as preferences are not observable on the individual level. If the driving force behind the observed boost effect is a better learning environment for

the political preferences of females, we would expect the result to be driven by those cantons that enfranchised women early. Again, the results presented in Table A.5 do not provide evidence for this specific mechanism, as the narrower sample yields stronger effects.

Democratic Income Effect

Finally, the willingness to spread democratic participation could depend on the belief in the quality and importance of the institution itself. Following Kant's advice "Act only according to that maxim whereby you can, at the same time, will that it should become a universal law"(Kant, 1993 [1785]), male voters might also transfer democratic rights to women as they want them to live under the same institution. Therefore, the boost effect might also be explained by a sort of "democratic income effect": The higher a male voter values the democratic institutions under which he lives (i.e. the higher his political income is), the more he is willing to pay for granting women the possibility to live under similar institutions.

8 Conclusion

Scientists continue to disagree on whether minorities fare better or worse under direct democracy. Part of the disagreement can be explained by the lack of comparative analysis of direct and representative democracy. We reconsider this question by examining the role of municipality-level differences in direct-democratic institutions for female enfranchisement in Switzerland. In our analysis, we take advantage of a rich dataset that allows to compare voting behavior in direct and representative democratic environments. Compared to most other studies, our data allow to analyze identical and therefore fully comparable ballot proposals. Applying a difference-in-differences approach, we discern two countervailing effects of direct democracy on women's enfranchisement: it increases the price for men to enfranchise women, but it also boosts men's general willingness to empower them.

Even though our results suggest that direct democracy initially hinders the enfranchisement of women, it does not seem to pose a general threat to politically weak groups or fundamental human rights. The late enfranchisement of women is rather a consequence of the individual resistance to give up influence in the political process. The act of benevolence, i.e., enlarging the franchise, comes at a price that increases in the effectiveness of democracy. This suggests that it is important to disentangle purely discriminatory effects from additional mechanisms of direct democratic in-

stitutions that might point in the same direction. Price mechanisms might be an important channel to be consider for future research, especially for decisions affecting the size of the electorate such as voting rights for non-citizens (e.g.; Koukal, Schafer, and Eichenberger 2019), adolescents or naturalized citizens.

The boost effect is more puzzling and needs further research. We have mentioned three potential mechanisms: in-group dynamics, learning environment and democratic income effect. However, in this paper, we do not find strong evidence for either of the three mechanisms. Our results are fully robust to restricting the sample to municipalities that had introduced female suffrage only shortly before the vote on extending suffrage at the federal level and, thus, did not offer their male citizens much time to learn. The results presented in this paper exonerate direct democracy at least partially of discriminating women. However, we do not claim that direct democracy never fosters discrimination against minorities. Further research is needed to investigate under what conditions direct democracy fosters discrimination or integration, respectively.

References

Acemoğlu, Daron, and James Robinson. 2001. "A Theory of Political Transitions." *American Economic Review* 91 (4): 938–963.

———. 2000. "Why Did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective." *The Quarterly Journal of Economics* 115 (4): 1167–1199.

Aidt, Toke, and Raphaël Franck. 2015. "Democratization Under the Threat of Revolution: Evidence From the Great Reform Act of 1832." *Econometrica* 83 (2): 505–547.

Aidt, Toke, and Peter Jensen. 2014. "Workers of the world, unite! Franchise extensions and the threat of revolution in Europe, 1820–1938." *European Economic Review* 72:52–75.

Akerlof, George, and Rachel Kranton. 2000. "Economics and Identity." *The Quarterly Journal of Economics* 115 (3): 715–753.

———. 2005. "Identity and the Economics of Organizations." *Journal of Economic Perspectives* 19 (1): 9–32.

Barczak, Monica. 2001. "Representation by Consultation? The Rise of Direct Democracy in Latin America." *Latin American Politics and Society* 43 (3): 37.

Bertocchi, Graziella. 2011. "The enfranchisement of women and the welfare state." *European Economic Review* 55 (4): 535–553.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-In-Differences Estimates?" *The Quarterly Journal of Economics* 119 (1): 249–275.

Braun, Sebastian, and Michael Kvasnicka. 2013. "Men, women, and the ballot: Gender imbalances and suffrage extensions in the United States." *Explorations in Economic History* 50 (3): 405–426.

Cambridge dictionary. 2008. *Cambridge advanced learner's dictionary.* 3rd. Cambridge: Cambridge University Press.

Chen, Yan, and Sherry Xin Li. 2009. "Group Identity and Social Preferences." *American Economic Review* 99 (1): 431–457.

Conley, John, and Akram Temimi. 2001. "Endogenous Enfranchisement When Groups' Preferences Conflict." *Journal of Political Economy* 109 (1): 79–102.

Doepke, Matthias, Michèle Tertilt, and Alessandra Voena. 2012. "The Economics and Politics of Women's Rights." *Annual Review of Economics* 4 (1): 339–372.

Donovan, Todd, and Shaun Bowler. 1998. "Direct Democracy and Minority Rights: An Extension." *American Journal of Political Science* 42 (3): 1020.

Eichenberger, Reiner. 1999. "Mit direkter Demokratie zu besserer Wirtschafts- und Finanzpolitik: Theorie und Empirie." In *Adäquate Institutionen: Voraussetzungen für "gute" und bürgernahe Politik?,* edited by Hans Herbert von Arnim, 259–288. Schriftenreihe der Hochschule Speyer. Berlin: Duncker und Humblot.

Ellis, Christopher, and John Fender. 2011. "Information Cascades and Revolutionary Regime Transitions." *The Economic Journal* 121 (553): 763–792.

Frey, Bruno S. 1994. "Direct Democracy: Politico-Economic Lessons from Swiss Experience." *American Economic Review* 84 (2): 338–342.

———. 2005. "Direkte Demokratie für eine lebendige Verfassung." In *Spielregeln für eine bessere Politik,* edited by Michael Wohlgemuth, 36–86. Freiburg: Herder.

Frey, Bruno S., and Lorenz Goette. 1998. "Does the Popular Vote Destroy Civil Rights?" *American Journal of Political Science* 42 (4): 1343.

Frey, Bruno S., and Gebhard Kirchgässner. 1993. "Diskursethik, Politische Ökonomie und Volksabstimmungen." *Analyse & Kritik* 15 (2).

Frey, Bruno S., and Alois Stutzer. 2004. "Beyond outcomes: Measuring procedural utility." *Oxford Economic Papers* 57 (1): 90–111.

———. 2000. "Happiness prospers in Democracy." *Journal of Happiness Studies* 1 (1): 79–102.

———. 2006. "Political participation and procedural utility: An empirical study." *European Journal of Political Research* 45 (3): 391–418.

Funk, Patricia, and Stephan Litschig. 2020. "Policy choices in assembly versus representative democracy: Evidence from Swiss communes." *Journal of Public Economics* 182:104122.

Gamble, Barbara. 1997. "Putting Civil Rights to a Popular Vote." *American Journal of Political Science* 41 (1): 245.

Geddes, Rick, and Dean Lueck. 2002. "The Gains From Self-Ownership and the Expansion of Women's Rights." *American Economic Review* 92 (4): 1079–1092.

Goette, Lorenz, David Huffman, and Stephan Meier. 2012. "The Impact of Social Ties on Group Interactions: Evidence from Minimal Groups and Randomly Assigned Real Groups." *American Economic Journal: Microeconomics* 4 (1): 101–115.

Haider-Markel, Donald, Alana Querze, and Kara Lindaman. 2007. "Lose, Win, or Draw? A Reexamination of Direct Democracy and Minority Rights." *Political Research Quarterly* 60 (2): 304–314.

Hainmueller, Jens, and Dominik Hangartner. 2019. "Does Direct Democracy Hurt Immigrant Minorities? Evidence from Naturalization Decisions in Switzerland." *American Journal of Political Science* 63 (3): 530–547.

Hajnal, Zoltan, Elisabeth Gerber, and Hugh Louch. 2002. "Minorities and Direct Legislation: Evidence from California Ballot Proposition Elections." *The Journal of Politics* 64 (1): 154–177.

Hicks, Daniel. 2013. "War and the political zeitgeist: Evidence from the history of female suffrage." *European Journal of Political Economy* 31:60–81.

Kant, Imannuel, ed. 1993 [1785]. *Grounding for the Metaphysics of Morals.* Vol. 3. Hackett.

Kenny, Lawrence. 1999. *Explaining the Puzzle of Why Men Gave Women the Right to Vote.* unpublished.

Kirchgässner, Gebhard, Lars Feld, and Marcel Savioz. 1999. *Die direkte Demokratie: Modern, erfolgreich, entwicklungs- und exportfähig.* Basel and München: Helbing & Lichtenhahn / Vahlen.

Koukal, Anna. 2017. " How Vatican II influenced female enfranchisement: A story of rapid cultural change." *CREMA Working Paper Series,* no. 7.

Koukal, Anna, Patricia Schafer, and Reiner Eichenberger. 2019. " Enfranchising Foreigners: What Drives Natives' Willingness to Share Power?" *CREMA Working Paper Series,* no. 10.

Ladner, Andreas. 1988. *Datensatz zur Gemeindeschreiberbefragung 1988.* http://www.andreasladner.ch/gemeindeforschung/fragebogen.htm.

Ladner, Andreas. 2016. *Gemeindeversammlung und Gemeindeparlament: Überlegungen und empirische Befunde zur Ausgestaltung der Legislativfunktion in den Schweizer Gemeinden.* Vol. 292. Cahier de l'IDHEAP. Lausanne: IDHEAP.

———. 2002. "Size and direct democracy at the local level: The case of Switzerland." *Environment and Planning C: Government and Policy* 20 (6): 813–828.

———. 2012. "Switzerland: Subsidiarity, Power–Sharing, and Direct Democracy." In *The Oxford handbook of local and regional democracy in Europe,* edited by John Loughlin, Frank Hendriks, and Anders Lidström, 196–220. Oxford handbooks in politics & international relations. Oxford: Oxford University Press.

Leininger, Arndt. 2015. "Direct Democracy in Europe: Potentials and Pitfalls." *Global Policy* 6 (1): 17–27.

Lizzeri, Alessandro, and Nicola Persico. 2004. "Why did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's "Age of Reform"." *The Quarterly Journal of Economics* 119 (2): 707–765.

Llavador, Humberto, and Robert Oxoby. 2005. "Partisan Competition, Growth, and the Franchise." *The Quarterly Journal of Economics* 120 (3): 1155–1189.

Madison, James. 2009. "Federalist No. 10." In *The Federalist Papers,* edited by M.A Genovese, 49–54. New York: Palgrave Macmillan.

Matsusaka, John. 2005a. "Direct Democracy Works." *Journal of Economic Perspectives* 19 (2): 185–206.

———. 2018. "Public Policy and the Initiative and Referendum: A Survey with Some New Evidence." *Public Choice* 174 (1): 107–143.

———. 2005b. "The eclipse of legislatures: Direct democracy in the 21st century." *Public Choice* 124 (1-2): 157–177.

Mesmer, Beatrix. 2007. *Staatsbürgerinnen ohne Stimmrecht: Die Politik der schweizerischen Frauenverbände 1914-1971.* Zürich: Chronos.

Mueller, Dennis. 2003. *Public choice III.* 3rd. Cambridge and New York: Cambridge University Press.

Polishchuk, Leonid, and Georgiy Syunyaev. 2015. "Ruling elites' rotation and asset ownership: Implications for property rights." *Public Choice* 162 (1-2): 159–182.

Qvortrup, Matt, ed. 2014. *Referendums around the world: The continued growth of direct democracy.* Basingstoke: Palgrave Macmillan.

Roten, Iris von, and Elisabeth Joris. 2014. *Frauen im Laufgitter: Offene Worte zur Stellung der Frau.* 6. Bern: eFeF.

Ruckstuhl, Lotti. 1986. *Frauen sprengen Fesseln: Hindernislauf zum Frauenstimmrecht in der Schweiz.* Bonstetten: Interfeminas.

Yamagishi, Toshio, and Toko Kiyonari. 2000. "The Group as the Container of Generalized Reciprocity." *Social Psychology Quarterly* 63 (2): 116.

A Additional tables and figures

Table A.1: Overview votes entire sample 1919 – 1983

vote ID	year	date	canton	level	optional	yes share	vote ID	year	date	canton	level	optional	yes share
2	1919	29.06.1919	NE	integral	0	30,8	52	1968	18.02.1968	SO	cantonal	0	42,5
3	1920	08.02.1920	BS	integral	0	35,0	53	1968	18.02.1968	SO	municipal	0	47,3
5	1920	08.02.1920	ZH	integral	0	19,6	54	1968	19.05.1968	OW	municipal	1	78,7
4	1921	06.09.1921	SG	integral	0	31.6	55	1968	23.06.1968	BL	cantonal	0	68,1
7	1921	16.10.1921	GE	integral	0	31,9	56	1968	20.10.1968	GR	integral	0	39,0
9	1926	11.07.1926	BL	school issues	0	48,7	57	1969	26.01.1969	TG	school issues	0	50,8
10	1927	15.05.1927	BS	integral	0	29,2	59	1969	14.09.1969	SH	integral	0	47,2
13	1946	16.06.1946	BS	integral	0	37,1	60	1969	14.09.1969	ZH	municipal	1	57,9
14	1946	07.07.1946	BL	integral	0	26,5	61	1969	19.10.1969	TI	integral	0	63,0
15	1946	29.09.1946	GE	integral	0	43,7	62	1969	16.11.1969	FR	fundamental approval	1	71,1
16	1946	08.11.1946	TI	integral	0	22,8	63	1970	12.04.1970	VS	integral	0	72,6
17	1947	30.11.1947	ZH	integral	0	22,5	68	1970	27.09.1970	BL	municipal	0	81,1
19	1948	14.03.1948	NE	municipal	0	32,8	69	1970	27.09.1970	SG	municipal	1	47,3
20	1948	14.11.1948	SO	municipal	0	49,5	70	1970	25.10.1970	LU	integral	0	63,0
21	1951	25.02.1951	VD	municipal	1	39,2	71	1970	15.11.1970	SO	municipal	1	65,9
23	1953	07.06.1953	GE	integral	0	42,8	72	1970	15.11.1970	ZH	integral	0	67,0
25	1954	05.12.1954	BS	integral	0	45,1	73	1971	07.02.1971	all cantons	federal	0	65,7
26	1954	05.12.1954	ZH	integral	0	28,7	74	1971	07.02.1971	FR	integral	0	73,8
27	1955	15.05.1955	BL	stepwise introduction	1	43,7	75	1971	07.02.1971	ZG	integral	0	62,5
33	1956	04.03.1956	BE	municipal	1	45,6	76	1971	07.02.1971	SH	integral	0	57,1
34	1957	03.11.1957	BS	municipal	1	59,7	77	1971	07.02.1971	AG	integral	0	51,7
35	1959	01.02.1959	all cantons	federal	0	33.1	78	1971	07.02.1971	SZ	integral	1	47,0
36	1959	01.02.1959	VD	integral	0	52,6	81	1971	06.06.1971	SO	cantonal	0	79,5
37	1959	27.09.1959	NE	integral	0	53,6	82	1971	12.12.1971	BE	cantonal	0	82,8
38	1960	06.03.1960	GE	integral	0	55,4	84	1971	12.12.1971	TG	integral	0	62,7
39	1960	04.12.1960	LU	municipal	1	24,5	85	1972	23.01.1972	SG	integral	0	65,3
42	1962	07.10.1962	GR	municipal	1	59,0	86	1972	30.01.1972	UR	integral	1	57,1
44	1966	13.03.1966	BL	stepwise introduction	1	57,3	87	1972	05.03.1972	SZ	integral	0	68,2
45	1966	24.04.1966	TI	integral	0	48,3	88	1972	05.03.1972	UR	integral	0	62,9
46	1966	26.06.1966	BS	integral	0	60,0	89	1972	05.03.1972	GR	cantonal	0	72,2
47	1966	20.11.1966	ZH	integral	0	46,4	94	1972	24.09.1972	OW	cantonal	0	58,7
49	1967	28.05.1967	SH	integral	0	45,0	99	1980	02.03.1980	SO	municipal	0	65,4
50	1967	04.06.1967	BL	stepwise introduction	1	63,9	101	1983	27.02.1983	GR	municipal	0	62,9
51	1968	18.02.1968	BE	municipal	1	52,1							

Notes: Listed are only those votes which are part of the dataset. Gaps in the data can be explained either by lack of data in general or lack of municipality information. Main source is Ruckstuhl (1986).

Table A.2: First implementation of female suffrage at the municipal level

Acceptance date	canton	level
February 1, 1959	Vaud	integral
September 27, 1959	Neuchâtel	integral
March 6, 1960	Geneva	integral
June 26, 1966	Basel City	integral
May 19, 1968	Obwalden	municipal
October 19, 1969	Ticino	integral
April 12, 1970	Valais	integral
April 26, 1970	Nidwalden	municipal
September 9, 1970	Basel County	municipal
October 25, 1970	Lucerne	integral
November 15, 1970	Zurich	integral
February 7, 1971	all cantons	federal
February 7, 1971	Fribourg	integral
February 7, 1971	Zug	integral
February 7, 1971	Schaffhausen	integral
February 7, 1971	Aargau	integral
May 5, 1971	Glarus	integral
December 12, 1971	Bern/ Jura	integral
December 12, 1971	Thurgau	integral
January 23, 1972	St. Gallen	integral
April 30, 1972	Appenzell A.Rh.	municipal
March 5, 1972	Schwyz	integral
March 5, 1973	Uri	integral
March 2, 1980	Solothurn	municipal
February 27, 1983	Grison	municipal
November 27, 1990	Appenzell I.Rh.	integral

Notes: Excluded are votes about facultative suffrage introduction at the municipal level and suffrage introduction for specific topics. The chronology is based on Ruckstuhl (1986).

Table A.3: Municipality fixed effects

	(1)	(2)	(3)	(4)	(5)
Dependent variable	yes share	yes share	yes share	yes share	yes share
town meeting					
no local suffrage	-6.293***	-6.898***	-3.647***	-3.262***	-3.289***
	(0.673)	(0.716)	(0.959)	(0.957)	(1.025)
town meeting*no local suffrage	-4.249***	-3.550***	-5.754***	-6.242***	-6.233***
	(0.776)	(0.808)	(0.902)	(0.894)	(0.898)
population (logs)	4.304***	6.029***	6.972***	7.419***	7.421***
	(1.154)	(1.401)	(1.414)	(1.412)	(1.416)
foreigners (share)		-0.170***	-0.157**	-0.009	-0.009
		(0.063)	(0.064)	(0.071)	(0.071)
agriculture (share)		-0.072	-0.036	-0.023	-0.023
		(0.074)	(0.075)	(0.074)	(0.075)
women (share)			0.061	0.055	0.056
			(0.095)	(0.097)	(0.098)
married (share)			0.171***	0.160***	0.160***
			(0.029)	(0.029)	(0.030)
working women (share)			0.031	0.046	0.044
			(0.038)	(0.038)	(0.043)
Catholics (share)				-0.185***	-0.186***
				(0.069)	(0.070)
German speaking (share)				0.143**	0.144**
				(0.073)	(0.073)
number of votes					-0.024
					(0.300)
Municipal FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Observations	4202	4202	4202	4202	4202
R-squared	0.892	0.892	0.895	0.896	0.896
Number of municipalities	2141	2141	2141	2141	2141

Robust standard errors in parentheses clustered at the municipality level
*** p<0.01, ** p<0.05, * p<0.1

Table A.4: Excluding the French speaking part

	(1)	(2)	(3)	(4)	(5)
Dependent variable	yes share	yes share	yes share	yes share	yes share
town meeting	3.501***	5.927***	7.191***	6.467***	6.831***
	(1.320)	(1.414)	(1.399)	(1.302)	(1.359)
no local suffrage	-5.098***	-2.873***	-1.805	-2.785**	-1.569
	(0.989)	(1.068)	(1.161)	(1.121)	(1.556)
town meeting*no local suffrage	-5.723***	-7.176***	-8.376***	-7.556***	-8.097***
	(1.099)	(1.180)	(1.226)	(1.165)	(1.272)
population (logs)	3.149***	0.422	0.072	0.350	0.348
	(0.224)	(0.270)	(0.256)	(0.240)	(0.240)
foreigners (share)		0.272***	0.266***	0.165***	0.164***
		(0.043)	(0.041)	(0.039)	(0.039)
agriculture (share)		-0.454***	-0.399***	-0.405***	-0.405***
		(0.042)	(0.042)	(0.040)	(0.040)
women (share)			0.113	0.108	0.096
			(0.083)	(0.080)	(0.081)
married (share)			0.263***	0.234***	0.229***
			(0.032)	(0.032)	(0.032)
working women (share)			0.259***	0.236***	0.245***
			(0.038)	(0.037)	(0.039)
Catholics (share)				-0.032***	-0.033***
				(0.010)	(0.010)
German speaking (share)				-0.140***	-0.140***
				(0.010)	(0.010)
number of votes					0.514
					(0.453)
Cantonal FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Observations	3574	3574	3574	3574	3574
R-squared	0.754	0.782	0.793	0.810	0.810

Robust standard errors in parentheses clustered at the municipality level
*** p<0.01, ** p<0.05, * p<0.1

Table A.5: Excluding late and early accepters

	(1)	(2)	(3)	(4)	(5)
Dependent variable	yes share	yes share	yes share	yes share	yes share
town meeting	4.262***	7.196***	8.216***	6.962***	6.627***
	(1.348)	(1.445)	(1.422)	(1.302)	(1.361)
no local suffrage	-5.775***	-3.439***	-2.744**	-3.873***	-5.125***
	(0.988)	(1.077)	(1.181)	(1.136)	(1.656)
town meeting*no local suffrage	-5.483***	-7.031***	-8.338***	-7.321***	-6.791***
	(1.090)	(1.190)	(1.245)	(1.174)	(1.289)
population (logs)	3.472***	0.609**	0.312	0.520**	0.523**
	(0.246)	(0.286)	(0.273)	(0.253)	(0.253)
foreigners (share)		0.269***	0.253***	0.147***	0.148***
		(0.047)	(0.046)	(0.042)	(0.042)
agriculture (share)		-0.521***	-0.454***	-0.435***	-0.434***
		(0.050)	(0.051)	(0.047)	(0.047)
women (share)			0.059	0.098	0.109
			(0.094)	(0.090)	(0.091)
married (share)			0.254***	0.225***	0.232***
			(0.035)	(0.034)	(0.034)
working women (share)			0.248***	0.212***	0.203***
			(0.041)	(0.040)	(0.042)
Catholics (share)				-0.010	-0.009
				(0.009)	(0.009)
German speaking (share)				-0.163***	-0.163***
				(0.011)	(0.011)
number of votes					-0.503
					(0.495)
Cantonal FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Observations	3065	3065	3065	3065	3065
R-squared	0.767	0.798	0.806	0.828	0.828

Robust standard errors in parentheses clustered at the municipality level

*** p<0.01, ** p<0.05, * p<0.1

Notes: Excluded are cantons accepting before 1968: Basel City, Geneva, Neuchatel, Vaud, and cantons accepting after 1973: Solothurn, Grison, and Appenzell I.Rh.

Table A.6: Excluding small and large municipalities

	(1)	(2)	(3)	(4)	(5)
Dependent variable: yes share	Full sample	Full sample	percentiles 1st-99th	percentiles 5th-95th	percentiles 10th-90th
town meeting	4.763***	4.615***	5.265***	5.560***	4.702***
	(0.902)	(0.907)	(0.936)	(0.979)	(1.038)
no local suffrage	-2.668***	-5.786***	-2.792***	-3.317***	-2.712***
	(0.907)	(0.951)	(0.935)	(0.977)	(1.015)
town meeting*no suffrage yet	-6.210***	-5.791***	-5.790***	-5.792***	-6.101***
	(0.851)	(0.929)	(0.870)	(0.913)	(0.947)
urbanity	✓	✓	✓	✓	✓
women in society	✓	✓	✓	✓	✓
culture	✓	✓	✓	✓	✓
number of votes	✓	✓	✓	✓	✓
Cantonal FE	✓		✓	✓	✓
Time FE	✓	✓	✓	✓	✓
Observations	4202	4202	4130	3820	3407
R-squared	0.825	0.780	0.826	0.835	0.846

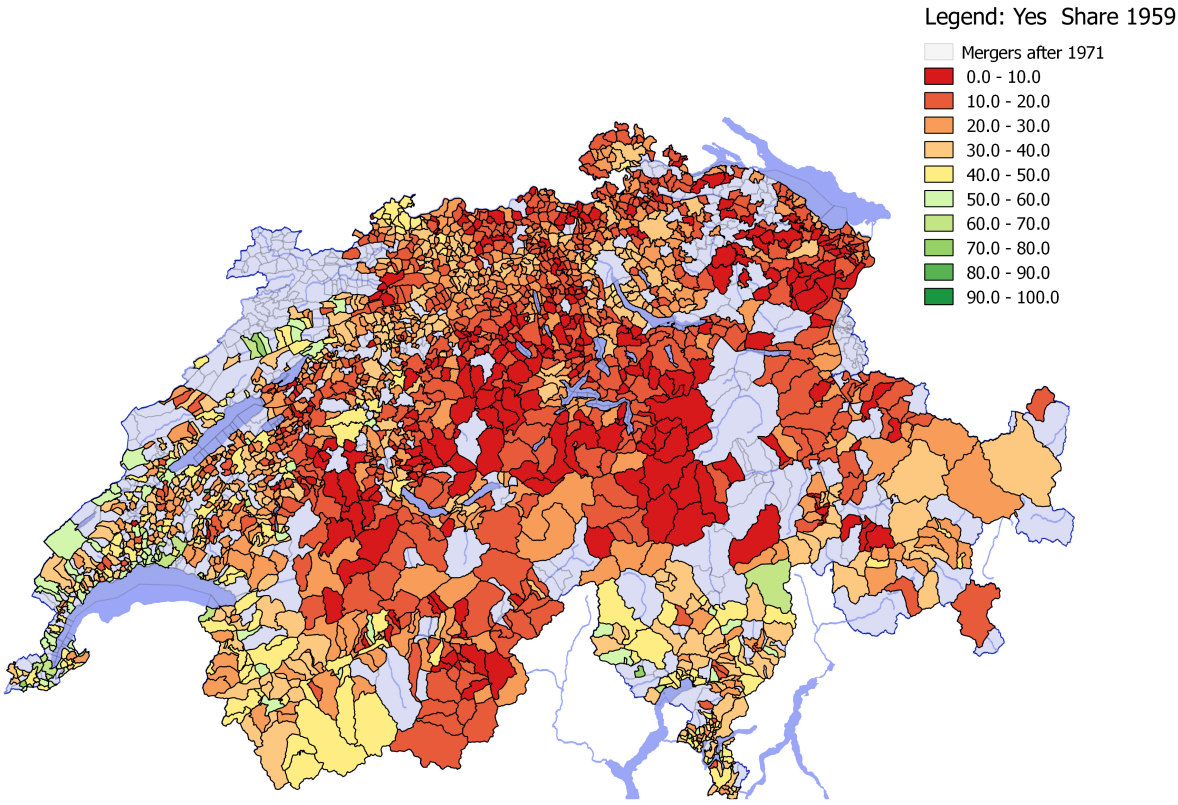
Robust standard errors in parentheses clustered at the municipality level
*** p<0.01, ** p<0.05, * p<0.1

Table A.7: Comparability of treatment and control group in 1959

	(1)	(2)	(3)	(4)	(5)
Dependent variable	yes share	yes share	yes share	yes share	yes share
town meeting	4.966**	6.080**	9.568***	9.747***	9.767***
	(2.403)	(2.537)	(2.667)	(2.626)	(2.514)
no local suffrage	-10.506***	-9.198***	-4.195	-4.354	-3.299
	(2.612)	(2.602)	(2.786)	(2.762)	(2.742)
town meeting*no local suffrage	-5.075*	-6.172**	-10.591***	-10.458***	-10.433***
	(2.702)	(2.698)	(2.845)	(2.811)	(2.685)
population (logs)	1.543***	-0.345	-0.310	-0.050	-0.065
	(0.291)	(0.345)	(0.329)	(0.340)	(0.339)
foreigners (share)		0.233***	0.191***	0.130*	0.124*
		(0.078)	(0.068)	(0.067)	(0.068)
agriculture (share)		-0.296***	-0.287***	-0.288***	-0.291***
		(0.045)	(0.043)	(0.042)	(0.042)
women (share)			-0.042	-0.043	-0.067
			(0.113)	(0.108)	(0.109)
married (share)			0.383***	0.385***	0.388***
			(0.043)	(0.044)	(0.044)
working women (share)			0.096**	0.103**	0.127***
			(0.046)	(0.046)	(0.049)
Catholics (share)				-0.006	-0.006
				(0.011)	(0.011)
German speaking (share)				-0.075***	-0.076***
				(0.016)	(0.016)
number of votes					1.243*
					(0.636)
Cantonal FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Observations	1734	1734	1734	1734	1734
R-squared	0.805	0.819	0.829	0.834	0.834
Number of municipalities	867	867	867	867	867

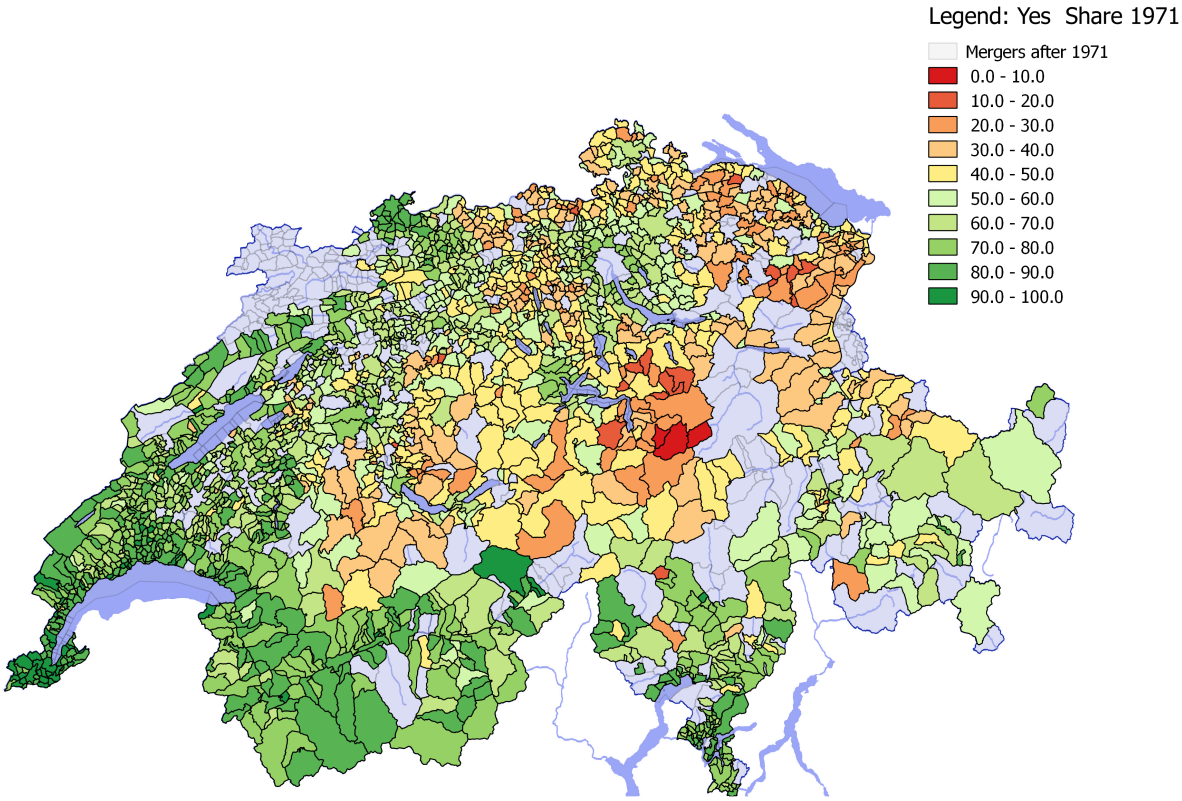
Robust standard errors in parentheses clustered at the municipality level
*** p<0.01, ** p<0.05, * p<0.1

Figure A.1: Federal vote 1959: yes share by municipality.



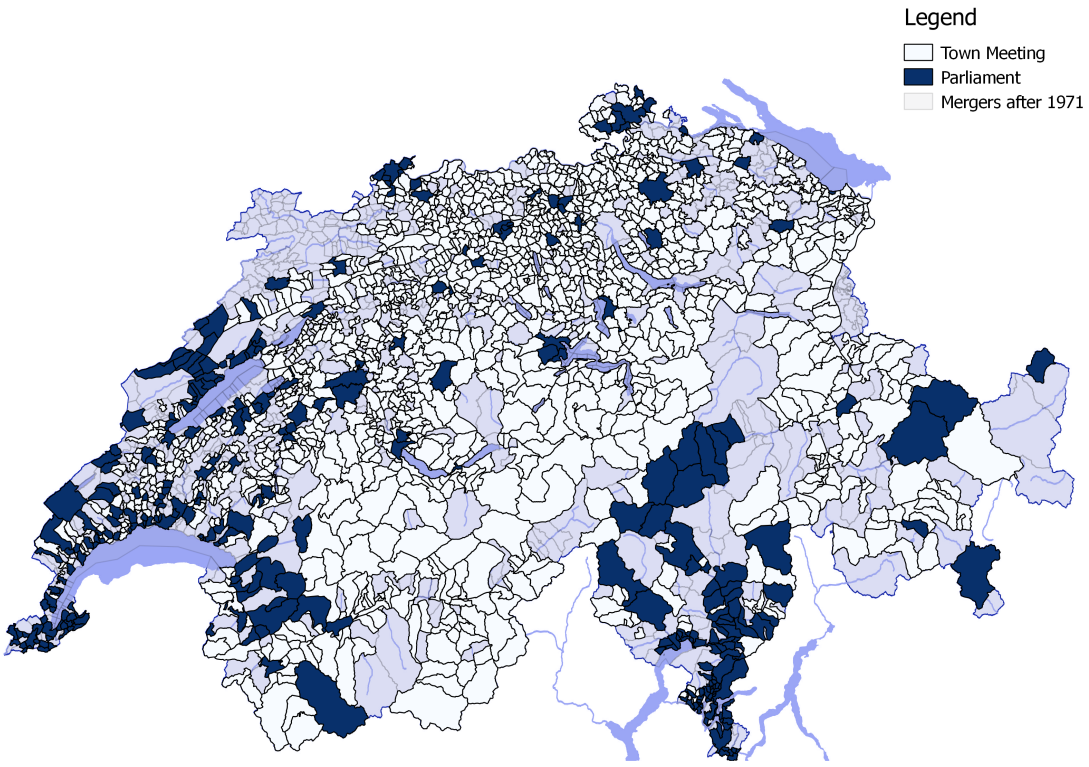
Notes: The grey-blue shaded municipalities are not fully missing in our dataset. The data period dates back to the 70s, therefore the geodatabase lacks the corresponding geo-information fitting old municipality numbers.

Figure A.2: Federal vote 1971: yes share by municipality.



Notes: The grey-blue shaded municipalities are not fully missing in our dataset. The data period dates back to the 70s, therefore the geodatabase lacks the corresponding geo-information fitting old municipality numbers

Figure A.3: Institutional variation



Notes: The grey-blue shaded municipalities are not totally missing in our dataset. The data period dates back to the 70s, therefore the geodatabase lacks the corresponding geo-information fitting the old municipality numbers of the Federal Statistical Office.