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# Essays on democratisation and incumbency effects

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*For my parents Rita and Karl,  
and my siblings Ella-Maria and Silvan.  
And for Helena, Gerri and Priska.*

# Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

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# Statement of Conjoint Work

I confirm that Chapter 3 was jointly co-authored with Greg Chih-Hsin Sheen (NYUAD), and I contributed 50% of this work.

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Stockholm, May 17, 2020

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Selina Hofstetter

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# Abstract

Both suffrage rights and elections are fundamental parts of democracy. I study the factors that drive the effects of and the support for suffrage extensions. In the context of elections, I develop an empirical strategy to identify the potential disadvantage from which incumbent parties suffer. My dissertation is therefore split into three papers, which answer the following research questions:

1. Does the political impact of enfranchisement vary with its political and institutional context?
2. What are the factors driving the support for enfranchisement?
3. How can we identify whether incumbent parties suffer from a disadvantage in elections?

In the first paper, I exploit quasi-random local franchise extensions to Swiss women in the late 20<sup>th</sup> century to empirically identify the political impact of female suffrage in different contexts. First, I analyse municipalities with a male majority in favor of women's vote and ones with a majority against it. I further study municipalities with a parliament versus direct-democratic assemblies. My findings show that female suffrage caused a right-wing effect in municipal party vote shares and expenditure. However, municipalities that favoured female suffrage moved more center-right than right, and experienced a lower drop in electoral turnout. Municipalities with a parliament instead of an assembly making budget decisions, experienced an increase instead of a drop in expenditure. I complement my findings with a national election survey from 1972 to show that the effects might be driven by differences in women's political interest.

Democratisation literature mostly focuses on the elite's decision to extend the franchise. But in many cases, current voters have to decide whether to grant the vote to a broader population. Little evidence exists on what factors drive the support among those who are already enfranchised. In this paper, I exploit the change in municipal Yes-vote shares among male voters for two Swiss national referenda on female suffrage between 1959 and 1971. I show that municipalities, which quasi-randomly introduced local female suffrage in between the two referenda, increased their support much more.

This increase is driven by municipalities in which a majority of men was initially opposed to national suffrage. Conditioning on similar initial support, I further show that this difference cannot be explained by a “ceiling effect”. My findings can also not corroborate that the rise in support is driven by post-suffrage change in municipal party vote shares, expenditure, or cultural proxies, such as female labour market participation.

The third paper discusses the partisan incumbency disadvantage. Partisan incumbency disadvantage is the extent to which a candidate is impeded by her party’s incumbency status in an open-seat race. The current literature suggests its prevalence in young democracies and explains it through weak parties or corruption. However, we show that canonical regression discontinuity designs (RD) to estimate this quantity can be downward biased. Cause is an imbalance in voters’ uncertainty about the candidate’s quality at the RD cut-off. We propose a revised empirical strategy to circumvent bias. With data from Brazilian mayoral elections in 1996-2012, we apply both the canonical and the revised strategy to identify the electoral disadvantage incumbent parties face. We find that using the new approach cuts the effect by three quarters (from -13.2% to -3.1%).

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# 1. Making Suffrage Work

The impact of female suffrage in different environments

*“We warned that the Swiss political landscape would shift to the left if women were given the right to vote in elections and referenda.”*

*Rosmarie Koepfel, Swiss Anti-suffragist<sup>1</sup>*

**Abstract:** I exploit quasi-random local franchise extensions to Swiss women in the late 20<sup>th</sup> century to empirically identify the political impact of female suffrage in different contexts. First, I analyse municipalities with a male majority in favor of women’s vote and ones with a majority against it. I further study municipalities with a parliament versus direct-democratic assemblies. My findings show that female suffrage caused a right-wing effect in municipal party vote shares and expenditure. However, municipalities that favoured female suffrage moved more center-right than right, and experienced a lower drop in electoral turnout. Municipalities with a parliament instead of an assembly making budget decisions, experienced an increase instead of a drop in expenditure. I complement my findings with a national election survey from 1972 to show that the effects might be driven by differences in women’s political interest.

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<sup>1</sup>New Zurich Newspaper (NZZ), “*Gegnerinnen der Gleichberechtigung*” (Enemies of (Gender) Equality), 6 February 2011.

## 1.1. Introduction

Women's political inclusion started with female suffrage. For most countries today, decades have passed since this turning point in history. But involving women in politics, both as voters and policy makers, is still a priority for governments around the world. On the one hand, the objective is to improve representation. On the other hand, evidence suggests direct welfare benefits from women's presence in politics.

An example for these welfare benefits is the powerful impact female suffrage had in the US. It reduced child death (Miller, 2008) and inequality in children's education (Kose et al., 2018). From several countries, we know that female policymakers increase the emphasis on public health (Clayton and Zetterberg, 2018; Chattopadhyay and Duflo, 2004). All of these effects are channelled through more liberal policy platforms and higher government expenditure.

While we know about these aggregate effects, the impact of women's inclusion may still vary with its political and institutional context. For example, the US gave women the vote during the Progressive Era, which was a particularly fruitful period for liberal policy. We therefore have to ask if suffrage would have had a different effect if it were introduced within other times, or under different political institutions. Understanding heterogeneous effects is important when we implement inclusive policy (e.g. gender quota), and want to learn the historical impact women's vote had around the world.

In this paper, I therefore study female suffrage in a setting, which has two main advantages. One, it allows for an improved causal identification. Moreover, I can identify heterogeneous effects across different political environments and their underlying institutions. In the following, I explain both advantages in detail.

Female suffrage was usually introduced as a national voting reform. This makes it hard to identify the political impact it had on a country. A cross-country comparison is problematic, because where and when women were enfranchised was not random (Teele, 2018; Przeworski, 2009). Even when we estimate the effect of suffrage at the subnational level (e.g. in US states), differential political trends may still be a confounding factor, which we cannot perfectly control for.

To address this issue, I exploit the case of *quasi-random* subnational franchise extensions to Swiss women. Like the US, Switzerland is a federalised country with a long democratic history. Its 26 cantons could change their suffrage laws autonomously by holding a referendum. Between 1966-1971, eight Swiss cantons held cantonal referenda on local female suffrage that were either narrowly rejected or approved, with a vote margin of 3% or less. This narrow margin made the referendum outcome unpredictable, and which of these eight cantons introduced women's vote was credibly quasi-random.

We can therefore be less concerned that enfranchised cantons in this sample followed systematically different political trends, which could confound the estimated effect of suffrage. I conduct my analysis at the municipality level with a new panel dataset of 1,242 Swiss municipalities for the years 1940-1990.

In a second step, I test two potential sources of heterogeneity in the political impact suffrage had. One is an environment of men in favour or against women's vote. This political context could influence the effect of suffrage in several ways. Gender norms could be correlated with municipalities being favourable towards suffrage. And women's political interest or preferences could be affected by these norms. Moreover, male vot-

ers against women's vote may respond differently to suffrage than those who favoured it.

The second source of heterogeneity I test is institutional. I analyse if the franchise extension had a different impact on municipalities with a municipal parliament instead of direct-democratic assemblies. Evidence shows that Swedish women turned out at higher rates where municipalities had local assemblies instead of parliaments (Kim, 2019). Differences in turnout could affect the impact suffrage had on municipal expenditure. The lack of anonymity in assemblies might alter both women's and men's voting behaviour. Finally, parliaments could respond less or slower to the new voters' political preferences.

To estimate the causal impact of women's suffrage, and test for heterogeneous effects, I estimate the difference in differences in municipal party vote shares, turnout and municipal expenditure. My findings show that, in aggregate, female suffrage caused a right-wing effect in municipal party vote shares and a drop in expenditure. However, I find meaningful heterogeneous effects for almost all outcomes.

Favourable municipalities show a larger drop in the vote share for left parties, but to the benefit of conservative and independent instead of right-wing populist parties. They also experienced a smaller decline in liberal party vote shares. And even though their voter base grew more as a result of suffrage, their election turnout dropped less.<sup>2</sup> Finally, municipalities with a parliament instead of direct-democratic assemblies show an increase instead of a drop in total expenditure. I find no significant effect on social welfare.

Since Swiss voting ballots are not split by gender, we cannot see if these effects are driven by the new female voters, or result from a response in male voting behaviour. In

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<sup>2</sup>The share of new voters is estimated by the effect of female suffrage on the number of entitled voters.



a final analysis, I therefore use two data sources to conduct ecological inference. The first is municipalities' proxied share of women.<sup>3</sup>

I find that the shift to the center-right was driven by a higher female proportion. Specifically, left parties' vote share and turnout dropped more with a higher share of women, and independent parties' vote share gained more.<sup>4</sup> A higher share of women was further associated with a smaller drop in liberal party vote shares and total expenditure.

The second source for ecological inference is a national election survey from 1972. The distribution of male and female responses to survey questions on ideology, party and policy preferences reveals: When they showed interest in politics, then men and women voted about equally center-right at the time.<sup>5</sup>

However, women's interest in politics ranked much lower than men's. In addition to claiming low interest, they responded more often than men to not know an answer to a question. The survey therefore points to a possible mechanism for the findings in this paper: Less informed women could have been more impressionable. Theory shows that uninformed voters are easier to influence with campaign spending (Baron, 1994). In a similar manner, low-informed women could have been more susceptible to party rhetoric at a time when right-wing parties generally gained in Swiss politics.<sup>6</sup> Therefore, when uninterested women turned out at all, they may have voted for more right-wing pol-

---

<sup>3</sup>The municipal share of women is proxied by the change in the number of entitled voters in the last election before and the first election after female suffrage.

<sup>4</sup>Within the sample, the average share of women is 52.6% in municipalities, with a standard deviation of 4.5%.

<sup>5</sup>This applies to both, respondents from the overall Swiss population and from the population of the eight cantons in my sample.

<sup>6</sup>In Figure A.12.1 in Appendix section A.12, we can see that Swiss right-wing parties increased their national vote share significantly in the 1970s. This was generally associated with the political debate around a 1970 national referendum on very restrictive immigration policy, called the "Schwarzenbach referendum".

icy platforms. My finding that favourable municipalities experienced a lower drop in turnout suggests that their women were possibly more interested in politics. And hence, these municipalities shifted less to the right and more to the center-right.

This paper makes several contributions to the current literature. Using quasi-random franchise extensions to women, it identifies the causal impact of female suffrage on political outcomes, which includes party vote shares, turnout and government expenditure. It further reveals meaningful heterogeneity in these effects. This heterogeneity shows that the impact of women's inclusion in politics is not one-directional, and may not always trigger liberal policy. Moreover, it improves our understanding how the political and institutional context may matter when we introduce gender-inclusive policies today.

The remainder of the paper is organized as follows. Section 2 reviews the current literature on female suffrage. Section 3 describes in detail the institutional context of Swiss female suffrage at the local level. Section 4 outlines the empirical strategy, the sample selection and the data. Section 5 presents the empirical results on municipal party vote shares, election turnout and municipal expenditure. Section 6 tests the robustness of the presented results. Section 7 investigates the underlying mechanisms using the municipal share of women and survey data. Section 8 concludes the paper.

## **1.2. Literature on Female Suffrage**

From the current literature, we know that the political and the cultural environment influenced the *timing* of women's suffrage. Women were more likely to get the franchise early where electoral competition was high and parties anticipated that they would gain vote shares from the newly enfranchised voters (Teele, 2018; Przeworski, 2009). Effective cooperation between the suffrage movements across the United States led to an earlier

franchise extension than in the otherwise similar political system of Switzerland. There, the cultural divide between the French- and German-speaking cantons slowed the process down (Banaszak, 1996).

The political and institutional environment further mattered for women's political participation after suffrage was introduced. Direct-democratic assemblies at the municipality level generated higher female turn-out than municipal parliaments after Sweden extended the franchise to women (Kim, 2019). In a study of the US, Corder and Wolbrecht (2005) find that turnout was significantly lower among women than men. But despite their inexperience, female voters' turnout was not more sensitive to political context, such as political campaigns, than men's.

Once introduced, women's suffrage had an important, mostly liberal impact on US policy. Suffrage caused an immediate shift to more progressive voting in Congress, which led to higher child healthcare expenditure and lower child mortality rates (Miller, 2008). It further led to improved education policies and higher as well as more equal educational attainment of American children (Kose et al., 2018).

Both studies exploit differential timing of US state-level suffrage extensions to identify these effects. Hence, effects are estimated by the difference in over-time differences in outcomes between states with and without women's vote. The identification relies on the assumption that outcomes across those states would follow parallel trends with and without suffrage.

In a similar study, Lott and Kenny (1999) find that enfranchised women caused a positive impact on states' total expenditure and revenues, and led to more progressive

voting of state representatives. They further show that this effect did not differ for states, which were forced to extend the franchise to women through the 19<sup>th</sup> Amendment in 1920. However, they cannot observe whether and how opposed those states were to suffrage by that time. Further, the impact of the 1920 enforcement cannot be disentangled from a simple year effect.

The current literature further provides evidence that female suffrage caused a liberal shift in election outcomes. Morgan-Collins and Teele (2018) show that women's suffrage was associated with an increase in liberal party vote shares across different democracies in Western Europe. Morgan-Collins (2019) finds that in US counties with a strong suffrage movement, the national franchise extension of 1920 decreased the success of conservative politicians, and incentivised others to adopt a more progressive agenda.

A complementary literature shows that women not only had an impact on policy as voters, but also as policymakers. Again, the identified effects are mostly liberal. Clayton and Zetterberg (2018) find that the introduction of women's quota across the world's legislatures is associated with higher healthcare expenditure. Similarly, Chattopadhyay and Duflo (2004) identify a shift in public goods provision from infrastructure to water supply, as a consequence of women's quota in Indian local government.

However, another branch of the literature points towards women voting more conservative than men. In France, Teele (2018) argues that the Radicals' main reason to not extend the franchise in early 20<sup>th</sup> century, was because they thought female voters were too pious to support a progressive political agenda. In America, the suffrage movement was linked to the Women's Christian Temperance Union (WCTU), a national organisation campaigning for alcohol prohibition (Teele, 2018; Keyssar, 2000; Banaszak, 1996).

In more recent elections in Chile, Pino (2017) shows that women were less likely to vote for female candidates than men, and that this bias against women is stronger among female voters from the political right.

Liberal impact through women's political inclusion can also be prevented by "backlash" from conservative voters. Clayton (2015) finds that women's quota caused a decrease in women's political participation in Lesotho. Gottlieb (2016) shows that civic education targeting women in Mali had a negative impact on female civic activity. Both conclude that the mechanism behind these effects were a backlash against the intervention into traditional gender norms. Gottlieb further finds that backlash was stronger where gender norms were more conservative. Hence, the impact of inclusive policies can vary with the cultural environment.

In summary, the literature on female franchise is not conclusive on the question whether women have or had different political preferences than men and in what direction. But the majority of studies suggests a more liberal tendency. Consensus exists on the following: The political environment influenced whether women received the right to vote earlier or later. And some evidence shows that the political, cultural and institutional environment affected women's political participation. This paper contributes to the literature with evidence that context matters for the political impact of female suffrage beyond participation. It further confirms that women's political inclusion does not always lead to more liberal policies. Finally, it shows that the impact of suffrage could depend on women's political interest.

## 1.3. The Institutional Context of Swiss Female Suffrage

### 1.3.1. Swiss Federalism

In 1970, Switzerland had 25 cantons and 3,074 municipalities. Its population consisted of 6.3 million residents (Swiss Federal Statistical Office, 2020). Roughly half of it were women and 15% foreigners, which together made up the unenfranchised share of the adult population.

As a democratic confederation founded in 1848, the Swiss cantons and their municipalities always had strong political autonomy. Each canton has its own constitution, which also determines who owns the right to vote within the canton. These local voting rights are important, because most policy decisions are made at the cantonal and the municipality level.

Table 1.1 shows the typical division of policy responsibilities across the three administrative levels in the Swiss political system. Social welfare is for example a typical municipal responsibility. Switzerland has a national social insurance against unemployment, age and invalidity. Social welfare is therefore intended to be a “last resort” when national insurance is not sufficient to cover an individual’s or family’s essential living expenses.

The generosity of social welfare varies considerably between municipalities (SKOS, 2020). The Swiss Conference for Social Welfare (SKOS) is an association of all cantons and about half of all Swiss municipalities that regularly meets to publish guidelines on what a minimum standard of living in Switzerland should include. However, these guidelines leave a lot of room for discretion.

Many other policies that directly affect people's lives such as education, healthcare, transportation and security, are all part of local and not national politics. Political participation therefore truly matters at the cantonal and the municipality level.

Switzerland's three administrative units and their responsibilities		
Federal Level	Cantons	Municipalities
<ul style="list-style-type: none"> <li>- Foreign policy</li> <li>- Defense</li> <li>- Railway infrastructure</li> <li>- Aviation</li> <li>- Monetary and currency</li> <li>- Customs</li> <li>- Research/science</li> <li>- Agrarian policy</li> <li>- Communication</li> <li>- Social insurances</li> <li>- Environmental policy</li> <li>- Nuclear energy</li> <li>- Macroeconomic policy</li> <li>- Immigration policy</li> </ul>	<ul style="list-style-type: none"> <li>- School system</li> <li>- Hospitals</li> <li>- Police</li> <li>- Culture</li> <li>- Nature/monument care</li> <li>- Public transportation</li> <li>- Taxation</li> <li>- Location policy</li> <li>- Church</li> <li>- Sports</li> <li>- Law enforcement</li> <li>- Additional social security</li> </ul>	<ul style="list-style-type: none"> <li>- Refuse collection</li> <li>- Water supply</li> <li>- Sanitation</li> <li>- Social welfare</li> <li>- Asylums</li> <li>- Fire brigades</li> <li>- Urban planning</li> <li>- Operating schools</li> <li>- Leisure locations</li> <li>- Operating road network</li> </ul>

Table 1.1.: Division of responsibilities between federal, cantonal and municipal level.  
*Source:* Moeckli (2008).

### 1.3.2. Swiss Direct Democracy

The decentralised political system in Switzerland made female suffrage just as much a cantonal as a national matter. Every franchise extension to women required a constitutional amendment. For any amendment to a constitution, both national and cantonal, an obligatory referendum has to be called. Above 50% of the voters has to approve the referendum in order to pass the amendment. Every referendum outcome counts. Hence, there are no minimum requirements for voter turn-out. Voters also do not have to register, with the exception of Swiss nationals who live abroad. There are therefore

relatively low barriers to turn out.

Referenda on constitutional amendments like female suffrage are either automatically called after parliament has passed the amendment. Or they can be requested through a so-called “popular initiative”. Almost all of the cantonal referenda on female suffrage were automatically launched after the amendment had passed parliament (Ruckstuhl, 1991). An exception was a referendum in Geneva in 1920.<sup>7</sup>

Swiss cantons started to hold local referenda on the question of cantonal and/or municipal female suffrage in 1919.<sup>8</sup> Until 1959, all of these referenda were unsuccessful. In 1959, the first national referendum on a constitutional amendment introducing women’s vote was rejected by 66.9% of the purely male voters. But at the same time, the first two local referenda were accepted in Waadt and in Neuenburg, both partly French-speaking cantons.

The numbers of cantonal referenda that followed varied per year. Only some of them succeeded. Figure 2.3.2 shows the number of cantonal referenda each year since the beginning of the 20<sup>th</sup> century and the accumulative number of cantons that introduced female suffrage of some sort (i.e. school council, municipal or cantonal voting right).

Swiss men eventually granted women the right to vote at the federal level in a second national referendum in 1971 where 65.7% of the voting population and the majority within 17 cantons voted Yes. Due to the cantonal autonomy, this had at first no legal consequences for local suffrage laws. Eight cantons had not yet extended their franchise

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<sup>7</sup>Yvonne Voegeli, Swiss Historical Lexicon, 17 Sept 2019:  
<https://hls-dhs-dss.ch/de/articles/010380/2019-09-17/>

<sup>8</sup>Neuenburg held a cantonal referendum on introducing the cantonal and municipal voting right for women in June 1919, which was however rejected with a 69.2% majority in the popular vote, and not a single municipality voting in favour.



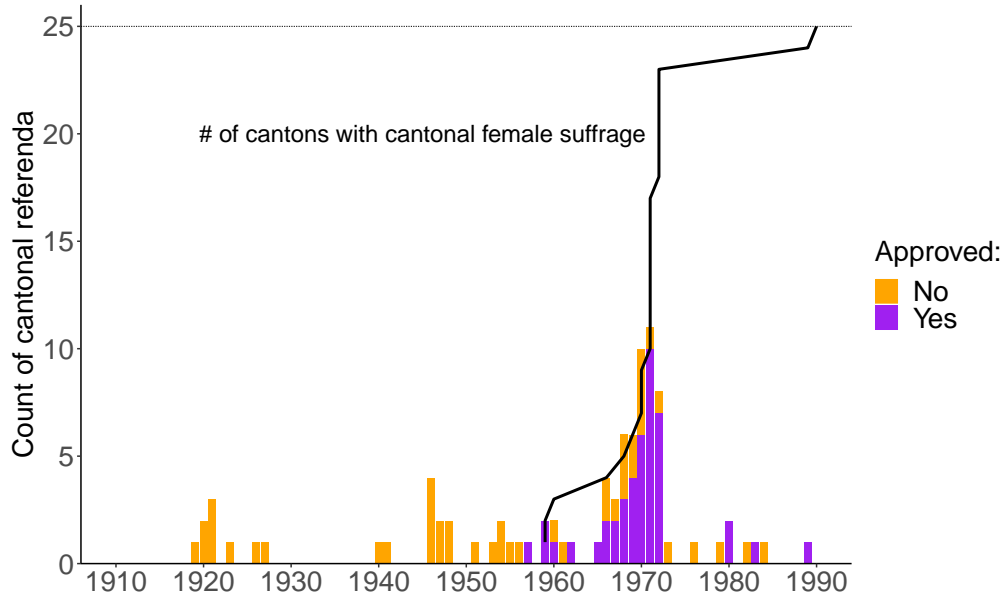


Figure 1.1.: **History of Swiss local female suffrage:** Timeline of cantonal referenda with Yes-vote share (in %) at the cantonal level and count of cantons with cantonal female suffrage.

to women.<sup>9</sup> Women in these cantons could therefore vote in national elections and referenda, but not in local ones. The very last canton to enfranchise women at the local level was Appenzell-Innerrhoden in 1990.<sup>10</sup>

The staggered enfranchisement of Swiss women brings an empirical advantage: We can observe political outcomes like election results or policy within the same years in cantons with and in cantons without women’s suffrage. Another advantage comes from the fact that the franchise was always extended through referenda.

Compared to for example survey data, referenda results are much more likely to reveal

<sup>9</sup>The eight cantons were all in the German-speaking part of Switzerland: Appenzell Ausserrhoden, Appenzell Innerrhoden, Glarus, Nidwalden, Obwalden, Schwyz, St. Gallen and Uri.

<sup>10</sup>Appenzell-Innerrhoden rejected female suffrage in its last referendum on this matter in 1990, but was then forced by the Swiss supreme court to introduce it. The court argued that the canton’s constitution violated a basic right (i.e. the right to vote independent of gender) in the national constitution. This intrusion by the supreme court into cantonal matters was without precedence and hence a surprise at the time.

sincere voter preferences. Swiss referenda are always binding. Hence, voters do not simply express their preference, but actually internalise the consequences of their decision. This includes the decision not to turn out to vote in the first place.

Referenda questions are always binary. This meant that voters were only allowed to give a unique response when they were asked whether they wanted to extend the franchise to women: Yes or No. Empty ballots do not count in referenda. We can therefore exclude the possibility of strategic voting.

Finally, referenda are not an unusual event for Swiss voters. Since 1848, Switzerland has held over 600 referenda at the national level. Among these, 69 happened between 1951-1970 and 145 between 1971-1990 (Swiss Federal Statistical Office, 2020). For local referenda, the frequency varies across cantons and years. But referenda are everywhere an essential part of the Swiss political decision-making process. Swiss voters are therefore not only familiar with the voting procedure, but also with the fact that referenda outcomes are truly binding and will have a potentially large impact on their lives.

In summary, the Swiss institutional context around female suffrage provides a unique setting for my empirical strategy.

## **1.4. Empirical Strategy**

The following section on how I identify heterogeneous effects of female suffrage first explains my specifications. It is followed by my sample selection of eight cantons, which quasi-randomly extended the franchise. It concludes with detailed information on the dataset I created to estimate the political effects female suffrage had on the municipalities within those eight cantons.

### 1.4.1. Specifications

To estimate my empirical model, I use two specifications. I first identify the political impact of female suffrage at the municipality level. In a second step, I test for heterogeneity in this effect.

To identify the impact of women’s suffrage, I exploit the fact that the cantons in my sample extended the franchise to women in different years. I use panel data on municipal party vote shares, turnout and municipal expenditure to estimate the difference in differences between municipalities in cantons with and without female suffrage. I use the following specification in an OLS regression:

$$Y_{m,c,y} = \alpha_m + \gamma_y + \sigma_c t + \beta \text{Enfranchised}_{c,y} + \epsilon_{m,c,y} \quad (1.1)$$

where  $Y_{m,c,y}$  is the outcome of interest in municipality  $m$  in canton  $c$  in year  $y$ .  $\alpha_m$  are municipality fixed effects and  $\gamma_y$  are year effects. Since cantonal elections don’t take place annually but every four years, I use election instead of year fixed effects when I run the regression for electoral outcomes.<sup>11</sup> Election effects can better capture electoral cycle effects, which might be common across cantons, despite their elections not taking place in the exact same year. I further control for canton-specific linear time trends with  $\sigma_c t$ .  $\beta$  is the difference-in-differences estimator of local female suffrage. Thus,  $\text{Enfranchised}_{c,y}$  is a dummy variable, which takes on the value of 1 in year  $y$  after female suffrage is successfully introduced by a cantonal referendum.  $\epsilon_{m,c,y}$  is the error term for each municipality-year observation.

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<sup>11</sup>Election dummies are coded for each  $j$ th election after the cantonal referendum on suffrage, and each  $j$ th election before the cantonal referendum on suffrage. Election dummies can hence control for common electoral cycle effects across cantons within the years in which the cantonal referenda on female suffrage happened.

In a second step, I estimate the following model:

$$\begin{aligned}
Y_{m,c,y} = & \alpha_m + \gamma_y + \sigma_c t + \sigma \text{Enfranchised}_{c,y} \\
& + \rho(\text{Enfranchised}_{c,y} \times \text{In favour}_m) + \epsilon_{m,c,y}
\end{aligned}
\tag{1.2}$$

where  $\text{In favour}_m$  is a dummy variable, which equals 0 (1) if a municipality's majority voted against (in favour of) the franchise extension at the time of the cantonal referendum. I further run a second version of this model, with an interaction variable being  $\text{Municipal parliament}_m$ , which equals 0 (1) if a municipality had a direct-democratic assembly (a municipal parliament) deciding over its budget.

The coefficient of interest in this model is  $\rho$ . It is the difference-in-difference-in-differences estimator. In other words, it captures the between-municipality difference in the effect of female suffrage on outcome  $Y_{m,y}$ . Whether a municipality favoured or voted against female suffrage, and whether it had a municipal parliament or not, both remain fixed over time. The individual effect of  $\text{In favour}_m$  and  $\text{Municipal parliament}_m$  on outcome  $Y_{m,y}$  is therefore absorbed in the municipality fixed effect  $\alpha_m$ . However, I can exploit the variation in the enfranchisement status of cantons ( $\text{Enfranchised}_{c,y}$ ) over the time period in the panel data. This allows me to identify the interaction effect between enfranchisement ( $\text{Enfranchised}_{c,y} = 1$ ) and favourable municipalities ( $\text{In favour}_m = 1$ ). The same applies to the interaction effect between enfranchisement and municipalities with a municipal parliament ( $\text{Municipal parliament}_m = 1$ ).

### 1.4.2. Sample Selection

Difference in differences rely on the parallel trends assumption (Steigerwald et al., 2020; Angrist and Pischke, 2009). Hence, one worry is that it is not random which cantons

introduce female suffrage earlier or later. If that is the case, these cantons may follow different instead of parallel trends in outcomes, and the estimated effect will be biased.

A common practice to address this concern is to test for differential trends in political outcomes before suffrage was introduced. However, trends might still differ in the introduction years. The problem is that we never observe the same canton in the same (election) year both with and without suffrage.

I therefore identified eight cantons in Switzerland, which had very narrow referenda outcomes on female suffrage. All of them happened within a relatively short time frame between 1966-1972. Table B.1.1 shows for each canton the year in which the cantonal referendum was held, the Yes-vote share in the referendum and the suffrage bill that was voted on. Each of the eight referenda had a margin of 3% or less. However, only three of them were narrowly approved and therefore extended the franchise. The other five were narrowly rejected. These cantons introduced local female suffrage in later years. Figure 1.2 shows a map of all Swiss cantons with the eight cantons colored in orange and purple, according to their narrow referendum outcome.

Referendum in	<i>Yes</i> -vote share	Suffrage right voted on	Canton
1968	52.1%	Municipal	Bern (BE)
1969	50.8%	Municipal (education policy)	Thurgau (TG)
1971	51.7%	Cantonal and municipal	Aargau (AG)

Referendum in	<i>Yes</i> -vote share	Suffrage right voted on	Canton
1966	48.3%	Cantonal and municipal	Ticino (TI)
1968	47.3%	Municipal	Solothurn (SO)
1969	47.2%	Cantonal and municipal	Schaffhausen (SH)
1970	47.3%	Municipal	St. Gallen (SG)
1971	47.0%	Cantonal and municipal	Schwyz (SZ)

Table 1.2.: The eight cantons with a narrow cantonal referendum outcome on female suffrage. At the top: The three cantons, which narrowly approved their referendum with a *Yes*-vote share below 53%. At the bottom: The five cantons, which narrowly rejected their referendum with a *Yes*-vote share at or above 47%.

Using the municipalities in these eight cantons to estimate the difference in differences brings a few improvements for identification. All eight cantons voted on local female suffrage around the same time. This makes selection bias from calling a referendum earlier or later less likely. Moreover, all expressed almost identical (dis)approval of a local franchise extension. In other words, none of these cantons was a female suffrage enthusiast, but instead rather hesitant to give women the vote. Finally, the very narrow margin of all referenda suggests that it was extremely difficult to anticipate the outcome of the referendum. Figure 1.3 shows the *Yes*-vote shares of all Swiss cantonal referenda over the years. As we can see, the eight referenda of the cantons I use in this sample were closest to the 50% threshold within a narrow time frame of five years.

In summary, the narrow referenda margins in these cantons make the introduction of female suffrage credibly quasi-random. In expectation, these cantons should therefore

be similar. More importantly, they should not follow differential political trends.

Another advantage of this sample selection is that although all eight cantons had narrow referendum margins, each consists of municipalities in which a majority of men had voted in favour of female suffrage and municipalities in which a majority of men had voted against it. They further all contain municipalities with a municipal parliament besides municipalities with direct-democratic assemblies. With this variation, I can identify the heterogeneity in the effect of female suffrage, which is specified as interaction effects in model (2).

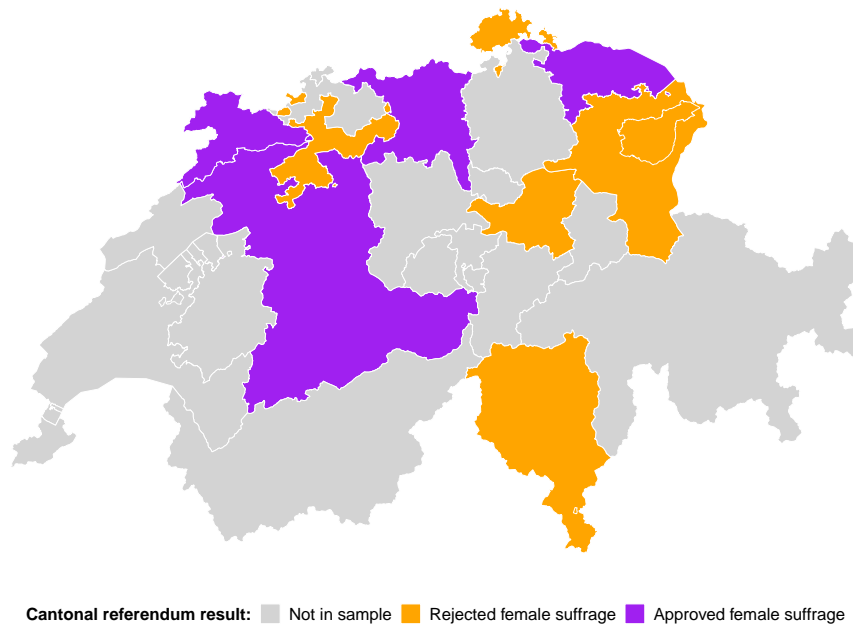


Figure 1.2.: The eight cantons in the sample, where the purple (orange) cantons narrowly approved (rejected) their cantonal referendum on female suffrage between 1966-1972.

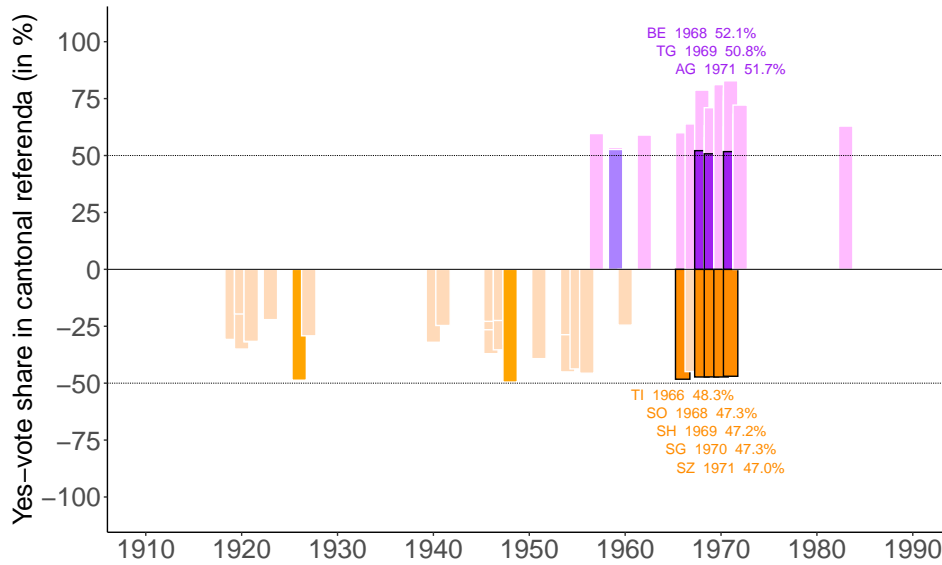


Figure 1.3.: **Sample selection:** Timeline of approved (purple) and rejected (orange) cantonal referenda on female suffrage and Yes-vote share (in %) at the cantonal level. In bold: The close cantonal referenda within time frame of 6 years.

### 1.4.3. Data

**Referenda Yes-vote shares at the municipality level.** I created a data-set from the referenda records of each cantonal referendum ever held on female suffrage, which I retrieved from the different cantonal archives in Switzerland. According to my records, a total of 81 cantonal referenda on female suffrage were held between 1919 and 1990. For each referendum, I coded the Yes-vote share of each municipality. Based on this data, I selected the eight close referenda for my sample.

For these eight referenda, I used the municipal Yes-vote shares to code a municipality as being favourable towards female suffrage or not. Specifically, if the municipal Yes-vote share was above 50%, a municipality was coded as being in favour with a dummy variable value of  $\text{In favour}_m = 1$ . For municipalities with a Yes-vote share below 50%, I coded the dummy variable as  $\text{In favour}_m = 0$ . In the overall sample, 44% of the munic-



ipalities had a male majority voting in favour of female suffrage.

**Municipal party vote shares.** Electoral outcomes are frequently used to measure the impact of franchise extensions (Morgan-Collins, 2019; Morgan-Collins and Teele, 2018; Berlinski and Dewan, 2011). To study the electoral impact of women’s suffrage, I therefore created an original panel data-set on cantonal parliament elections. All election records were retrieved from the eight cantonal archives.

For seven of the eight sample cantons, I was able to collect and code the municipal vote shares of each party in each election between 1940-1990. I listed each party in Appendix section A.13. For the canton of Schaffhausen (SH), these results were only recorded at the district level. In my analyses of the electoral outcomes at the municipality level, I therefore had to drop this canton from the sample.

Swiss cantonal elections happen every four years. All have a PR system within which the four main parties run almost everywhere along with several fringe parties. The four main parties are the Socialist Party (*SP*), the Christian-Democrats (*CVP/EVP*), the Free Democratic Party (*FDP*, former *FDP/LPS*) and the Swiss People’s Party (*SVP*, former *BGB/DP*). The order on a left-right scale of these four parties would be the same as the order they were mentioned in.

The number and type of fringe parties who run in cantonal elections varies between years and cantons. However, fringe parties can almost always be associated with one of the four main parties. In a second step, I therefore aggregated them together with the main parties into four party blocks: *Socialist*, *conservative*, *liberal* and *right-wing populist* parties.

I also created a fifth party block for usually smaller parties, which could not be associated with any of the four main parties. This party block is called *independent*. The largest among these independent parties was the Alliance of Independents (*LdU*), which existed from 1936-1999 and ran a policy platform that could be located at the center of a left-right scale. Appendix section A.13 lists the party names under each of the 5 labels for each canton.

Table 2.4.1 lists the pre-suffrage averages for the five party blocks in the sample cantons that narrowly rejected (approved) their cantonal referendum.<sup>12</sup> We can see that the right-wing populist block had the highest average vote share, followed by the conservatives, the liberals, the left, and independent parties. This highlights the rather conservative political landscape, which is not atypical for many Swiss cantons at the time. However, we can also see that there is considerable variation in vote shares across and within the cantons.

Variable	Cantons Narrowly					
	Rejected Referendum		Approved Referendum		Overall	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Left parties' vote share	16.3	14.9	25.1	18.4	21.9	17.7
Conservative parties' vote share	37.0	23.9	18.9	25.2	25.2	26.2
Independent parties' vote share	2.1	9.7	1.4	4.0	1.6	6.7
Liberal parties' vote share	38.2	20.8	14.8	14.7	23.2	20.5
Populist parties' vote share	4.2	8.7	39.8	28.8	26.9	29.2

Table 1.3.: Pre-suffrage means and standard deviations for municipal party vote shares (in %) for the sample cantons with a narrowly rejected or approved referendum on female suffrage, since 1940.

**Number of entitled voters and turnout.** From the archival records, I further coded the number of entitled voters and the number of voters who turned out in each

<sup>12</sup>For a municipal party vote share averages listed by canton, see Table B.2.1 in Appendix section B.2

municipality in each election year. Table 1.4 lists the pre-suffrage averages for number of entitled voters and turnout in the sample cantons that narrowly rejected (approved) their cantonal referendum.<sup>13</sup> Estimating the effect of the franchise extension on the number of entitled voters allows us to see by how much the municipal franchise grew after the inclusion of women. I can further estimate the impact of suffrage on the electoral turnout rate.

Variable	Cantons Narrowly				Overall	
	Rejected Referendum		Approved Referendum			
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Entitled Voters	467	1,143	509	1,831	495	1,625
Election Turnout	79.4	12.7	78.6	12.4	78.9	12.4

Table 1.4.: Pre-suffrage means and standard deviations for number of entitled voters and election turnout (in %) for the sample cantons with a narrowly rejected or approved referendum on female suffrage, since 1940.

**Share of women.** With the number of entitled voters, I further proxied the number of female voters in each municipality at the time of the franchise extension. To do this, I calculated the difference between the number of entitled voters in the last cantonal election before and the first election after women’s suffrage had been introduced.

**Municipal expenditure.** A change in party platforms as a response to women’s suffrage can be hidden behind the same party labels. This is therefore something to be aware of when we study the impact suffrage had on election outcomes. Unlike party vote shares in an election, municipal expenditure is a direct policy outcome.

I located the annual budget reports for each municipality and each year I could find in the cantonal archives and the Swiss National Library. Out of these, I coded an orig-

<sup>13</sup>For a municipal entitled voters and turnout averages listed by canton, see Table B.2.2 in Appendix section B.2

inal panel data-set on total expenditure between 1950-1990 for all eight cantons in my sample, and social welfare expenditure for all but the canton of Ticino (TI). The municipalities in this canton only kept records of their total expenditure. Table 2.4.2 lists the pre-suffrage averages for municipal expenditure in the sample cantons that narrowly rejected (approved) their cantonal referendum.<sup>14</sup>

Variable	Cantons Narrowly				Overall	
	Rejected Referendum		Approved Referendum			
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Total expenditure	4,730,724	36,445,307	3,048,340	13,144,636	146,560	1,544,652
Total expenditure p.c.	462	704	1,182	3,621	552	1,460
Social welfare	929,273	4,170,934	281,627	1,259,229	737,833	3,578,959
Social welfare p.c.	27	54	73	487	43	291

Table 1.5.: Pre-suffrage means and standard deviations for municipal expenditure (in CHF) for the sample cantons with a narrowly rejected or approved referendum on female suffrage, since 1940.

**Municipal parliaments.** In four out of five municipalities in Switzerland, it is a direct-democratic assembly that decides over the municipal budget. Whether a municipality has a parliament or an assembly is the municipality’s free choice and is not bound to, for example, a population threshold. Hence, even though larger municipalities are slightly more likely to switch to parliaments, we observe a great variation of municipalities among both, municipalities with assemblies and those with a parliament (Ladner, 2016).

Based on a published book by Ladner (2016) and correspondence with the cantonal archives, I coded for each municipality in the sample whether it had a municipal parliament or a direct-democratic assembly deciding over the annual budget. Almost 18% of the municipalities in my sample ran a parliament instead of holding assemblies.

<sup>14</sup>For a municipal expenditure averages listed by canton, see Table B.2.3 in Appendix section B.2

**Adjustment for municipal mergers.** In 1960, Switzerland had 3,095 municipalities. Due to municipal mergers, the number had shrunk to 3,021 by 1990. Based on information by the Swiss Federal Statistical Office (2020), I therefore identified all Swiss municipalities that had undergone a merger. For those, I aggregated all outcome data under the names of the new municipalities that existed by 1990.

## 1.5. Results

The main findings are shown in Table 1.7 and 1.8. In an aggregate effect, female suffrage caused a shift to the right in both municipal party vote shares and municipal expenditure. However, the results also reveal significant heterogeneity in the effects for most outcomes.

The results in Table 1.6 and Table 1.7 include the first election after suffrage is introduced in each canton. Appendix section A.3 further shows the results including up to four elections after suffrage. Similarly, the results in Table 1.9 include the first year with suffrage in a municipality, while Appendix section A.4 shows the results including up to five post-suffrage years.

Due to the small number of cantons in my sample, clustering the standard errors at the cantonal level could still generate invalid significance (Steigerwald et al., 2020; Donald and Lang, 2007). I therefore show for all effects both robust standard errors clustered at the cantonal level in round brackets, and wild cluster robust confidence intervals in square brackets.

**Cantonal parliament elections:** Female suffrage caused an immediate drop in left party vote shares. Immediate winners of suffrage were conservative parties. Includ-

ing more than one election after suffrage, I further find that liberal parties' vote share dropped, while independent and populist right-wing parties gained. Electoral turnout dropped at first, but recovered with later elections.

Municipalities with a male majority in favour of female suffrage experienced a larger loss for left parties, and increased more in conservative party vote shares. They further show a decrease for right-wing populist parties. Finally, independent parties increased their vote shares only in favourable municipalities. In summary, female suffrage caused a political shift to the center-right in favourable municipalities, and a shift to the right in unfavourable municipalities.

At pre-suffrage averages, the shown effects are considerable. Left parties lost 8.9% in favourable, and 5.8% in unfavourable municipalities. This change accounts for 12.9% (6.7%) in the standard deviation before enfranchisement. In favourable municipalities, the conservative party vote share increased by 13.8%, and 10.5% in unfavourable ones. This effect is equivalent to 16.0% (9.5%) of the respective standard deviation.<sup>15</sup>

Right-wing populist parties lost 2.3% in favourable municipalities, i.e. 3.7% of their pre-suffrage standard deviation. Another large change compared to pre-suffrage levels occurred for independent parties, which gained 8.4% in a favourable environment. This effect is equivalent to 3.8% of the respective standard deviation.

Female suffrage further caused a large drop of 11.2% in election turnout. In Table 1.6, we can see that the negative effect on turnout is 2.8% smaller in favourable municipalities. This turnout gap between unfavourable and favourable municipalities sustains

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<sup>15</sup>Pre-suffrage averages are calculated from pre-suffrage election data since 1940. Effects at the average and share of standard deviations use separate pre-suffrage baseline values for favourable and unfavourable municipalities.

until 3 elections post-suffrage (see Figure A.3.11 in Appendix section A.3).

Another finding shown in Table 1.6 is that favourable municipalities grew more in numbers of entitled voters. The fact that favourable municipalities gained a higher share of new voters makes the result for turnout even more significant. It suggests that favourable municipalities had higher female turnout, assuming that male turnout did not change as a result of suffrage.

Table 1.6.: Impact of female suffrage on number of entitled voters and turnout in cantonal parliament elections

	Number of Voters and Election Turnout			
	log(Entitled voters)		Electoral turnout	
	(1)	(2)	(3)	(4)
Enfranchised	0.654*** (0.019) [0.62, 0.69]	0.615*** (0.020) [0.58, 0.69]	-0.112*** (0.021) [-0.15, -0.07]	-0.118*** (0.021) [-0.16, -0.08]
Enfranchised x In favour		0.140*** (0.028) [0.09, 0.19]		0.028* (0.016) [0, 0.06]
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.358	0.368	0.6	0.601
Observations	9728	9728	9728	9728
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

Table 1.7.: Impact of female suffrage on municipal party vote shares (in %) in cantonal parliament elections

Party Vote Shares in Cantonal Parliament Elections										
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-1.480** (0.583) [-2.44, -0.52]	-1.169* (0.607) [-2.23, -0.11]	2.918*** (0.806) [1.65, 4.18]	2.591*** (0.867) [1.2, 3.98]	-0.347 (0.813) [-1.72, 1.03]	-0.549 (0.867) [-1.94, 0.84]	-0.464 (0.688) [-0.93, 0]	-0.695 (0.723) [-1.91, 0.52]	0.270 (0.759) [-0.97, 1.51]	0.651 (0.796) [-0.68, 1.98]
Enfranchised x In favour		-1.113** (0.557) [-2.07, -0.16]		1.173* (0.649) [0.1, 2.24]		0.724** (0.338) [0.19, 1.26]		0.829 (0.640) [-0.22, 1.88]		-1.367** (0.624) [-2.4, -0.33]
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.029	0.029	0.012	0.012	0.05	0.05	0.013	0.014	0.015	0.016
Observations	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.



**Municipal expenditure:** I find that total expenditure dropped as a result of female suffrage. The coefficient for social welfare is large and negative, but not significant. However, I have less observations and therefore lower statistical power to estimate the effect on this outcome.

In Table 1.9, we can see that municipalities with a municipal parliament instead of an assembly making budget decisions, experienced no drop in total expenditure. Results including more than one post-suffrage year show that suffrage even caused an increase in total expenditure of municipalities with a parliament. Again, I find no significant effect for social welfare, but the interaction coefficient is also large and positive.

One question could be whether the effect of suffrage in municipalities with a parliament was generally different from those with an assembly. I therefore test if having a parliament also affected the impact suffrage had on cantonal election outcomes. In Appendix section A.3, I show the results including one to four elections after cantonal enfranchisement. Municipalities with a parliament experienced a larger drop in left parties' vote share and a larger increase in their number of entitled voters. Hence, this result suggests that municipalities with a parliament had a higher share of women. For all other outcomes, I find that effects were not different from municipalities with an assembly.

Table 1.8.: Impact of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.128*** (0.036) [-0.19, -0.07]	-0.151*** (0.039) [-0.22, -0.08]	-0.253 (0.165) [-0.43, -0.08]	-0.178 (0.167) [-0.48, -0.09]
Enfranchised x In favour		0.069 (0.046) [-0.01, 0.15]		0.194 (0.163) [-0.09, 0.27]
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.042	0.042	0.1	0.003
Observations	11260	11260	4601	4601
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

Table 1.9.: Impact of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.128*** (0.036) [-0.19, -0.07]	-0.162*** (0.038) [-0.22, -0.1]	-0.253 (0.165) [-0.43, -0.08]	-0.282 (0.172) [-0.47, -0.09]
Enfranchised x Municipal parliament		0.159*** (0.052) [0.06, 0.25]		0.208 (0.180) [0, 0.41]
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.042	0.043	0.1	0.1
Observations	11260	11260	4601	4601
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

## **1.6. Robustness**

### **1.6.1. Autocorrelated Errors**

One concern with difference in differences estimation is that error terms of the units of analysis are correlated over time (Bertrand et al., 2004). Autocorrelated errors become especially likely when panel data is used over a long time period, and with relatively few years being treated at the end of it. To address this concern, I use the solution, which Bertrand et al. (2004) suggest for samples with a small number of clusters. My sample contains municipalities from only 8 cantons and therefore qualifies for this category.

As Bertrand et al. recommend, I regress my outcomes on municipality fixed effects, time effects and a linear cantonal time trend in a first stage OLS estimation. In a second step, I aggregate the residuals from the first stage regression into only two time periods per municipality: The period before and the period after female suffrage. In a second stage OLS estimation, I regress the aggregated residuals onto the binary treatment with female suffrage. As standard errors need to be adjusted (Donald and Lang, 2007), I again report wild cluster robust confidence intervals in square brackets.

The Appendix section A.5 shows the results for both election and expenditure outcomes. All results remain substantively very similar to the ones I find with the conventional difference in differences estimation.

### **1.6.2. Parallel Trends Assumption**

Difference in differences rely on the parallel trends assumption (Steigerwald et al., 2020). This assumption can by definition not be tested, because we never observe a municipality-level outcome both with and without female suffrage in the same year.

However, we can observe if municipalities already had differential trends in outcomes before female suffrage was introduced. Significant differences in pre-suffrage trends would be a concern for identification.

The Appendix section B.4 shows autocorrelation-robust results (Bertrand et al., 2004) for pre-trending one (Placebo 1-year), two (Placebo 2-year) and three (Placebo 3-year) (election) years before female suffrage was introduced. Most of the placebo effects are not only insignificant, but also close to zero.

An exception are electoral turnout, independent parties' vote share and social welfare. For electoral turnout and social welfare, the placebos suggest a positive pre-trend two years before suffrage was introduced. Difference in differences could therefore be capturing an underlying trend that is independent of the impact women's suffrage had. However, the pre-trending coefficient for turnout is almost zero. For social welfare, the effect is larger. We therefore have to interpret the main findings of the effect on social welfare with caution. The same applies for the effect on the independent parties' vote share, which shows differential pre-trending one election before suffrage is introduced.

As an additional robustness test, I estimate the main effects controlling for all placebo treatments with female suffrage. The results are reported in Table A.6.1 and A.6.2 in Appendix section B.4. The direction and the size of the effects remain very similar to the ones estimated in the conventional and in the autocorrelation-robust difference in differences.

## 1.7. Ecological Inference

At this point, we know that women's suffrage caused both electoral and expenditure effects at the municipality level. A second important question is now who caused these effects. Two intuitive mechanisms would be: A large enough number of women who voted different than men. Or men who changed their voting behaviour as a response to the franchise extension. Naturally, a mix of the two is also possible.

Because Switzerland does not record voting separated by gender, I cannot fully reveal men's versus women's voting behaviour after suffrage was introduced. The second-best solution is therefore to use techniques that allow me to shed light on how women may have voted compared to men. In a first step, I test if the share of female voters in a municipality moderated or amplified the effects I find. A similar technique is used by Morgan-Collins (2019) and Morgan-Collins and Teele (2018). As a second approach, I analyse a national election survey from 1972 to evaluate male versus female political preferences at the time.

### 1.7.1. Share of Women

The proxy I use for the share of women is the difference between the municipal number of entitled voters in the election year before and after the franchise extension. I use this approximation instead of the municipal share of women from historical census data for 1970, because it excludes women who are either not old enough to vote or who have no voting right (e.g. because they are foreigners). I therefore expect less noise in this proxy than in the census data.

However, to exclude very noisy measures, I restrict the sample to observations for

which the proxied share of women is between 30-70% of entitled voters. The distribution of municipalities that fall outside of this range are shown in Figure A.10.1 in the Appendix. For the remaining sample, Figure A.10.2 shows the distribution of the municipal share of entitled female voters by canton.

To make the baseline effects more interpretable, I code each municipal share as percentage point deviation from the cantonal average share of female voters. The results are shown in Table 1.11, 1.10 and 1.12. Even though this is a smaller sample, the baseline effects are similar to the ones from the main analysis.

The share of female voters gives some evidence that the observed effects might be driven by women. A higher share of women is associated with a larger drop in left parties' vote share and turnout. A higher proportion of women is further associated with an increase in the independent and a lower drop in liberal parties' vote share. Total expenditure also drops less in municipalities with a higher share of women. All of the effects remain very similar when I include more post-suffrage elections or years.

One concern could be that the proxied share of women in a municipality is highly correlated with it being favourable, and with having a municipal parliament. We can see this in Figure A.3.13 and A.3.14 in Appendix section A.3. Suffrage caused a larger increase in the number of entitled voters in favourable municipalities, and in municipalities with a parliament. In Table A.10.1 in Appendix section A.10, I therefore interact suffrage both with the municipal share of women and having a municipal parliament. The result suggests that the share of women still drives the lower drop in total expenditure.

Table 1.10.: Interaction effect of female suffrage and share of women in a municipality on turnout in cantonal parliament elections

	<i>Dependent variable:</i>	
	Electoral turnout	
	(1)	(2)
Enfranchised	-0.143*** (0.034) [-0.2, -0.09]	-0.152*** (0.033) [-0.21, -0.09]
Enfranchised x Share of women	-0.006** (0.002) [-0.01, 0]	-0.005* (0.003) [-0.01, 0]
Enfranchised x In favour		0.048*** (0.018) [0.02, 0.07]
Enfranchised x In favour x Share of women		-0.006 (0.004) [-0.01, 0]
Municipality FEs	✓	✓
Election FEs	✓	✓
Linear Canton-Specific Trend	✓	✓
Within R-squared	0.615	0.617
Observations	7790	7790
Time Frame	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

Table 1.11.: Interaction effect of female suffrage and share of women in a municipality on party vote shares (in %) in cantonal parliament elections

Party Vote Shares in Cantonal Parliament Elections										
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-0.666 (0.757) [-1.79, 0.46]	-0.364 (0.800) [-1.56, 0.83]	1.936* (1.042) [0.37, 3.51]	1.389 (1.114) [-0.31, 3.09]	-0.727 (1.025) [-2.66, 1.21]	-0.926 (1.071) [-2.58, 0.73]	0.254 (0.894) [-1.06, 1.57]	0.026 (0.947) [-1.35, 1.4]	0.181 (0.998) [-1.44, 1.81]	0.726 (1.053) [-0.92, 2.38]
Enfranchised x Share of women	-0.266*** (0.090) [-0.41, -0.12]	-0.235** (0.099) [-0.38, -0.09]	-0.057 (0.096) [-0.2, 0.09]	-0.071 (0.104) [-0.22, 0.08]	0.111* (0.058) [0, 0.22]	0.086 (0.075) [-0.03, 0.2]	0.212** (0.091) [0.07, 0.36]	0.114 (0.094) [-0.02, 0.25]	-0.026 (0.097) [-0.19, 0.14]	0.057 (0.123) [-0.13, 0.24]
Enfranchised x In favour		-1.094 (0.781) [-2.25, 0.06]		2.306** (0.964) [0.85, 3.76]		0.695 (0.473) [-0.01, 1.4]		0.281 (0.928) [-1.22, 1.78]		-1.786* (0.918) [-3.21, -0.36]
Enfranchised x In favour x Share of women		-0.009 (0.218) [-0.35, 0.34]		-0.129 (0.228) [-0.5, 0.24]		0.018 (0.098) [-0.12, 0.16]		0.254 (0.233) [-0.1, 0.61]		-0.102 (0.208) [-0.41, 0.21]
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.016	0.016	0.009	0.011	0.05	0.051	0.006	0.007	0.011	0.012
Observations	7980	7980	7980	7980	7980	7980	7980	7980	7980	7980
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.



Table 1.12.: Interaction effect of female suffrage and share of women in a municipality on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.090 (0.081) [-0.21, -0.04]	-0.141 (0.093) [-0.23, -0.05]	-0.275 (0.197) [-0.47, -0.08]	-0.277 (0.207) [-0.48, -0.07]
Enfranchised x Share of women	0.029*** (0.010) [0.02, 0.04]	0.025* (0.013) [0.01, 0.04]	0.032 (0.021) [0.01, 0.05]	0.018 (0.027) [-0.01, 0.04]
Enfranchised x In favour		0.014 (0.133) [-0.12, 0.15]		-0.168 (0.186) [-0.34, 0]
Enfranchised x In favour x Share of women		0.012 (0.025) [-0.02, 0.04]		0.059 (0.042) [0.02, 0.1]
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.012	0.024	0.089	0.092
Observations	3916	3916	3775	3775
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

## 1.7.2. National Election Survey 1972

A second way to make inferences about women's versus men's political preferences is through surveys. There were no surveys carried out at the municipality level in this time period in Switzerland. However, the first Swiss national election survey was conducted in 1972 (Kerr et al., 1976). It used a representative sample of 1,917 respondents from the Swiss population. I decrypted the punched card format in which the survey was saved to analyse the political preference distributions of male and female respondents. For this analysis, I plot the gender distributions for several questions on party and policy preferences.

All response distributions are shown for both the population-representative sample and the sample containing only respondents from the eight cantons. Showing the distributions for both samples visualises that the respondents from the eight cantons were very similar to the Swiss overall population. In the Appendix section A.11.1, we can further see the sample composition for both, with regard to the number of respondents from each canton, their age, education, employment and civil status distribution.

This paper's findings show a political shift to the right as a result of female suffrage. The first question is therefore whether women had more right-wing preferences than men. In Figure 1.4, we see that women and men placed themselves similarly on a left-right scale. Both are concentrated on the center-right. However, a much larger share of women claimed to not know their political preferences. This finding is further consistent with other questions that proxy both genders' political preference distribution, such as their sympathy for the Schwarzenbach referendum on heavy immigration restrictions in 1970 (see Figure A.11.14), or their party choices in the 1971 national elections (see Figure A.11.15).

The next question is whether both genders perceived party platforms the same way. In the Appendix section A.11.2, we see where the survey respondents placed the different main parties on a left-right scale. The distributions suggest both women and men saw the party platforms from the left-labelled parties as considerably left. Parties labelled as conservative are perceived to be center to center-right, similar to the liberal-labelled parties. Among both genders, the most right-wing party platforms are associated with the label of right-wing populist. Again, a much higher share of female respondents claimed to not know where to place parties on a left-right scale.

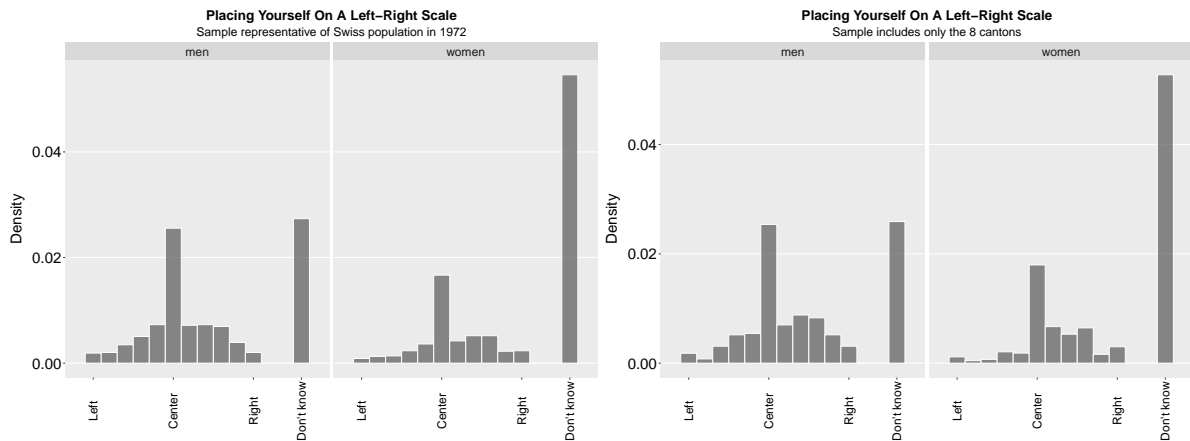


Figure 1.4.: **Left-right scale:** Distribution of female and male responses to survey question on placing themselves on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

Questions on turnout and political interest further point towards women being considerably less interested in politics than men at the time. In Figure A.11.17, we can observe that women reported much lower turnout than men, in both federal and cantonal elections. This finding contributes to previous evidence suggesting that the new female voters were driving the drop in turnout caused by suffrage.

Together, these survey results point to a possible mechanism for the findings in this paper. In his model on lobbying, Baron (1994) shows that uninformed voters are easier to influence with campaign spending. Similarly, low-informed women could have been more susceptible to party rhetoric at a time when right-wing parties generally gained in Swiss politics. Figure A.12.1 in the Appendix section A.12 shows how Swiss right-wing parties increased their national vote share significantly in the 1970s. This was generally associated with the 1970 Schwarzenbach referendum, which mobilised many right-wing voters to campaign for more restrictive immigration policy.

Therefore, when low-informed women turned out at all, they could have been more likely to vote for right-wing policy platforms. Such platforms included lower government expenditure. My finding that favourable municipalities experienced a lower drop in turnout suggests that their women were possibly more interested in politics. And hence, these municipalities shifted less to the right and more to the center-right.

The question is if women became more interested in politics over time, once they were included as voters. In a second step, I therefore test if women who were longer exposed to the franchise expressed a higher interest in politics. Due to the limited sample size of the survey, I cannot distinguish between respondents from different municipalities. However, I can distinguish between cantons, which already had female suffrage for a few years in 1972, and cantons, which had only recently or not yet enfranchised women in that year.

Splitting the responses from both genders into these two groups in Figure 1.5, we observe that the gender gap in political interest was larger in cantons with late female suffrage. However, only at the lower end of the distribution. Among the very interested, the gender gap was larger in longer enfranchised cantons. Within the eight sample cantons, having female suffrage by 1972 was quasi-random. Hence, observing this difference in the gender gap suggests that enfranchisement may increase the interest in politics among women. However, due to the small number of respondents from these cantons, we have to be very cautious when we make this inference.

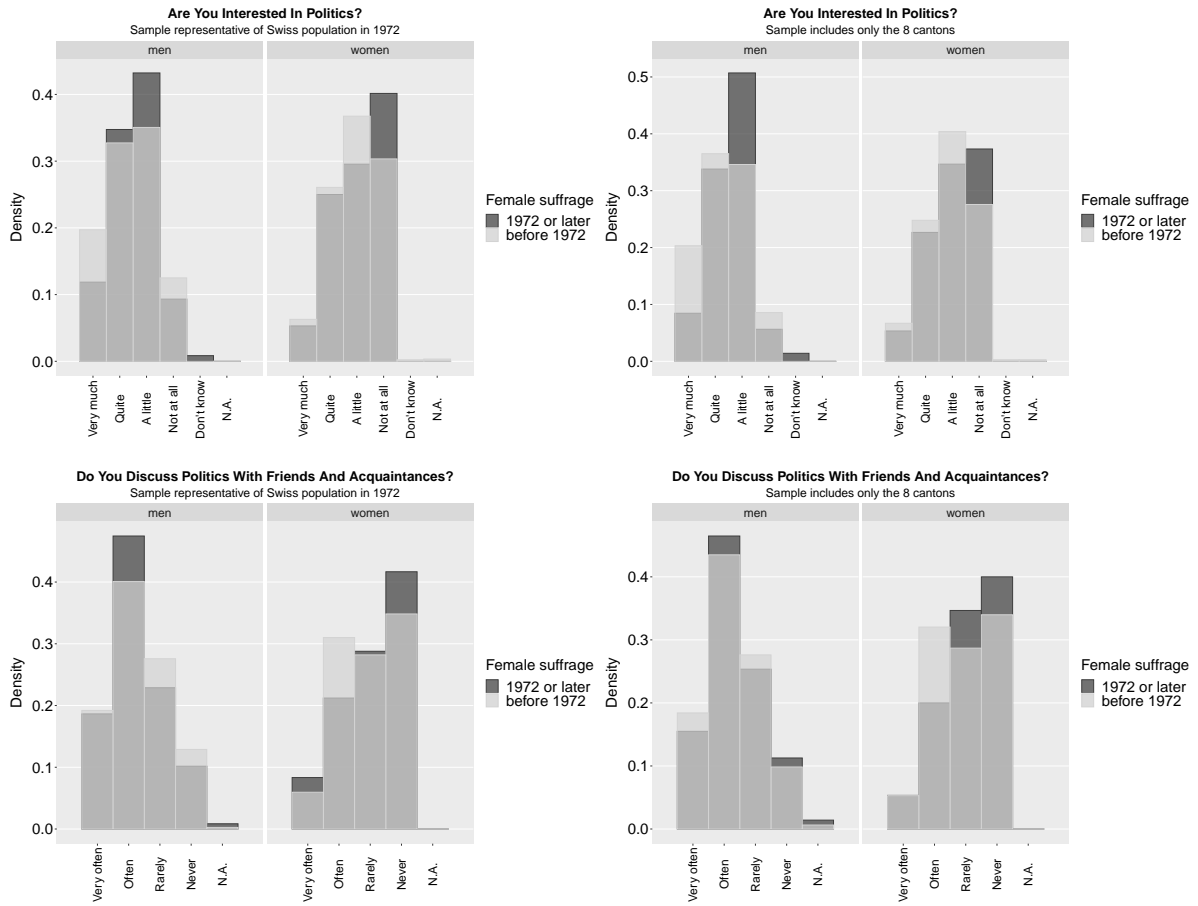


Figure 1.5.: **Interest in politics:** Distribution of female and male responses to survey questions on interest in politics, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

## 1.8. Conclusion

Women's political inclusion is often associated with a liberal impact on policies. This paper shows that extending the franchise to women can also cause a shift to the right. I reveal significant heterogeneity in this effect and argue that it could be driven by differences in women's political interest.

This paper's empirical strategy tests the political impact of female suffrage in the municipalities of eight Swiss cantons, in which women received the vote quasi-randomly through close referenda held between 1966-1971. I test for heterogeneous effects in municipalities with a male majority in favor of women's vote and ones with a majority against it. I further study municipalities with a parliament versus direct-democratic assemblies.

My findings show that female suffrage caused an overall shift to the right in municipal party vote shares, and a drop in expenditure. However, favourable municipalities moved more center-right, while unfavourable ones moved more to the right. Unfavourable municipalities further experienced a larger drop in election turnout. Municipalities with a parliament instead of an assembly making budget decisions, increased instead of dropped their expenditure.

In a complementary analysis, I proxy the municipal share of women to show that municipalities with a higher female proportion shifted more to the center-right than the right. As a second source for ecological inference, I use a national election survey from 1972. The survey reveals that politically interested women had similarly center-right preferences as men. However, a much higher share of women was uninterested in politics.

I therefore propose an explanation for the heterogeneous effects based on differences in women's political interest. Politically less informed women could have been more susceptible to campaign rhetoric of rising right-wing parties at the time. As a consequence, unfavourable municipalities may have moved more to the right. The fact that unfavourable municipalities experienced a larger drop in turnout is consistent with women being possibly less interested and, hence, more impressionable in these localities.

# A. Appendix

## A.1. Suffrage Timeline in Sample

Female suffrage	<1968	1968	1969	1970	1971	>=1972
Introduced		<b>Bern (BE)</b>	Bern (BE) <b>Thurgau (TG)</b> Ticino (TI)	Bern (BE) Thurgau (TG) Ticino (TI) Solothurn (SO)	Bern (BE) Thurgau (TG) Ticino (TI) Solothurn (SO) <b>Aargau (AG)</b> Schaffhausen (SH)	all 8 cantons
Not Yet Introduced	all 8 cantons	rest of cantons (7)	rest of cantons (5)	rest of cantons (4)	rest of cantons (2)	no more cantons

Table A.1.1.: Timeline of municipal voting right for women introduced through cantonal referendum. In bold: Cantons that passed female suffrage through narrow referendum outcome in that year.

## A.2. Cantonal Election Timeline

1967	1968	1969	1970	<b>1971</b>	<b>1972</b>	<b>1973</b>	<b>1974</b>
Ticino (TI)	St. Gallen (SG) Schwyz (SZ) Thurgau (TG)	Aargau (AG) Solothurn (SO)	Bern (BE)	Ticino (TI)	St. Gallen (SG) Schwyz (SZ) Thurgau (TG)	Aargau (AG) Solothurn (SO)	Bern (BE)

Table A.2.1.: Timeline of last cantonal parliament elections before cantonal voting right for women is introduced, and first elections afterwards (in bold).



### A.3. Effects including several post-suffrage elections

Table A.3.1.: DID effects of female suffrage on left parties' vote share (in %)

	Left parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-1.169* (0.607)	-1.251*** (0.401)	-1.124*** (0.410)	-0.450 (0.424)
Enfranchised x In favour	-1.113** (0.557)	-1.440*** (0.532)	-1.414** (0.576)	-1.672*** (0.546)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.029	0.038	0.054	0.06
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

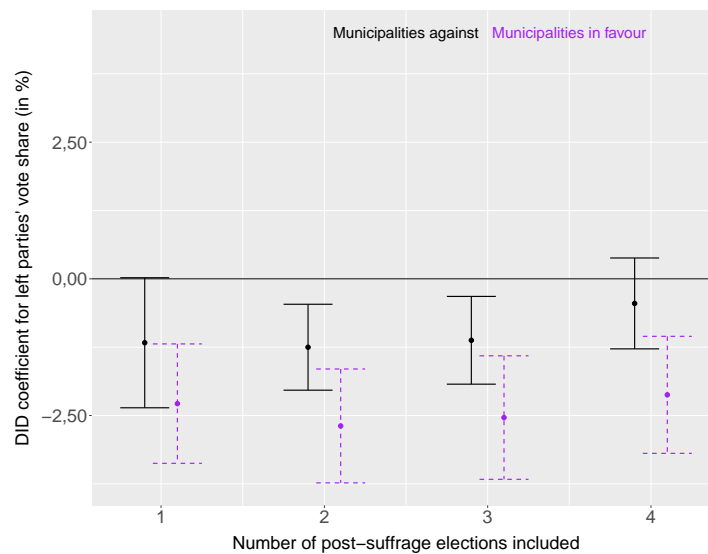


Figure A.3.1.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.2.: DID effects of female suffrage on left parties' vote share (in %)

	Left parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-1.432** (0.582)	-1.555*** (0.370)	-1.381*** (0.382)	-0.763* (0.404)
Enfranchised x Municipal parliament	-1.020 (0.726)	-1.463** (0.667)	-1.581** (0.734)	-1.684** (0.710)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.029	0.037	0.053	0.059
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

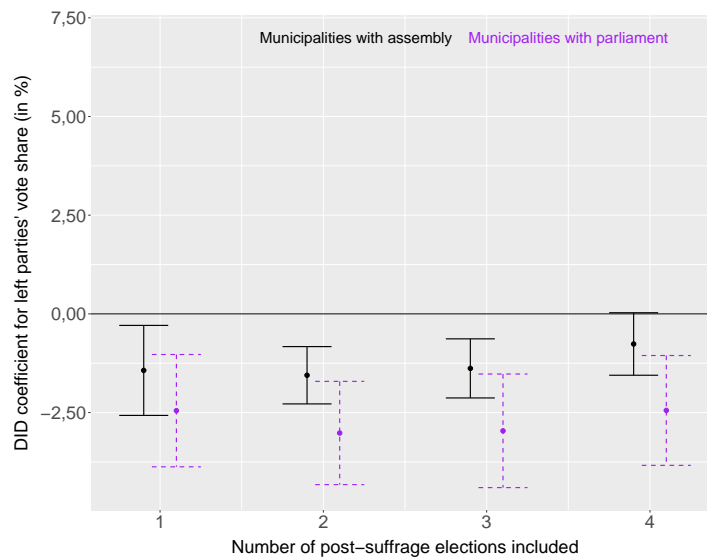


Figure A.3.2.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.3.: DID effects of female suffrage on conservative parties' vote share (in %)

	Conservative parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	2.591*** (0.867)	1.688*** (0.567)	0.736 (0.579)	1.066* (0.594)
Enfranchised x In favour	1.173* (0.649)	0.947 (0.592)	0.927 (0.593)	0.802 (0.631)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.012	0.016	0.014	0.022
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

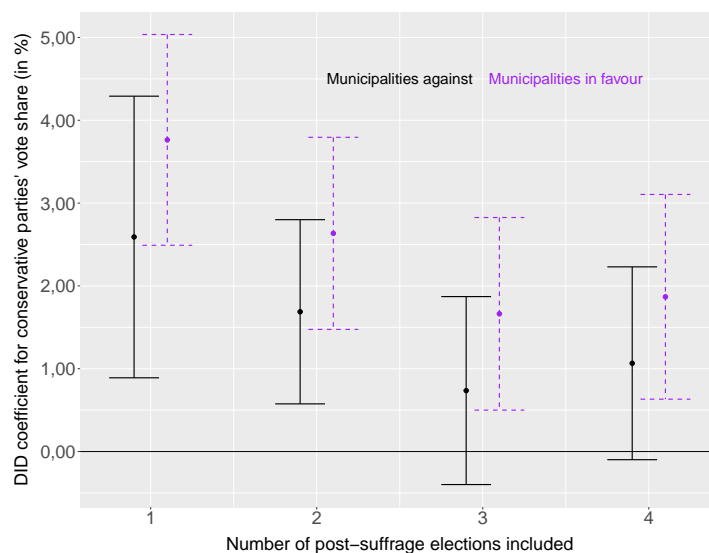


Figure A.3.3.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.4.: DID effects of female suffrage on conservative parties' vote share (in %)

	Conservative parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	2.883*** (0.810)	1.912*** (0.520)	0.933* (0.533)	1.212** (0.548)
Enfranchised x Municipal parliament	0.736 (0.991)	0.692 (0.908)	0.739 (0.922)	0.856 (0.947)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.012	0.016	0.014	0.021
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

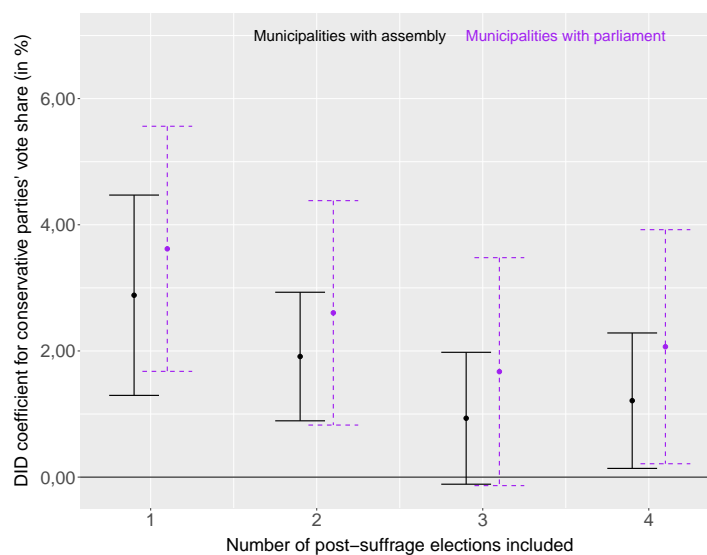


Figure A.3.4.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.5.: DID effects of female suffrage on liberal parties' vote share (in %)

	Liberal parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-0.695 (0.723)	-1.056** (0.480)	-1.385*** (0.462)	-2.075*** (0.480)
Enfranchised x In favour	0.829 (0.640)	0.918 (0.578)	0.976* (0.581)	0.979* (0.577)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.014	0.012	0.024	0.025
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

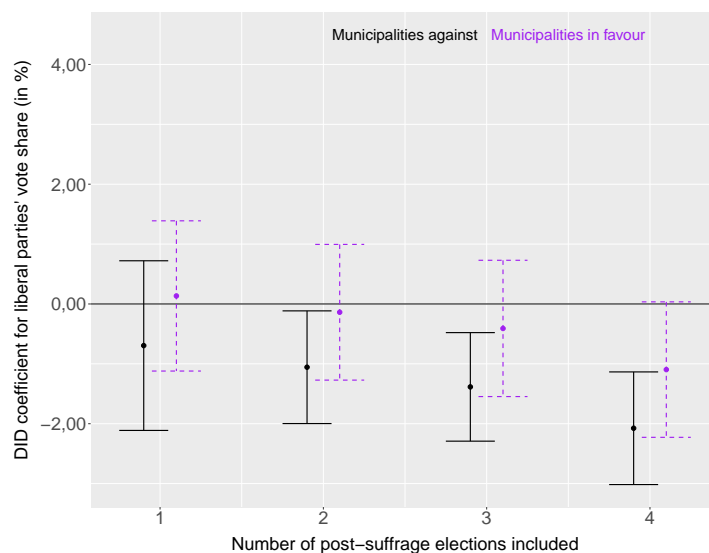


Figure A.3.5.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.6.: DID effects of female suffrage on liberal parties' vote share (in %)

	Liberal parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-0.435 (0.689)	-0.760* (0.448)	-1.073** (0.435)	-1.755*** (0.455)
Enfranchised x Municipal parliament	-0.615 (0.989)	-0.224 (0.836)	-0.315 (0.810)	-0.490 (0.822)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.013	0.012	0.023	0.025
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

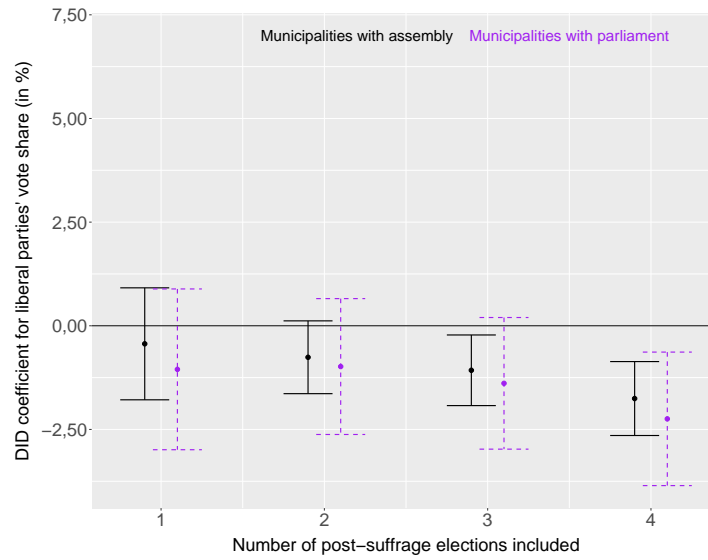


Figure A.3.6.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.7.: DID effects of female suffrage on populist parties' vote share (in %)

	Populist parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	0.651 (0.796)	0.849 (0.540)	1.106** (0.516)	0.776 (0.520)
Enfranchised x In favour	-1.367** (0.624)	-1.218** (0.565)	-1.103** (0.558)	-0.780 (0.541)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.016	0.02	0.018	0.017
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

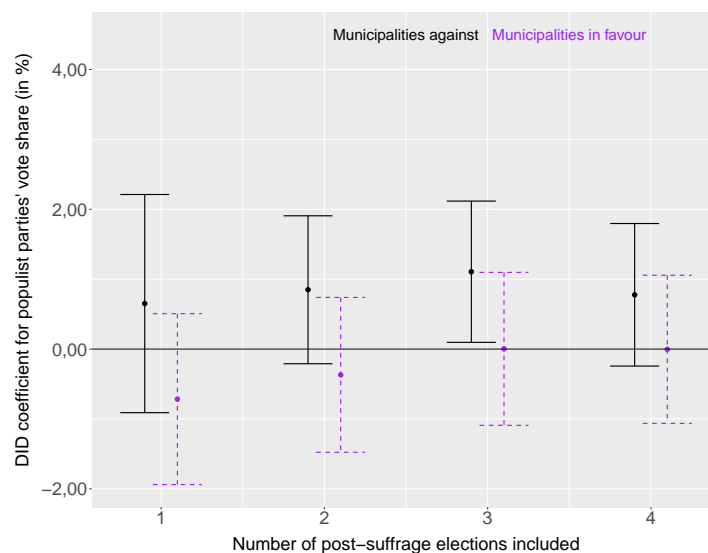


Figure A.3.7.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.8.: DID effects of female suffrage on populist parties' vote share (in %)

	Populist parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	0.244 (0.759)	0.422 (0.502)	0.705 (0.487)	0.463 (0.494)
Enfranchised x Municipal parliament	0.539 (0.745)	0.658 (0.641)	0.879 (0.637)	1.021* (0.615)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.015	0.02	0.017	0.017
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

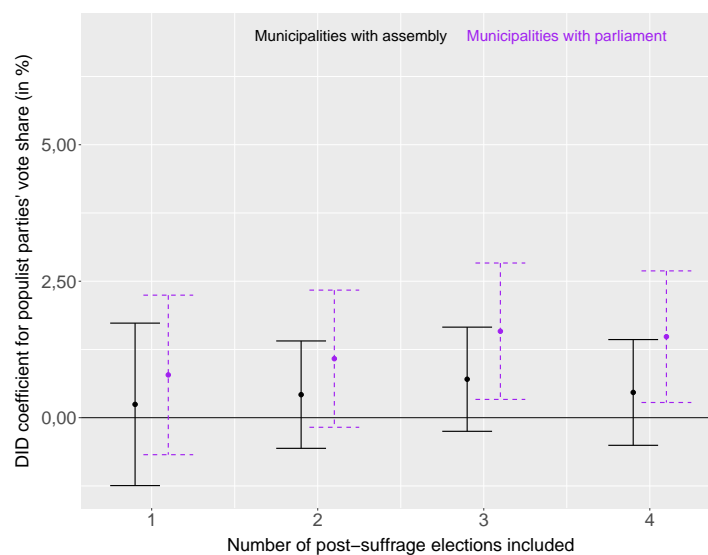


Figure A.3.8.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.



Table A.3.9.: DID effects of female suffrage on independent parties' vote share (in %)

	Independent parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-0.549 (0.867)	0.365 (0.596)	1.364** (0.554)	1.867*** (0.527)
Enfranchised x In favour	0.724** (0.338)	1.146*** (0.280)	0.747*** (0.242)	0.593*** (0.221)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.05	0.041	0.029	0.024
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

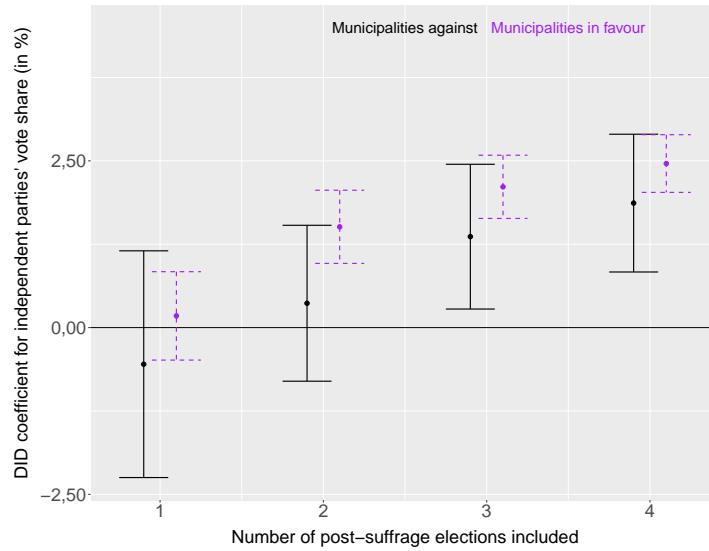


Figure A.3.9.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.10.: DID effects of female suffrage on independent parties' vote share (in %)

	Independent parties' vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	-0.361 (0.816)	0.681 (0.571)	1.560*** (0.542)	2.024*** (0.516)
Enfranchised x Municipal parliament	0.304 (0.266)	0.330 (0.261)	0.204 (0.282)	0.099 (0.266)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.05	0.039	0.028	0.024
Observations	10153	11300	12399	13190
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

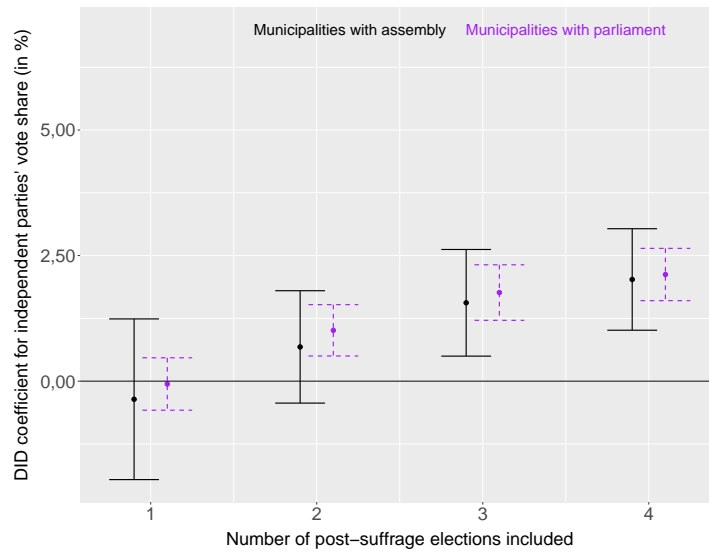


Figure A.3.10.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.11.: DID effects of female suffrage on electoral turnout

	Electoral turnout			
	(1)	(2)	(3)	(4)
Enfranchised	-0.118*** (0.021)	-0.035* (0.020)	-0.0005 (0.020)	-0.002 (0.018)
Enfranchised x In favour	0.028* (0.016)	0.035** (0.016)	0.029* (0.017)	0.018 (0.015)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.601	0.566	0.55	0.569
Observations	9728	10669	11609	12399
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

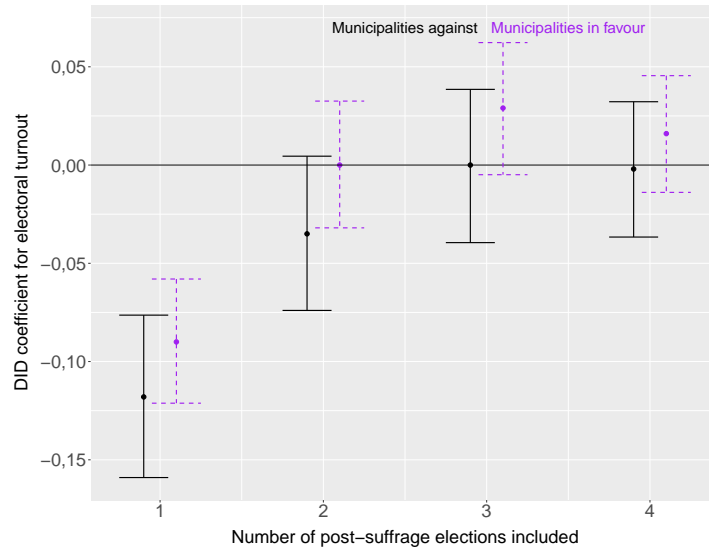


Figure A.3.11.: DID point estimates and 95%-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.12.: DID effects of female suffrage on electoral turnout

	Electoral turnout			
	(1)	(2)	(3)	(4)
Enfranchised	-0.111*** (0.021)	-0.029 (0.020)	0.003 (0.020)	0.0001 (0.018)
Enfranchised x Municipal parliament	-0.054 (0.038)	-0.047 (0.035)	-0.046 (0.032)	-0.007 (0.026)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.601	0.565	0.55	0.568
Observations	9728	10669	11609	12399
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

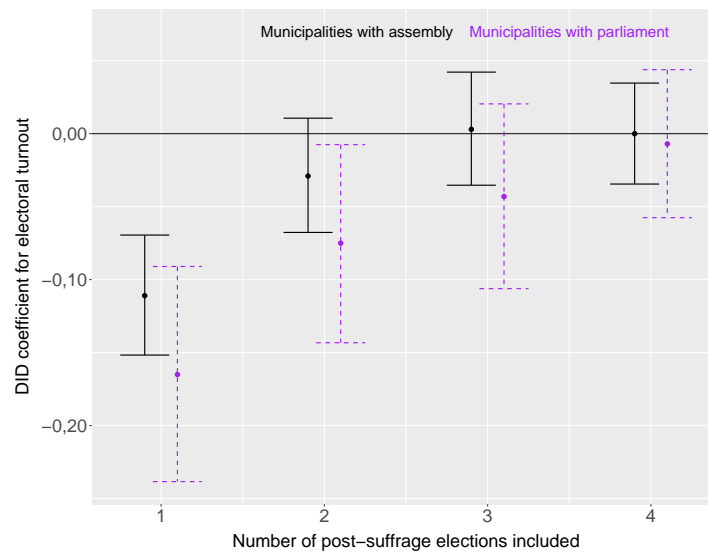


Figure A.3.12.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.13.: DID effects of female suffrage on log(number of entitled voters)

	log(Number of entitled voters)			
	(1)	(2)	(3)	(4)
Enfranchised	0.615*** (0.020)	0.597*** (0.016)	0.600*** (0.016)	0.602*** (0.016)
Enfranchised x In favour	0.140*** (0.028)	0.173*** (0.023)	0.191*** (0.023)	0.182*** (0.023)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.368	0.344	0.314	0.285
Observations	9728	10669	11609	12399
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

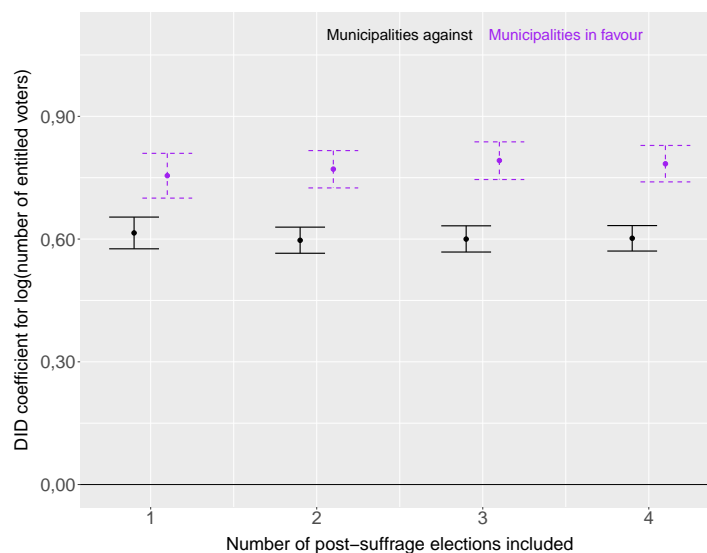


Figure A.3.13.: DID point estimates and 95%-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

Table A.3.14.: DID effects of female suffrage on log(number of entitled voters)

	log(Number of entitled voters)			
	(1)	(2)	(3)	(4)
Enfranchised	0.644*** (0.019)	0.637*** (0.015)	0.643*** (0.015)	0.636*** (0.015)
Enfranchised x Municipal parliament	0.226** (0.097)	0.244*** (0.062)	0.225*** (0.059)	0.251*** (0.042)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.363	0.331	0.292	0.271
Observations	9728	10669	11609	12399
Time Frame	1941 – 74	1941 – 78	1941 – 82	1941 – 86

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

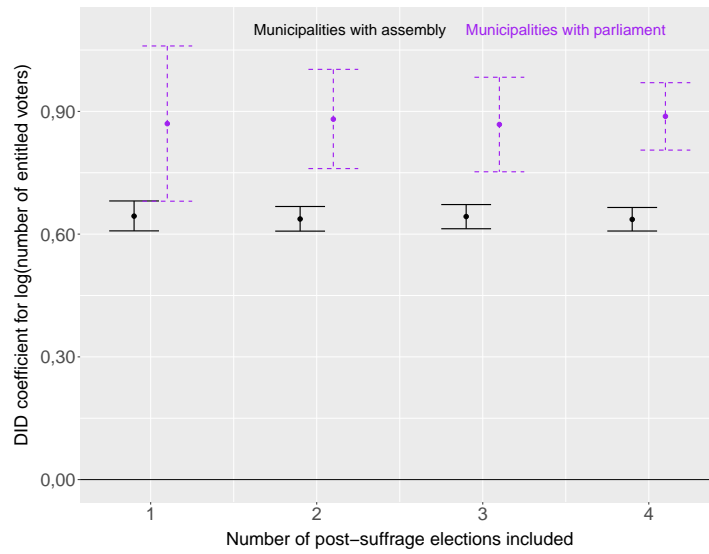


Figure A.3.14.: DID point estimates and 0.95-confidence intervals for sample including one, two, three and four elections after women's enfranchisement.

## A.4. Effects including several post-suffrage years

Table A.4.1.: DID effects of female suffrage on  $\log(\text{total expenditure})$

	log(Total expenditure)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	-0.151*** (0.039)	-0.174*** (0.044)	-0.110*** (0.035)	-0.101*** (0.038)	-0.058 (0.037)
Enfranchised x In favour	0.069 (0.046)	0.065 (0.057)	0.067 (0.046)	0.020 (0.053)	0.034 (0.057)
Municipality FEs	✓	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓
Within R-squared	0.042	0.047	0.039	0.036	0.039
Observations	11260	10042	11885	11793	11465
Time Frame	1940 – 1972	1940 – 1973	1940 – 1974	1940 – 1975	1940 – 1976

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Robust standard errors clustered at the cantonal level in parentheses.

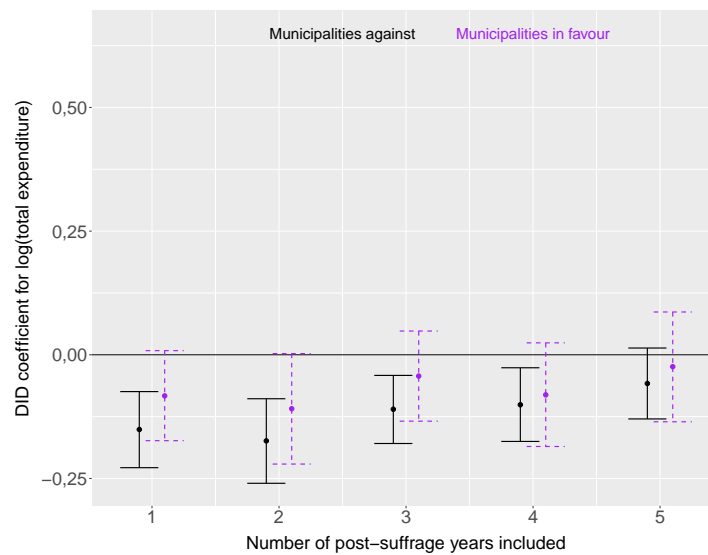


Figure A.4.1.: DID point estimates and 0.95-confidence intervals for sample including one, two, three, four and five years after women's enfranchisement.

Table A.4.2.: DID effects of female suffrage on log(total expenditure)

	log(Total expenditure)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	-0.162*** (0.038)	-0.219*** (0.043)	-0.133*** (0.034)	-0.147*** (0.036)	-0.101*** (0.034)
Enfranchised x Municipal parliament	0.159*** (0.052)	0.212*** (0.055)	0.175*** (0.051)	0.210*** (0.055)	0.212*** (0.055)
Municipality FEs	✓	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓
Within R-squared	0.043	0.05	0.042	0.041	0.044
Observations	11260	10042	11885	11793	11465
Time Frame	1940 – 1972	1940 – 1973	1940 – 1974	1940 – 1975	1940 – 1976

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

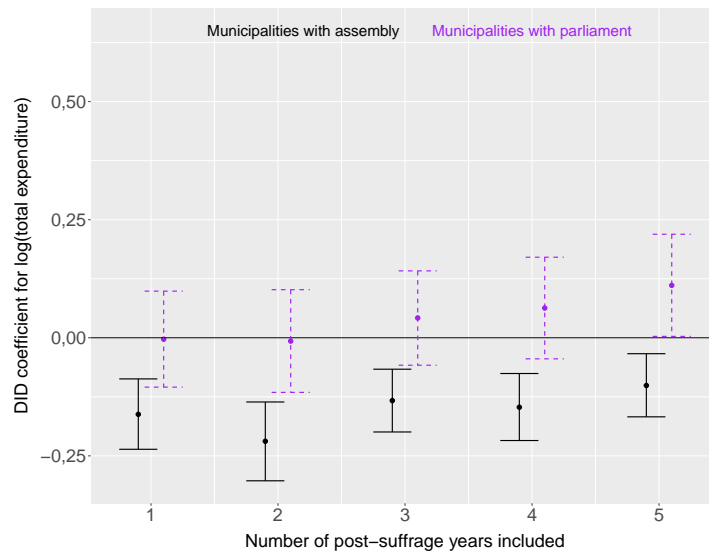


Figure A.4.2.: DID point estimates and 0.95-confidence intervals for sample including one, two, three, four and five years after women's enfranchisement.



Table A.4.3.: DID effects of female suffrage on log(social welfare)

	log(Social welfare)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	-0.283 (0.178)	-0.168 (0.194)	-0.204 (0.140)	0.031 (0.160)	0.100 (0.157)
Enfranchised x In favour	0.091 (0.155)	0.225 (0.277)	0.051 (0.142)	0.108 (0.229)	0.060 (0.259)
Municipality FEs	✓	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓
Within R-squared	0.1	0.1	0.159	0.088	0.118
Observations	4601	3272	4860	4396	3968
Time Frame	1940 – 1972	1940 – 1973	1940 – 1974	1940 – 1975	1940 – 1976

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

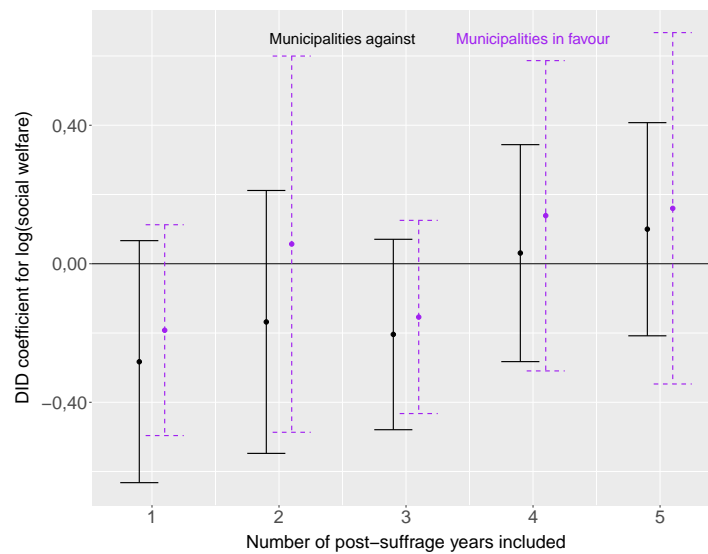


Figure A.4.3.: DID point estimates and 0.95-confidence intervals for sample including one, two, three, four and five years after women's enfranchisement.

Table A.4.4.: DID effects of female suffrage on log(social welfare)

	log(Social welfare)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	-0.282 (0.172)	-0.136 (0.162)	-0.215* (0.127)	0.058 (0.142)	0.109 (0.137)
Enfranchised x Municipal parliament	0.208 (0.180)	0.202 (0.244)	0.142 (0.182)	0.052 (0.248)	0.060 (0.282)
Municipality FEs	✓	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓
Within R-squared	0.1	0.099	0.159	0.087	0.118
Observations	4601	3272	4860	4396	3968
Time Frame	1940 – 1972	1940 – 1973	1940 – 1974	1940 – 1975	1940 – 1976

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

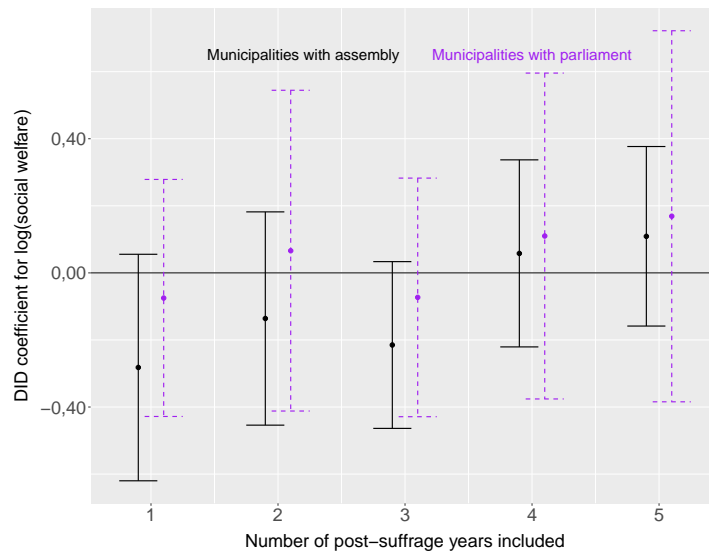


Figure A.4.4.: DID point estimates and 0.95-confidence intervals for sample including one, two, three, four and five years after women's enfranchisement.

## A.5. Autocorrelation-robust Effects (Bertrand et al., 2004)

### A.5.1. Cantonal Elections

Table A.5.1.: Impact of female suffrage on municipal party vote shares (in %) in cantonal parliament elections

Party Vote Shares in Cantonal Parliament Elections										
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-0.182 (0.192) [-0.6, 0.24]	0.121 (0.231) [-0.39, 0.64]	0.363 (0.235) [-0.19, 0.92]	0.025 (0.283) [-0.62, 0.67]	-0.052 (0.151) [-0.39, 0.28]	-0.249 (0.182) [-0.69, 0.19]	-0.058 (0.211) [-0.5, 0.38]	-0.384 (0.254) [-0.89, 0.12]	0.037 (0.241) [-0.5, 0.58]	0.476 (0.290) [-0.2, 1.15]
Enfranchised x In favour		-0.979** (0.415) [-1.94, -0.02]		1.088** (0.508) [-0.03, 2.2]		0.635* (0.326) [0.05, 1.22]		1.051** (0.456) [-0.06, 2.17]		-1.415*** (0.520) [-2.44, -0.39]
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within $R^2$ in 1st stage	0.032	0.032	0.007	0.007	0.059	0.059	0.013	0.013	0.015	0.015
Adj. $R^2$ in 2nd stage	0	0.003	0.001	0.003	0	0.001	0	0.002	0	0.003
N in 1st stage	10183	10183	10183	10183	10183	10183	10183	10183	10183	10183
N in 2nd stage	2508	2508	2508	2508	2508	2508	2508	2508	2508	2508
Time Frame	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74	1940 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

Table A.5.2.: Impact of female suffrage on number of entitled voters and turnout in cantonal parliament elections

	Number of Voters and Election Turnout			
	log(Entitled voters)		Electoral turnout	
	(1)	(2)	(3)	(4)
Enfranchised	0.089*** (0.008) [0.07, 0.11]	0.052*** (0.009) [0.03, 0.07]	-0.013*** (0.005) [-0.02, 0]	-0.021*** (0.006) [-0.03, -0.01]
Enfranchised x In favour		0.126*** (0.017) [0.08, 0.18]		0.029*** (0.010) [0, 0.05]
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within $R^2$ in 1st stage	0.211	0.211	0.596	0.596
Adj. $R^2$ in 2nd stage	0.052	0.083	0.003	0.007
N in 1st stage	9728	9728	9728	9728
N in 2nd stage	2274	2274	2274	2274
Time Frame	1940 – 74	1940 – 74	1940 – 74	1940 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

## A.5.2. Municipal Expenditure

Table A.5.3.: Impact of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.032** (0.016) [-0.07, 0]	-0.049** (0.020) [-0.09, -0.01]	-0.051 (0.033) [-0.13, 0.03]	-0.063 (0.039) [-0.16, 0.03]
Enfranchised x In favour		0.057 (0.035) [-0.02, 0.13]		0.041 (0.075) [-0.1, 0.18]
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within $R^2$ in 1st stage	0.04	0.04	0.095	0.095
Adj. $R^2$ in 2nd stage	0.002	0.003	0.001	0
N in 1st stage	11260	11260	4601	4601
N in 2nd stage	1582	1582	1050	1050
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

Table A.5.4.: Impact of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.032** (0.016) [-0.07, 0]	-0.049*** (0.018) [-0.09, -0.01]	-0.051 (0.033) [-0.13, 0.03]	-0.057* (0.034) [-0.14, 0.03]
Enfranchised x Municipal parliament		0.109** (0.044) [0.02, 0.19]		0.086 (0.131) [-0.09, 0.26]
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within $R^2$ in 1st stage	0.04	0.04	0.095	0.095
Adj. $R^2$ in 2nd stage	0.002	0.007	0.001	0
N in 1st stage	11260	11260	4601	4601
N in 2nd stage	1582	1582	1050	1050
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild cluster bootstrapped 0.95 confidence intervals in bottom parantheses.

## A.6. Pre-suffrage Parallel Trends

### A.6.1. Cantonal Elections

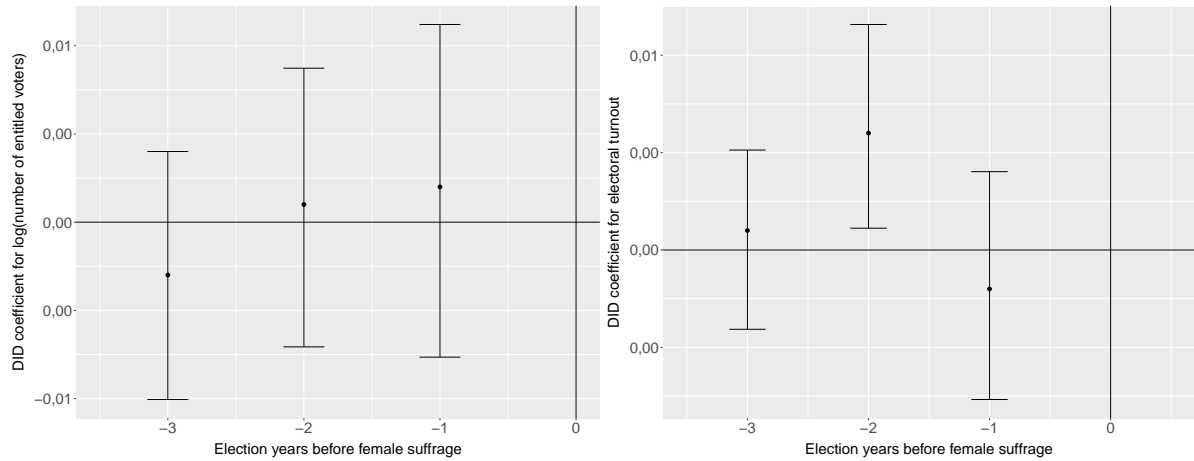


Figure A.6.1.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three elections before women's enfranchisement.

Table A.6.1.: Placebo and actual effects of female suffrage on parties' vote share (in %)

	Party Vote Shares in Cantonal Parliament Elections				
	Left Parties (1)	Conservative Parties (2)	Independent Parties (3)	Liberal Parties (4)	Populist Parties (5)
Enfranchised	-1.587*** (0.209)	0.010 (0.280)	2.484*** (0.279)	-0.841*** (0.232)	0.753*** (0.246)
Placebo 1-year	0.654*** (0.238)	-1.636*** (0.325)	0.812*** (0.171)	0.205 (0.264)	-0.143 (0.265)
Placebo 2-year	-1.251*** (0.311)	-2.607*** (0.402)	3.463*** (0.337)	1.483*** (0.357)	-0.658 (0.405)
Placebo 3-year	0.019 (0.259)	-2.914*** (0.345)	2.376*** (0.347)	0.061 (0.315)	0.802*** (0.303)
Municipality FEs	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓
Within R-squared	0.056	0.013	0.041	0.023	0.017
Observations	12429	12429	12429	12429	12429
Time Frame	1940 – 82	1940 – 82	1940 – 82	1940 – 82	1940 – 82

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

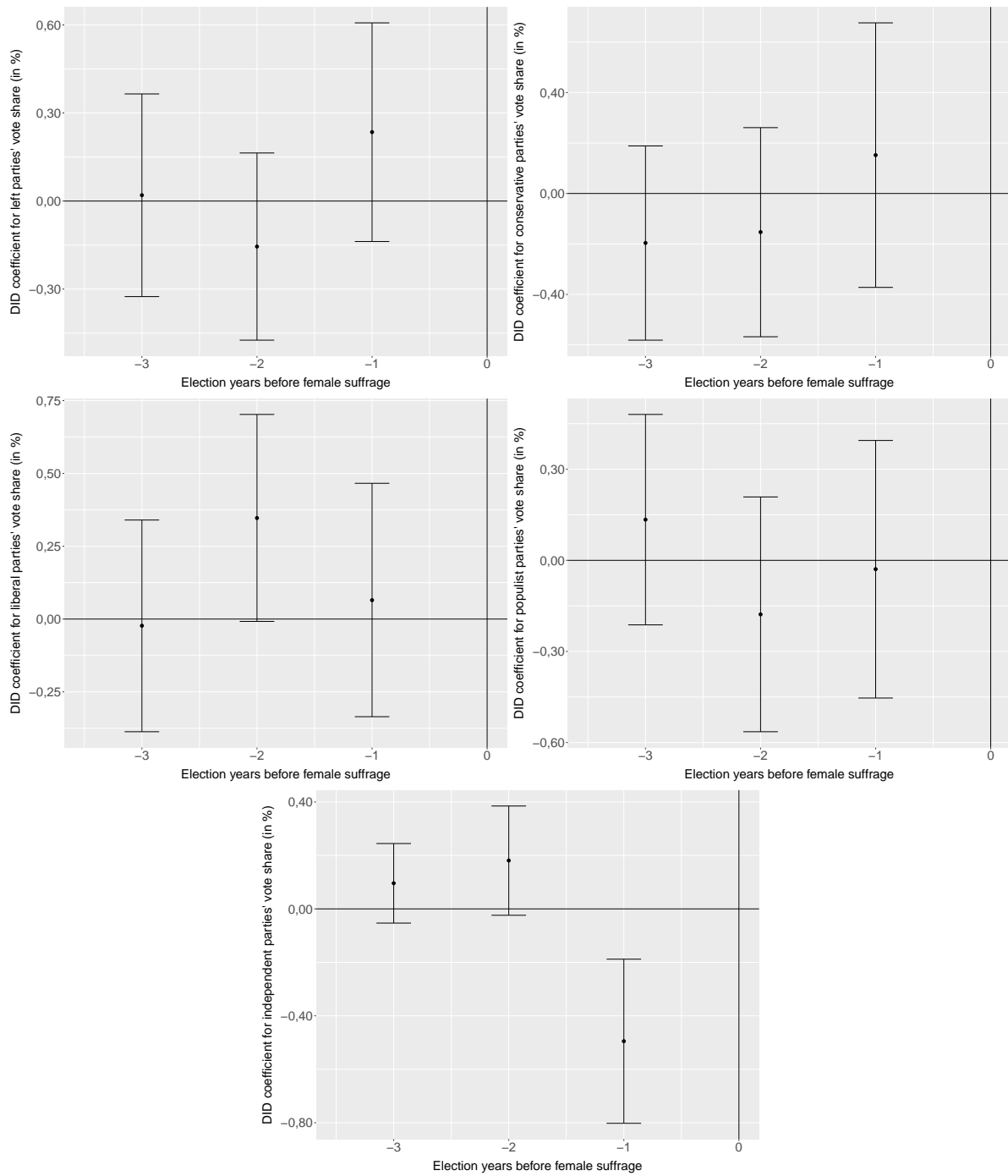


Figure A.6.2.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three elections before women's enfranchisement.

## A.6.2. Municipal Expenditure

Table A.6.2.: Placebo and actual effects of female suffrage on municipal expenditure

	Municipal Expenditure	
	log(Total expenditure)	log(Social welfare)
	(1)	(2)
Enfranchised	-0.064*** (0.017)	-0.141** (0.060)
Placebo 1-year	0.006 (0.019)	0.262*** (0.070)
Placebo 2-year	-0.028 (0.019)	0.570*** (0.062)
Placebo 3-year	0.081*** (0.016)	-0.034 (0.036)
Municipality FEs	✓	✓
Year FEs	✓	✓
Linear Canton-Specific Trend	✓	✓
Within R-squared	0.039	0.193
Observations	11885	4860
Time Frame	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

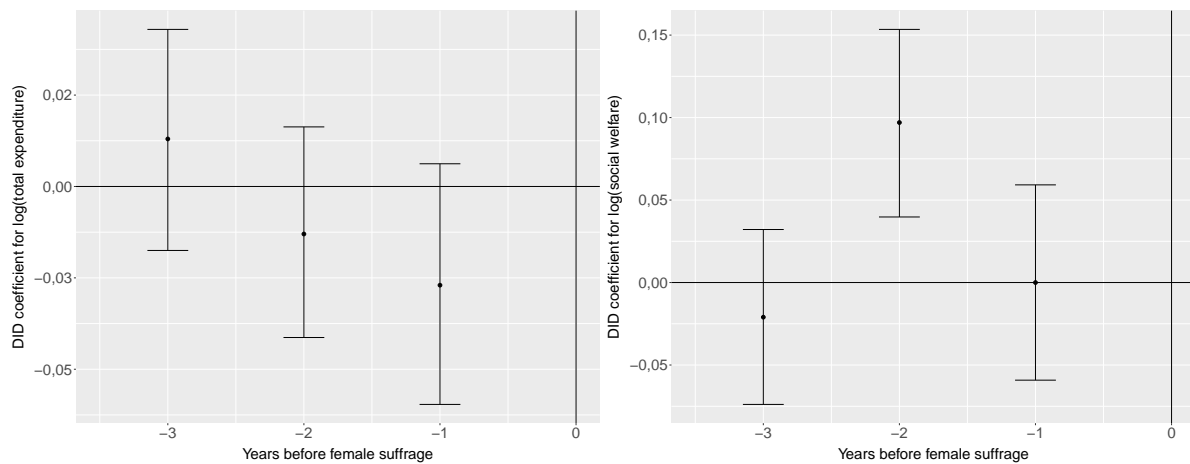


Figure A.6.3.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three years before women's enfranchisement.



## A.7. Alternative Specifications

We can exploit more variation in men's support for enfranchisement when we use the referendum margin in each municipality. Hence, instead of a binary indicator for how each municipality's majority voted (i.e. in favour or against women's suffrage), we can use the municipal percentage margin above (below) a 50%-Yes-vote share in the cantonal referendum. For example, the cantonal Yes-vote share in the narrow referendum of Aargau in 1971 was 51.7%. In the municipality of Aarau, 64.9% of male voters approved the referendum, while in Boswil, only 37.8% voted Yes. The referendum margin is therefore 14.9% in Aarau and 12.2% in Boswil. I split the sample into municipalities with a Yes-vote share above and below 50% and interact the introduction of female suffrage with the municipal referendum margin. The margin can be understood as an intensity measure for being against or in favour of female suffrage. The findings are presented in Table A.7.1, A.7.2 and A.7.3. As we can see, all of the results remain substantively the same as when I used the binary indicator for male support of female suffrage.

Table A.7.1.: Impact of female suffrage on municipal turnout in cantonal parliament elections

	<i>Dependent variable:</i>	
	Electoral turnout	
	(1)	(2)
Enfranchised	-0.112*** (0.021)	-0.110*** (0.022)
Enfranchised x Referendum margin		0.001 (0.001)
Municipality FEs	✓	✓
Election FEs	✓	✓
Linear Canton-Specific Trend	✓	✓
Within R-squared	0.493	0.737
Observations	6741	2987
Time Frame	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table A.7.2.: Impact of female suffrage on municipal party vote shares (in %) in cantonal parliament elections

Party Vote Shares in Cantonal Parliament Elections										
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-1.480** (0.583)	-1.481** (0.585)	2.918*** (0.806)	2.918*** (0.807)	-0.347 (0.813)	-0.346 (0.812)	-0.464 (0.688)	-0.463 (0.688)	0.270 (0.759)	0.269 (0.760)
Enfranchised x Referendum margin		-0.058*** (0.018)		0.022 (0.025)		0.020 (0.015)		0.041* (0.021)		-0.031 (0.020)
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.029	0.03	0.012	0.012	0.05	0.05	0.013	0.014	0.015	0.015
Observations	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table A.7.3.: Impact of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.128*** (0.036)	-0.132*** (0.036)	-0.253 (0.165)	-0.274* (0.166)
Enfranchised x Referendum margin		0.003* (0.002)		0.008 (0.007)
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.042	0.042	0.1	0.102
Observations	11260	11260	4601	4601
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

## A.8. Further Heterogeneous Effects

Table A.8.1.: Three-way interaction effect of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.162*** (0.038)	-0.186*** (0.041)	-0.282 (0.172)	-0.299* (0.181)
Enfranchised x Municipal parliament	0.159*** (0.052)	0.271*** (0.077)	0.208 (0.180)	0.567* (0.325)
Enfranchised x In favour		0.098* (0.056)		0.077 (0.179)
Enfranchised x Municipal parliament x In favour		-0.244** (0.107)		-0.468 (0.386)
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.043	0.043	0.1	0.101
Observations	11260	11260	4601	4601
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table A.8.2.: Three-way interaction effect of female suffrage on party vote shares (in %) in cantonal parliament elections

	Party Vote Shares in Cantonal Parliament Elections									
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-1.432** (0.582)	-1.133* (0.607)	2.883*** (0.810)	2.531*** (0.871)	-0.361 (0.816)	-0.548 (0.870)	-0.435 (0.689)	-0.733 (0.722)	0.244 (0.759)	0.704 (0.798)
Enfranchised x Municipal parliament	-1.020 (0.726)	-1.620 (1.025)	0.736 (0.991)	2.169 (1.824)	0.304 (0.266)	0.011 (0.175)	-0.615 (0.989)	0.671 (1.766)	0.539 (0.745)	-1.102 (0.987)
Enfranchised x In favour		-1.213* (0.629)		1.485** (0.734)		0.703* (0.381)		1.264* (0.717)		-1.920*** (0.693)
Enfranchised x Municipal parliament x In favour		1.581 (1.398)		-3.048 (2.054)		0.106 (0.484)		-2.700 (2.099)		3.604*** (1.360)
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.029	0.03	0.012	0.013	0.05	0.05	0.013	0.014	0.015	0.016
Observations	10153	10153	10153	10153	10153	10153	10153	10153	10153	10153
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

## A.9. Descriptives

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Left parties' vote share	25.9	16.9	26.2	20.0	11.1	10.3	-	-	24.8	19.8	8.6	13.4	18.5	12.2	15.8	12.0
Conservative parties' vote share	30.6	25.8	9.1	19.7	51.8	25.3	-	-	25.8	20.0	29.5	32.9	30.8	27.1	35.6	18.8
Independent parties' vote share	3.7	5.4	0.3	2.5	3.8	5.1	-	-	0.5	2.2	15.4	34.6	0.0	0.3	0.2	0.7
Liberal parties' vote share	14.3	10.6	14.9	17.3	30.2	18.7	-	-	48.9	21.1	12.7	18.5	15.6	11.2	40.4	17.3
Populist parties' vote share	25.5	20.6	49.4	30.0	1.8	5.0	-	-	0.0	0.0	1.8	8.1	35.0	25.2	8.0	10.9

Table A.9.1.: Pre-suffrage means and standard deviations for municipal party vote shares (in %) for each canton since 1940.

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Entitled voters	396	544	556	2,413	936	1,886	-	-	431	806	831	856	597	672	220	475
Election turnout	85.7	6.6	74.2	13.7	77.2	7.7	-	-	89.7	8.8	62.4	13.7	79.3	6.7	75.8	13.6

Table A.9.2.: Pre-suffrage means and standard deviations for number of entitled voters and election turnout (in %) for each canton since 1940.

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Total expenditure	903,583	1,642,204	9,877,831	25,953,863	809,744	1,697,612	61,082,583	124,936,494	1,046,472	2,609,276	1,107,671	1,596,802	1,991,222	1,769,748	337,654	1,544,652
Total expenditure p.c.	989	1,015	2,031	7,560	444	390	-	-	1,029	1,615	778	1,169	420	322	391	529
Social welfare	25,931	70,994	1,077,764	2,434,568	21,607	61,078	4,099,693	8,198,749	36,651	161,885	124,898	215,664	218,668	270,576	-	-
Social welfare p.c.	19	21	267	1,031	11	28	-	-	16	38	73	79	38	37	-	-

Table A.9.3.: Pre-suffrage means and standard deviations for municipal expenditure (in CHF) for each canton since 1940.

# A.10. Ecological Inference

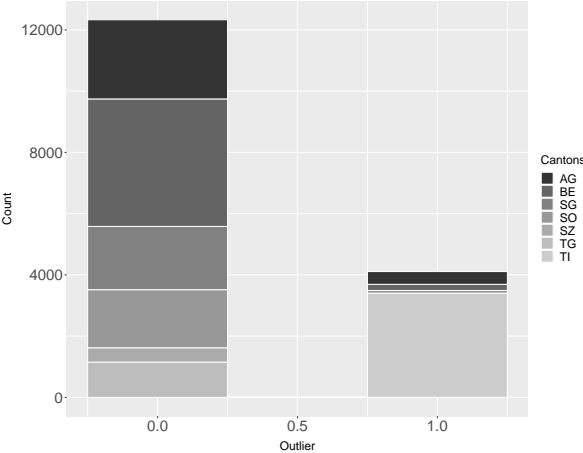


Figure A.10.1.: Share of each canton in number of outlier observations before and after female suffrage in sample. Outlier observations have a proxied municipal share of women below 30% or above 70%.

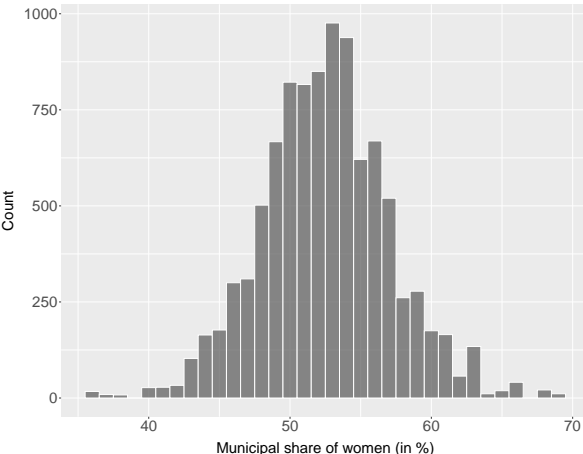


Figure A.10.2.: Within-canton distribution of proxied share of women in municipalities (excluding outliers). The sample contains municipality-election year observations.

Table A.10.1.: Four-way interaction effect of female suffrage on municipal expenditure

	Municipal Expenditure			
	log(Total expenditure)		log(Social welfare)	
	(1)	(2)	(3)	(4)
Enfranchised	-0.110 (0.085)	-0.132 (0.093)	-0.289 (0.204)	-0.287 (0.210)
Enfranchised x Municipal parliament	-0.333** (0.129)	-0.145 (0.221)	-0.256 (0.241)	0.418 (0.358)
Enfranchised x Share of women	0.030*** (0.011)	0.024* (0.014)	0.029 (0.023)	0.017 (0.027)
Enfranchised x In favour		0.074 (0.146)		-0.153 (0.210)
Enfranchised x Municipal parliament x Share of women	0.041 (0.027)	0.036 (0.033)	0.076 (0.052)	0.033 (0.058)
Enfranchised x Municipal parliament x In favour		-0.241 (0.202)		-0.538 (0.364)
Enfranchised x Share of women x In favour		0.011 (0.027)		0.055 (0.046)
Municipality FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.026	0.027	0.09	0.092
Observations	3916	3916	3775	3775
Time Frame	1940 – 72	1940 – 72	1940 – 72	1940 – 72

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table A.10.2.: Four-way interaction effect of female suffrage on turnout in cantonal parliament elections

	<i>Dependent variable:</i>			
	Election Turnout			
	(1)	(2)	(3)	(4)
Enfranchised	-0.111*** (0.021)	-0.118*** (0.021)	-0.143*** (0.034)	-0.152*** (0.034)
Enfranchised x Municipal parliament	-0.054 (0.038)	-0.022 (0.014)	0.009 (0.060)	0.027 (0.065)
Enfranchised x In favour		0.039** (0.016)		0.054*** (0.018)
Enfranchised x Share of women			-0.006** (0.002)	-0.005** (0.003)
Enfranchised x Municipal parliament x In favour		-0.060 (0.040)		-0.060 (0.046)
Enfranchised x Share of women x In favour				-0.004 (0.004)
Enfranchised x Municipal parliament x Share of women			-0.010 (0.012)	-0.005 (0.013)
Municipality FEs	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓
Within R-squared	0.601	0.601	0.615	0.617
Observations	9728	9728	7790	7790
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table A.10.3.: Three-way interaction effect of female suffrage on party vote shares (in %) in cantonal parliament elections

Party Vote Shares in Cantonal Parliament Elections										
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-1.432** (0.582)	-0.514 (0.762)	2.883*** (0.810)	1.771* (1.051)	-0.361 (0.816)	-0.734 (1.040)	-0.435 (0.689)	0.400 (0.903)	0.244 (0.759)	0.065 (1.004)
Enfranchised x Municipal parliament	-1.020 (0.726)	-3.897*** (1.479)	0.736 (0.991)	4.031** (1.567)	0.304 (0.266)	-0.401 (1.697)	-0.615 (0.989)	-3.357 (2.199)	0.539 (0.745)	3.400* (1.758)
Enfranchised x Share of women		-0.245*** (0.095)		-0.083 (0.098)		0.101* (0.061)		0.238** (0.093)		-0.037 (0.100)
Enfranchised x Municipal parliament x Share of women		0.207 (0.298)		-0.119 (0.386)		0.265 (0.312)		0.014 (0.646)		-0.347 (0.540)
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.029	0.016	0.012	0.01	0.05	0.05	0.013	0.007	0.015	0.011
Observations	10153	7980	10153	7980	10153	7980	10153	7980	10153	7980
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.



Table A.10.4.: Four-way interaction effect of female suffrage on party vote shares (in %) in cantonal parliament elections

	Party Vote Shares in Cantonal Parliament Elections									
	Left Parties		Conservative Parties		Independent Parties		Liberal Parties		Populist Parties	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Enfranchised	-1.133*	-0.336	2.531***	1.375	-0.548	-0.902	-0.733	0.045	0.704	0.673
	(0.607)	(0.803)	(0.871)	(1.116)	(0.870)	(1.078)	(0.722)	(0.947)	(0.798)	(1.055)
Enfranchised x Municipal parliament	-1.620	4.559**	2.169	0.052	0.011	-2.040	0.671	-3.436	-1.102	1.247
	(1.025)	(1.916)	(1.824)	(2.280)	(0.175)	(1.585)	(1.766)	(3.546)	(0.987)	(3.030)
Enfranchised x Share of women		-0.237**		-0.071		0.086		0.117		0.057
		(0.099)		(0.105)		(0.075)		(0.094)		(0.123)
Enfranchised x In favour	-1.213*	-0.769	1.485**	2.026**	0.703*	0.691	1.264*	0.724	-1.920***	-2.211**
	(0.629)	(0.828)	(0.734)	(1.004)	(0.381)	(0.484)	(0.717)	(0.969)	(0.693)	(0.952)
Enfranchised x Municipal parliament x Share of women		0.139		0.060		0.288		-0.182		-0.302
		(0.361)		(0.428)		(0.308)		(0.682)		(0.564)
Enfranchised x Municipal parliament x In favour	1.581	-7.978***	-3.048	2.432	0.106	1.147	-2.700	-0.277	3.604***	3.743
	(1.398)	(1.796)	(2.054)	(1.864)	(0.484)	(0.897)	(2.099)	(2.353)	(1.360)	(2.529)
Enfranchised x Share of women x In favour		0.027		-0.170		0.0001		0.323		-0.140
		(0.236)		(0.239)		(0.100)		(0.244)		(0.214)
Municipality FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Election FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linear Canton-Specific Trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Within R-squared	0.03	0.016	0.013	0.011	0.05	0.051	0.014	0.008	0.016	0.013
Observations	10153	7980	10153	7980	10153	7980	10153	7980	10153	7980
Time Frame	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74	1941 – 74

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

# A.11. National Election Survey 1972

## A.11.1. Sample Composition

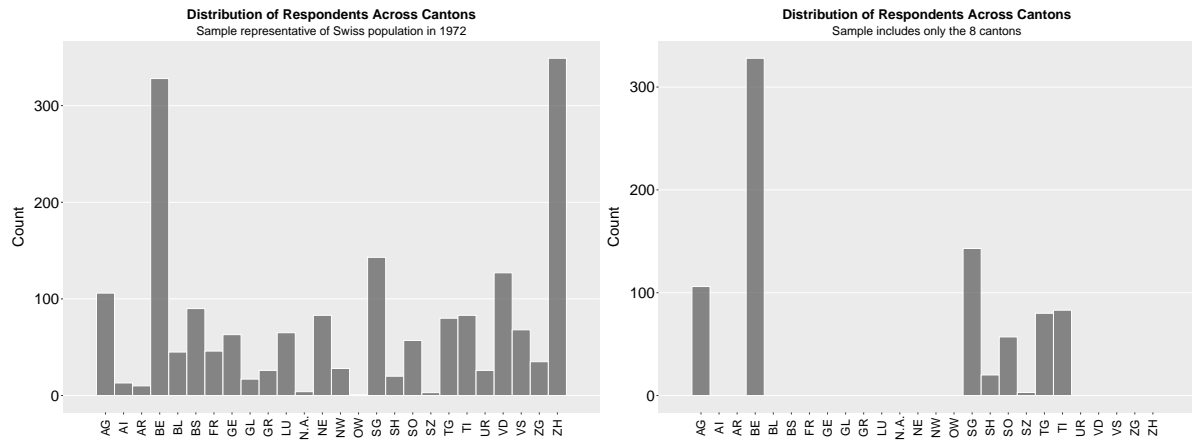


Figure A.11.1.: **Count of respondents from each canton:** Distribution of respondents from each canton in the Swiss Voting Study in 1972 by Kerr et al. (1976).

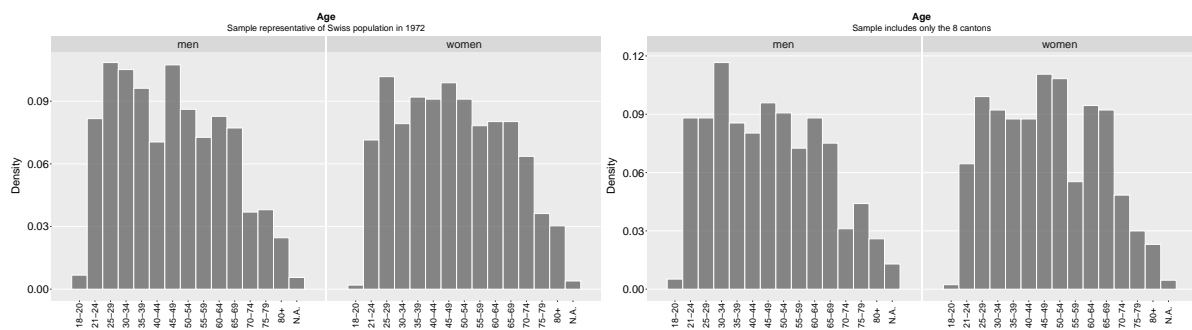


Figure A.11.2.: **Age:** Age distribution of respondents in the Swiss Voting Study in 1972 by Kerr et al. (1976).

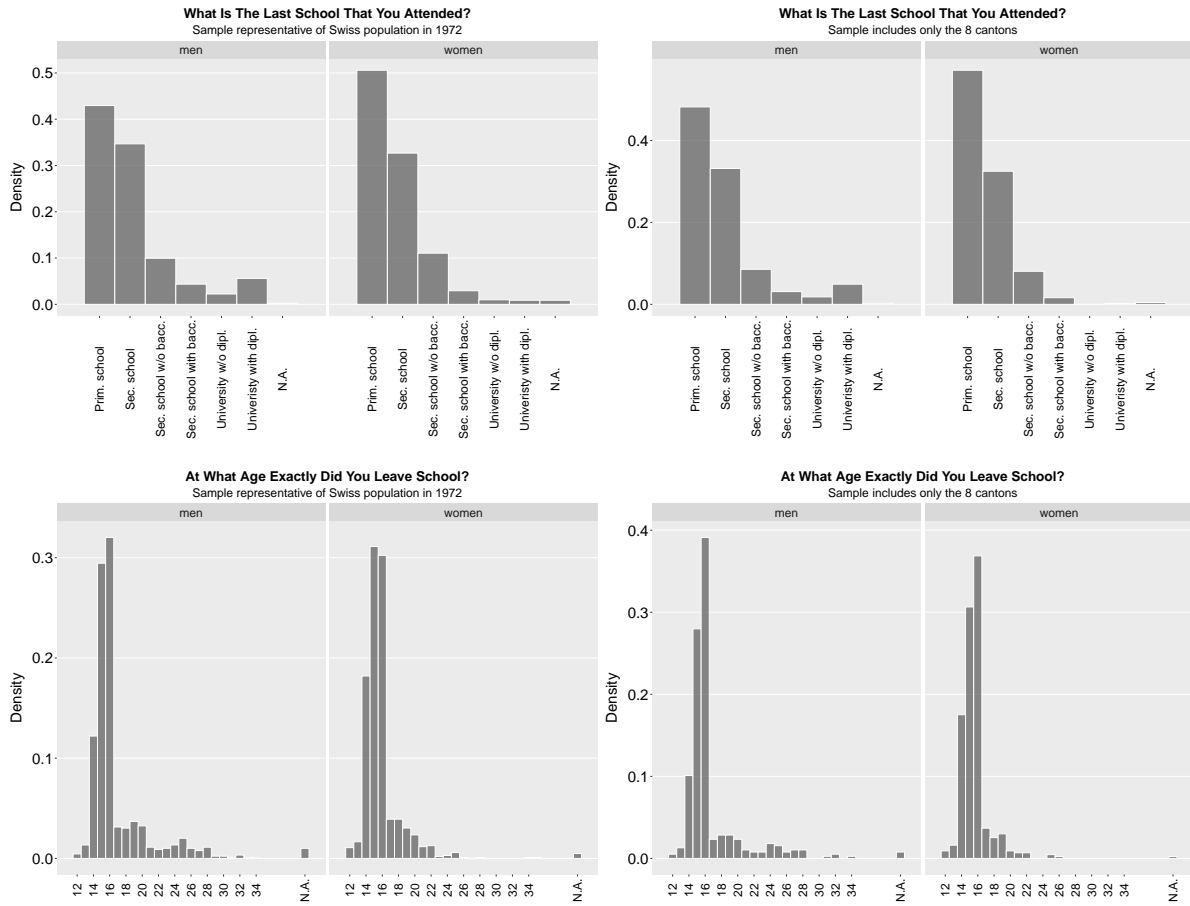


Figure A.11.3.: **Education:** Distribution of highest education degree and school-leaving age of respondents in the Swiss Voting Study in 1972 by Kerr et al. (1976).

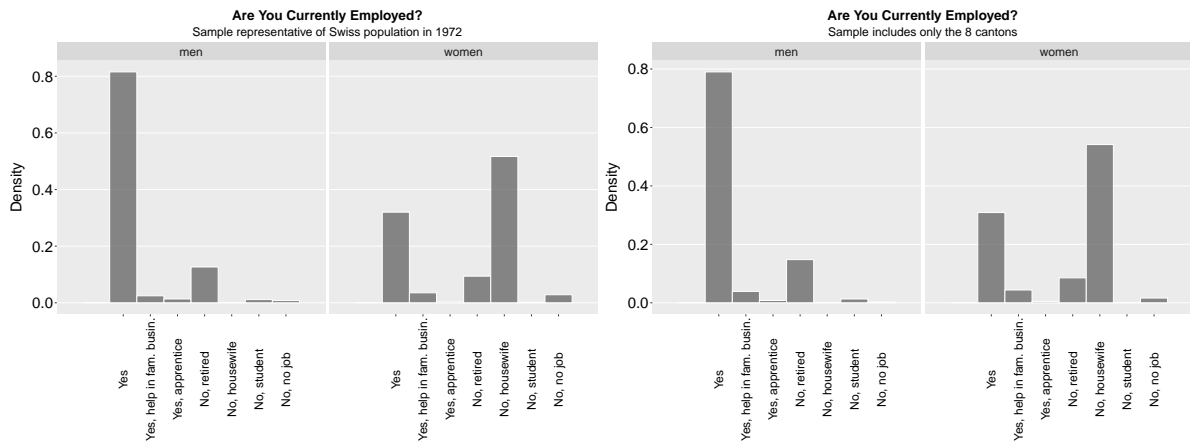


Figure A.11.4.: **Employment:** Employment status distribution of respondents in the Swiss Voting Study in 1972 by Kerr et al. (1976).

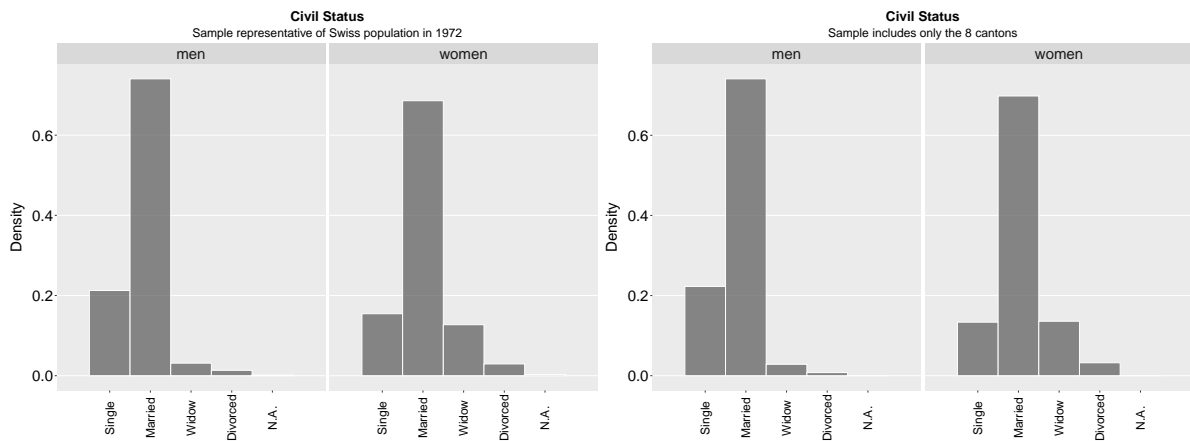


Figure A.11.5.: **Civil status:** Civil status distribution of respondents in the Swiss Voting Study in 1972 by Kerr et al. (1976).

# A.11.2. Main Party Platforms

## Left Parties

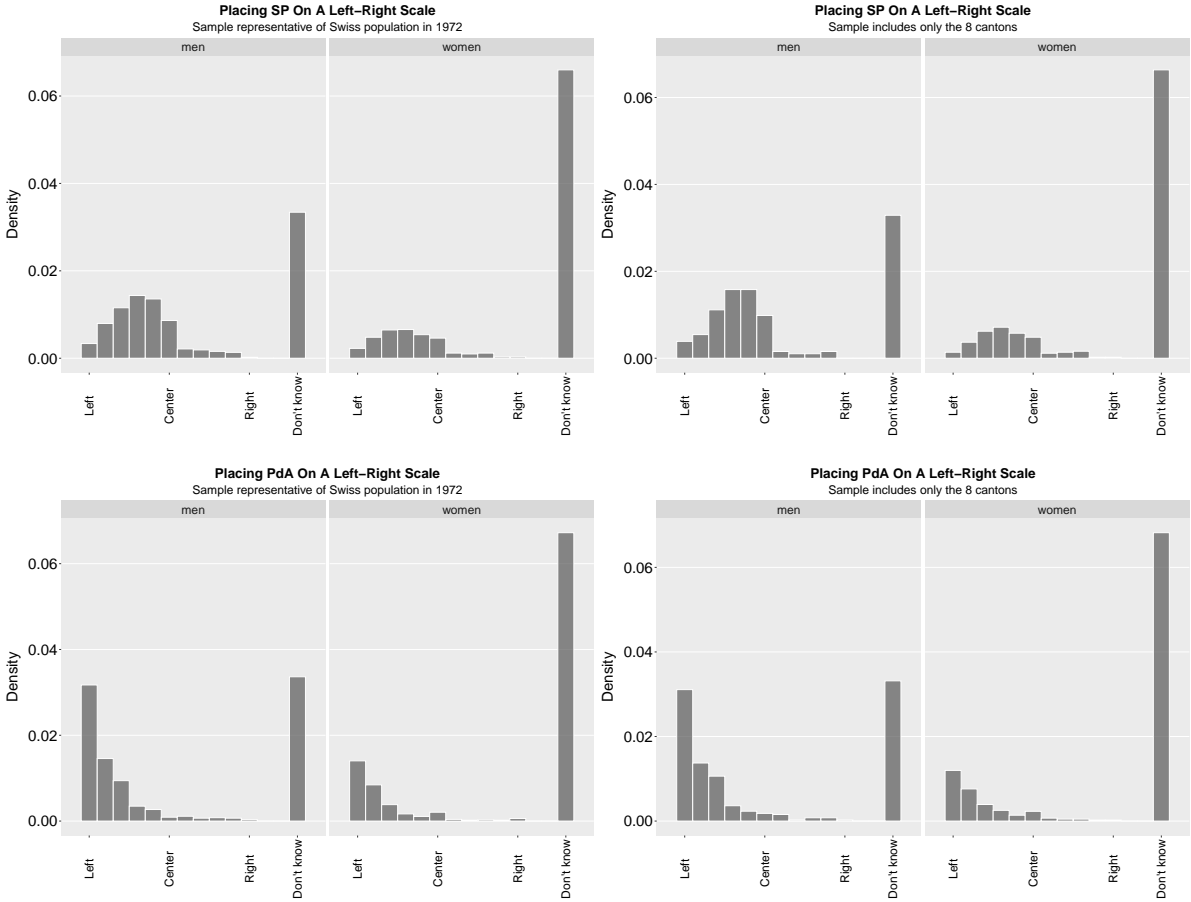


Figure A.11.6.: **Left-right scale:** Distribution of female and male responses to survey questions on placing the Socialist Party (SP) and the Labour Party (PdA) on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

# Conservative Parties

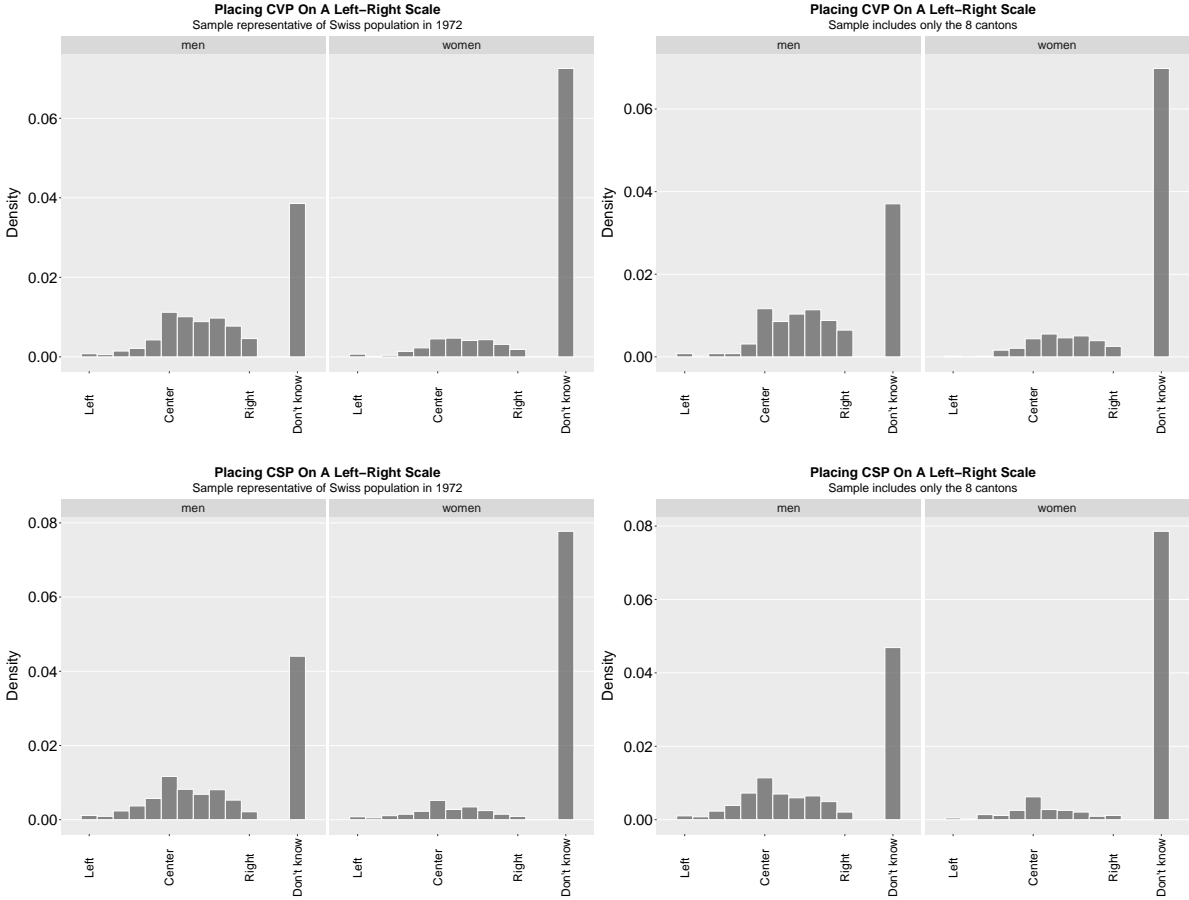


Figure A.11.7.: **Left-right scale:** Distribution of female and male responses to survey questions on placing the Christian-democratic People’s Party (CVP) and the Christian-socialist Party (CSP) on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

# Liberal Parties

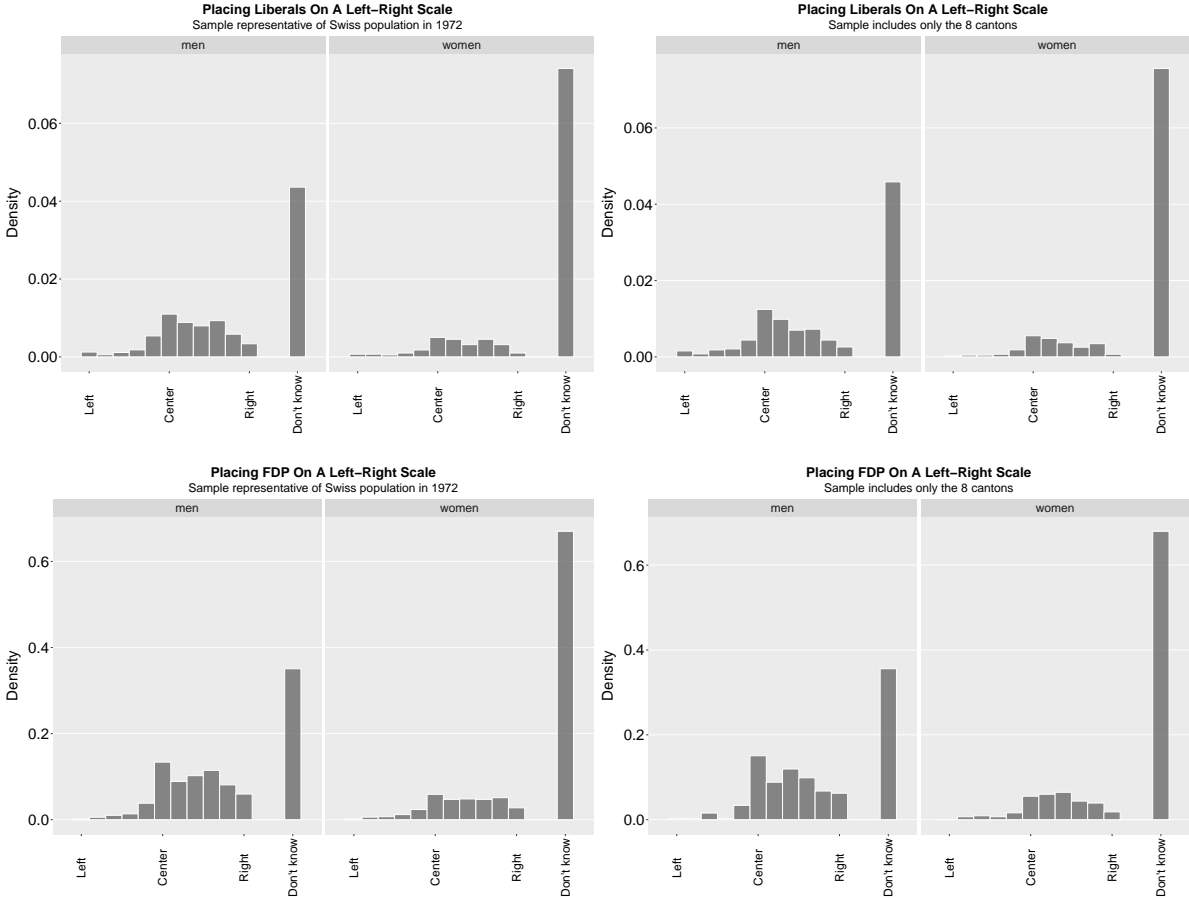


Figure A.11.8.: **Left-right scale:** Distribution of female and male responses to survey questions on placing the Liberal Party and the Free Democratic Party (FDP) on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

# Right-wing Populist Parties

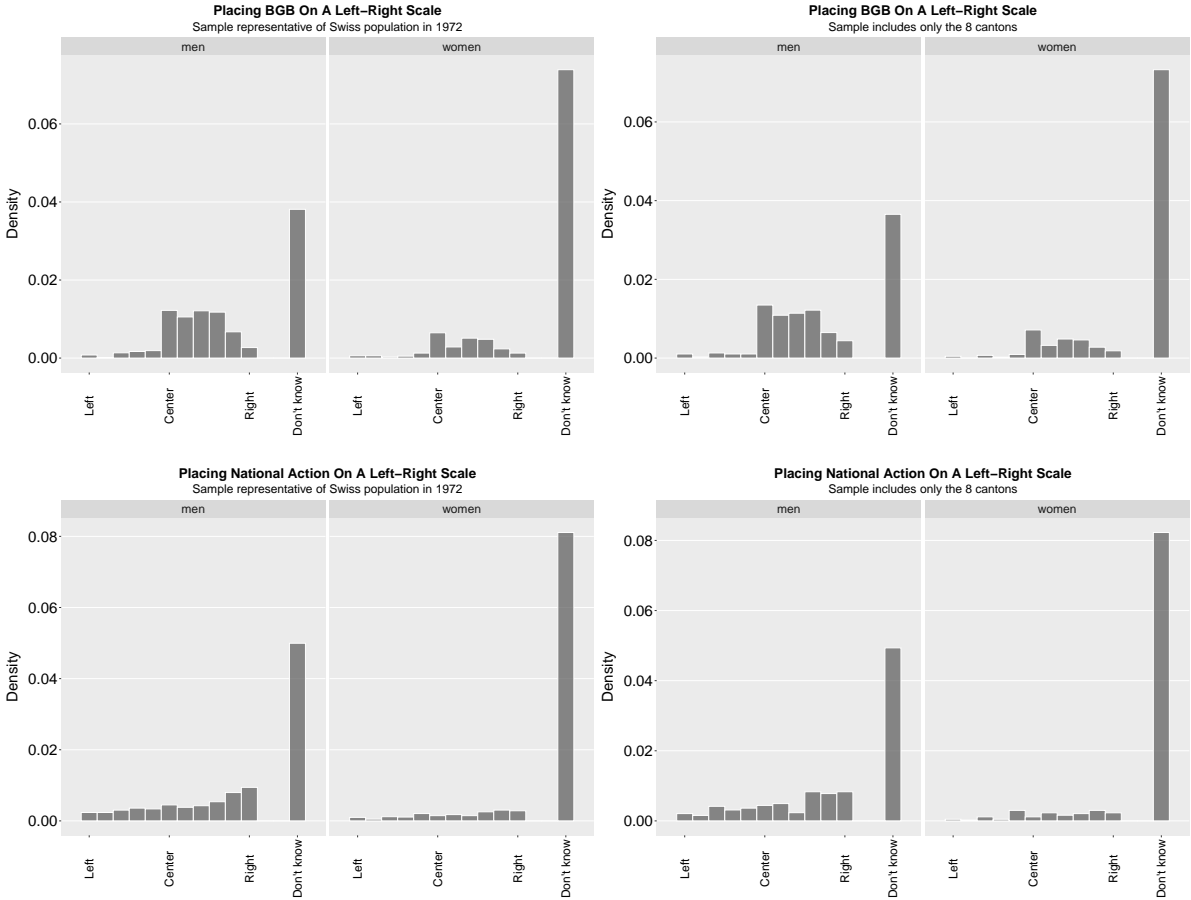


Figure A.11.9.: **Left-right scale:** Distribution of female and male responses to survey questions on placing the Farmer, Business and Citizen party (BGB, later Swiss People’s Party (SVP)) and the National Action Party (NA) on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).



## Independent Parties

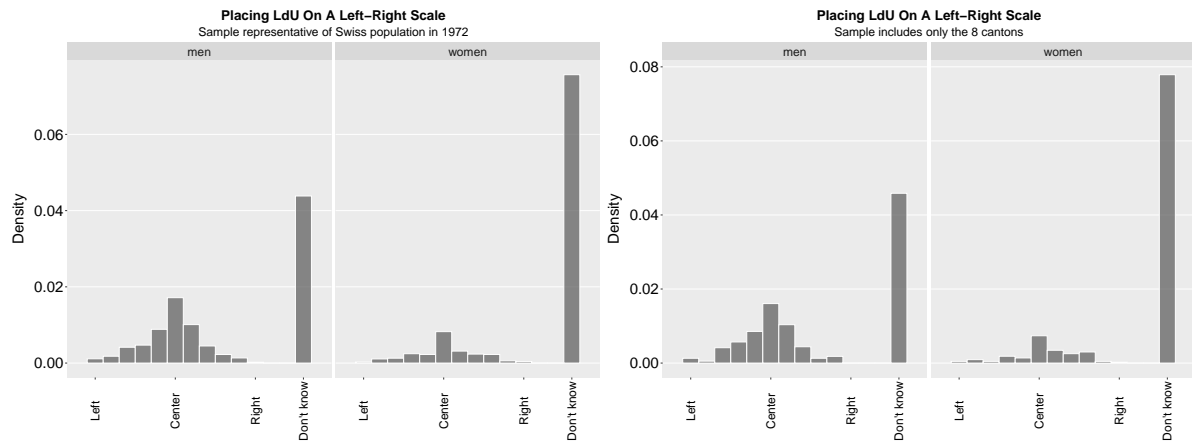


Figure A.11.10.: **Left-right scale:** Distribution of female and male responses to survey questions on placing the Alliance of Independents (LdU) on a left-right scale, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

### A.11.3. Importance of Left-Right & Political Parties

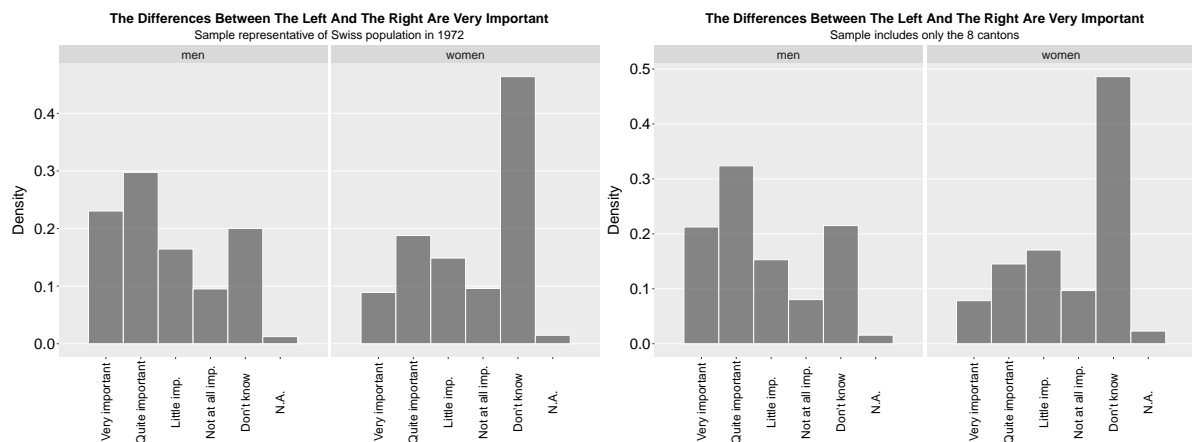


Figure A.11.11.: **Importance of left-right:** Distribution of female and male responses to survey questions on importance of political left-right, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

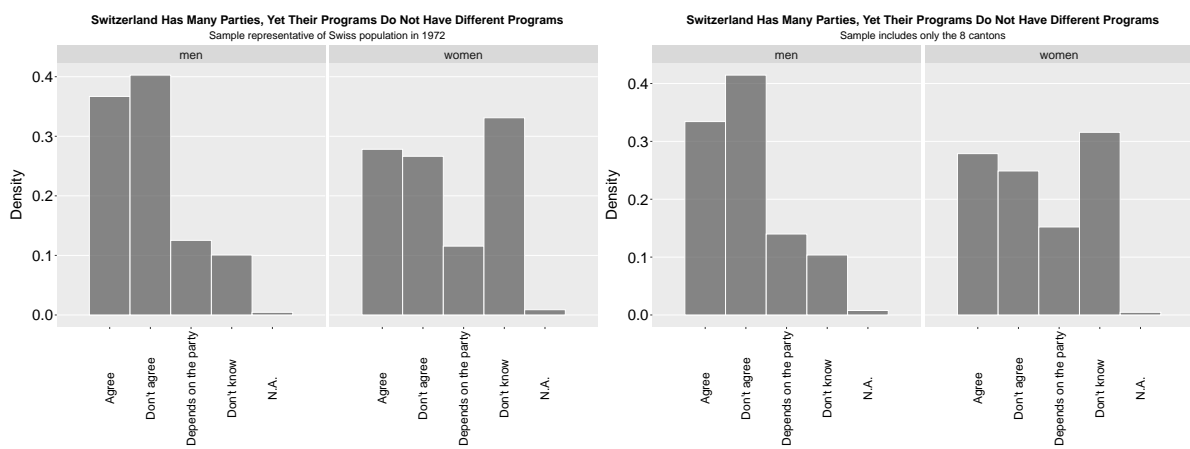


Figure A.11.12.: **Difference in party platforms:** Distribution of female and male responses to survey questions on difference in party platforms, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

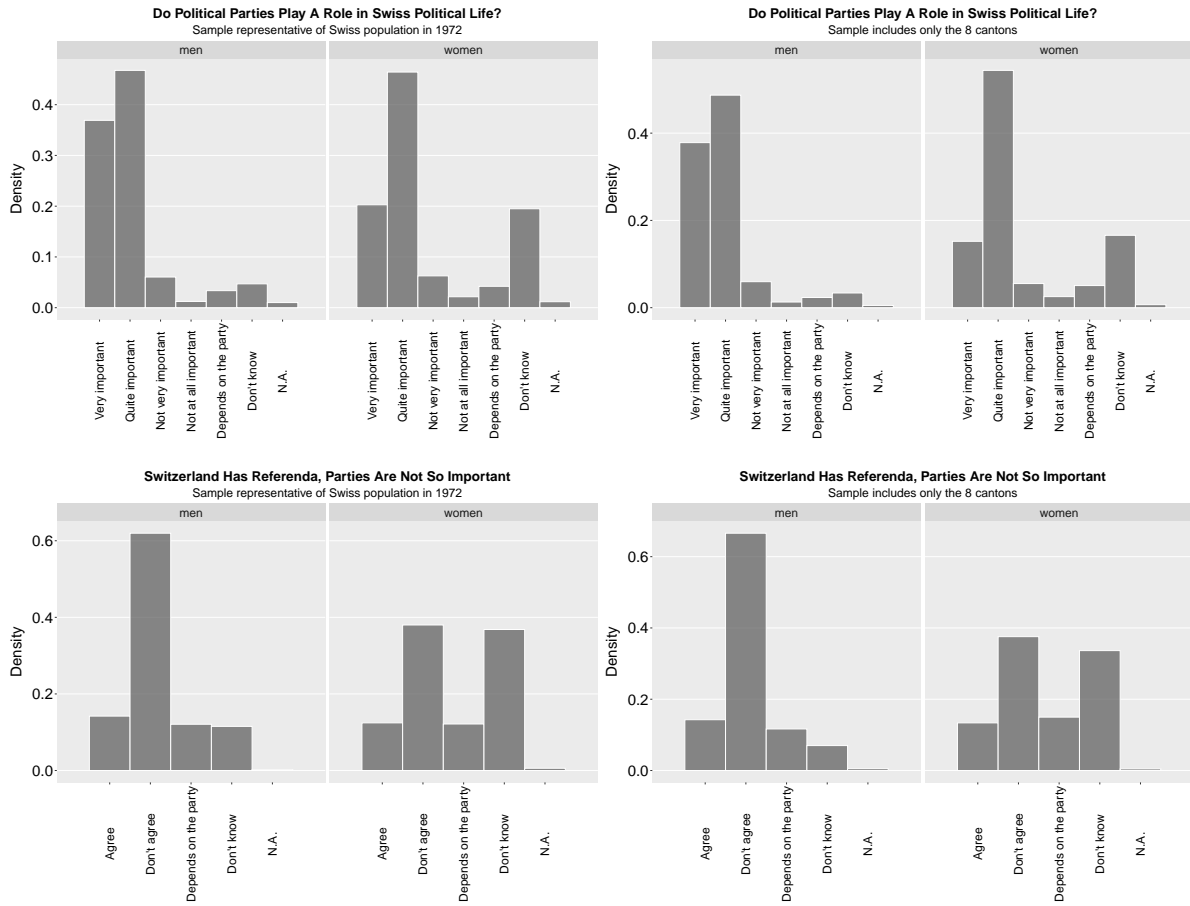


Figure A.11.13.: **Importance of parties:** Distribution of female and male responses to survey questions on importance of political parties, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

### A.11.4. Political Preferences

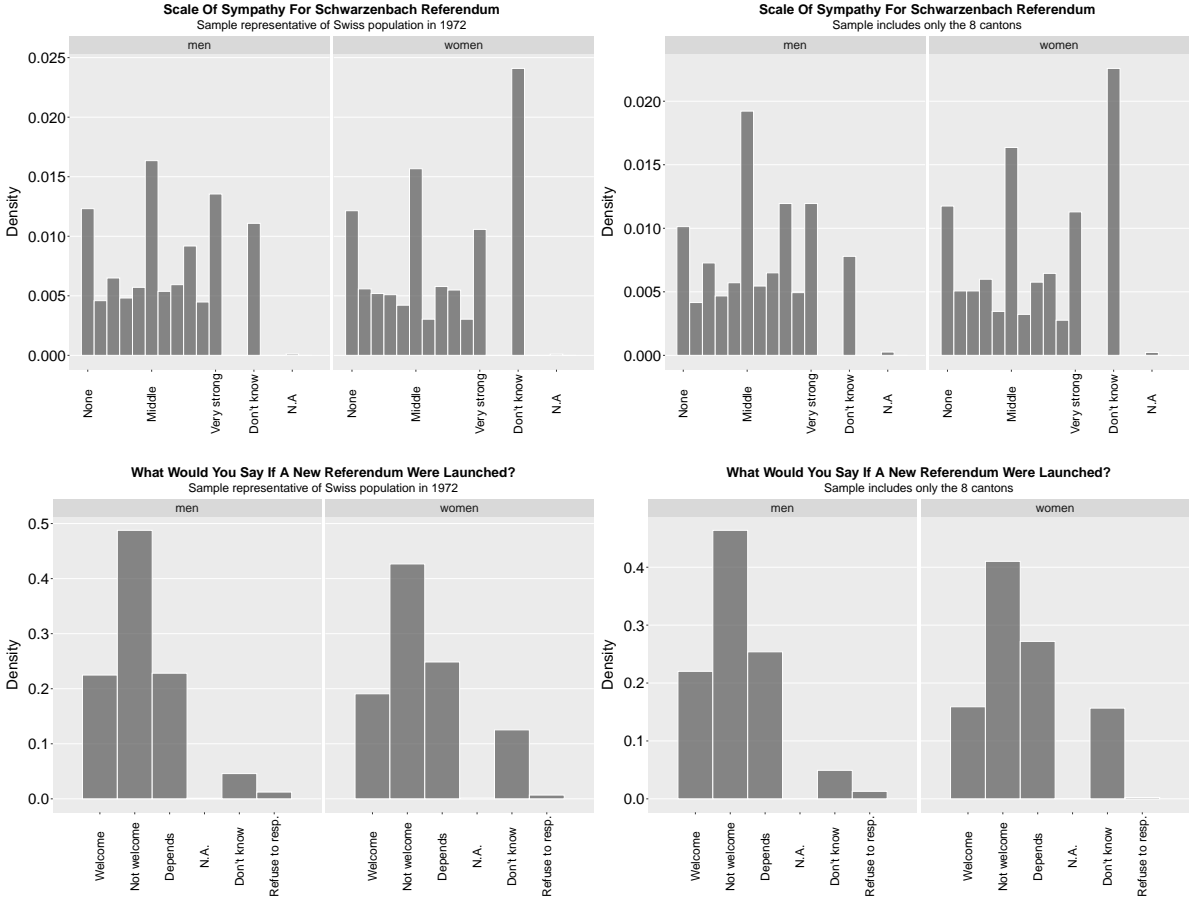


Figure A.11.14.: **Schwarzenbach referendum:** Distribution of female and male responses to survey questions on sympathy for Schwarzenbach referendum on heavy immigration restrictions in 1970, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

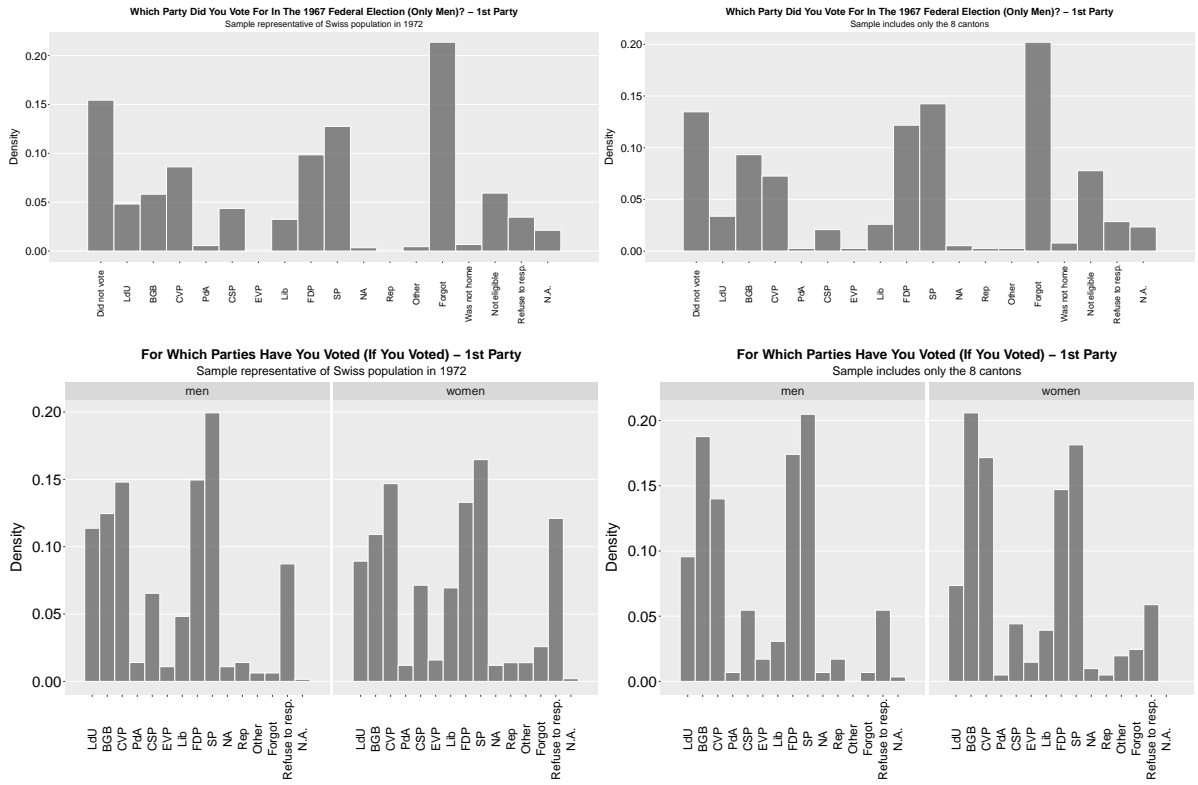


Figure A.11.15.: **Vote choice in federal elections 1967 & 1971:** Distribution of male responses to survey question on their first party choice in the 1967 federal election, and distribution of female and male responses to survey question on their first party choice in the 1971 federal election, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

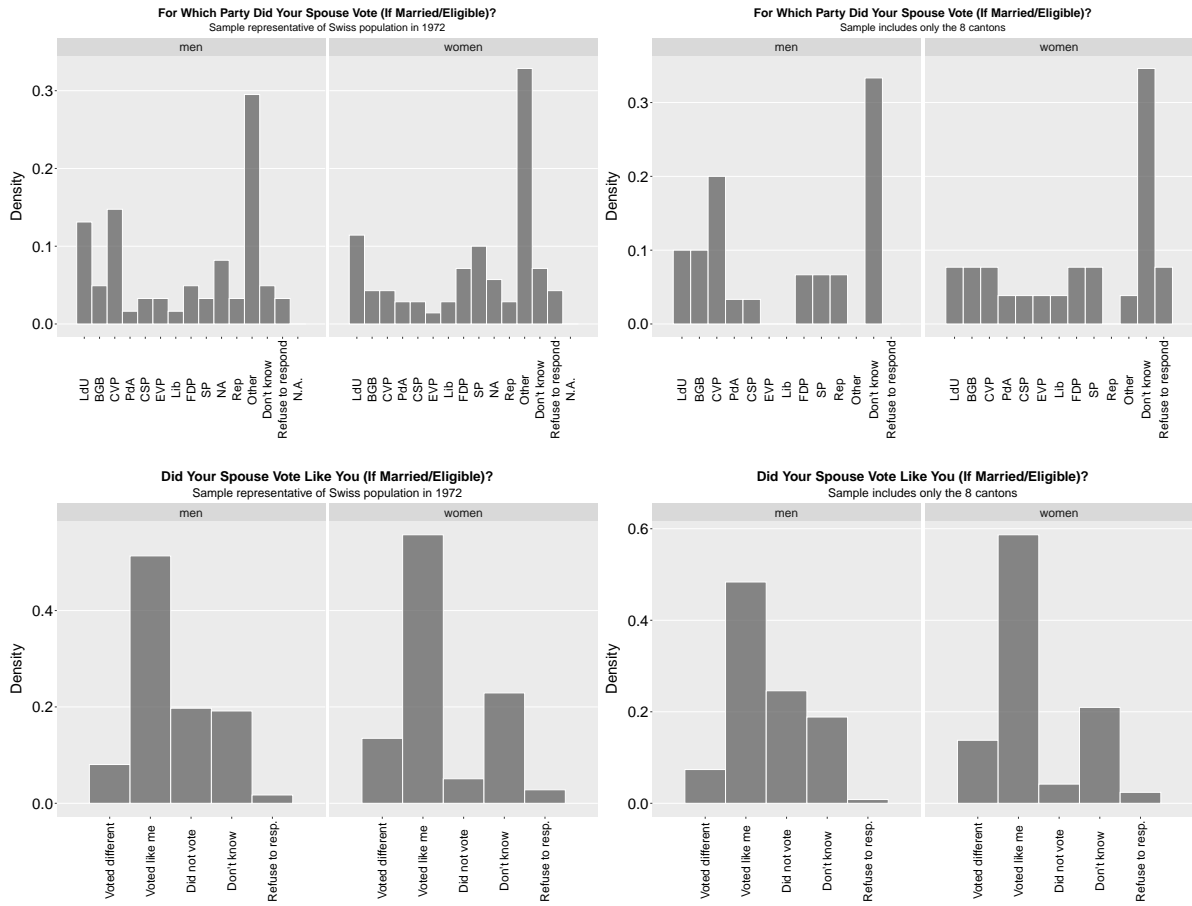


Figure A.11.16.: **How respondents think their spouses vote:** Distribution of female and male responses to survey questions on how they think their spouses vote, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

### A.11.5. Election Turnout & Area of Interest

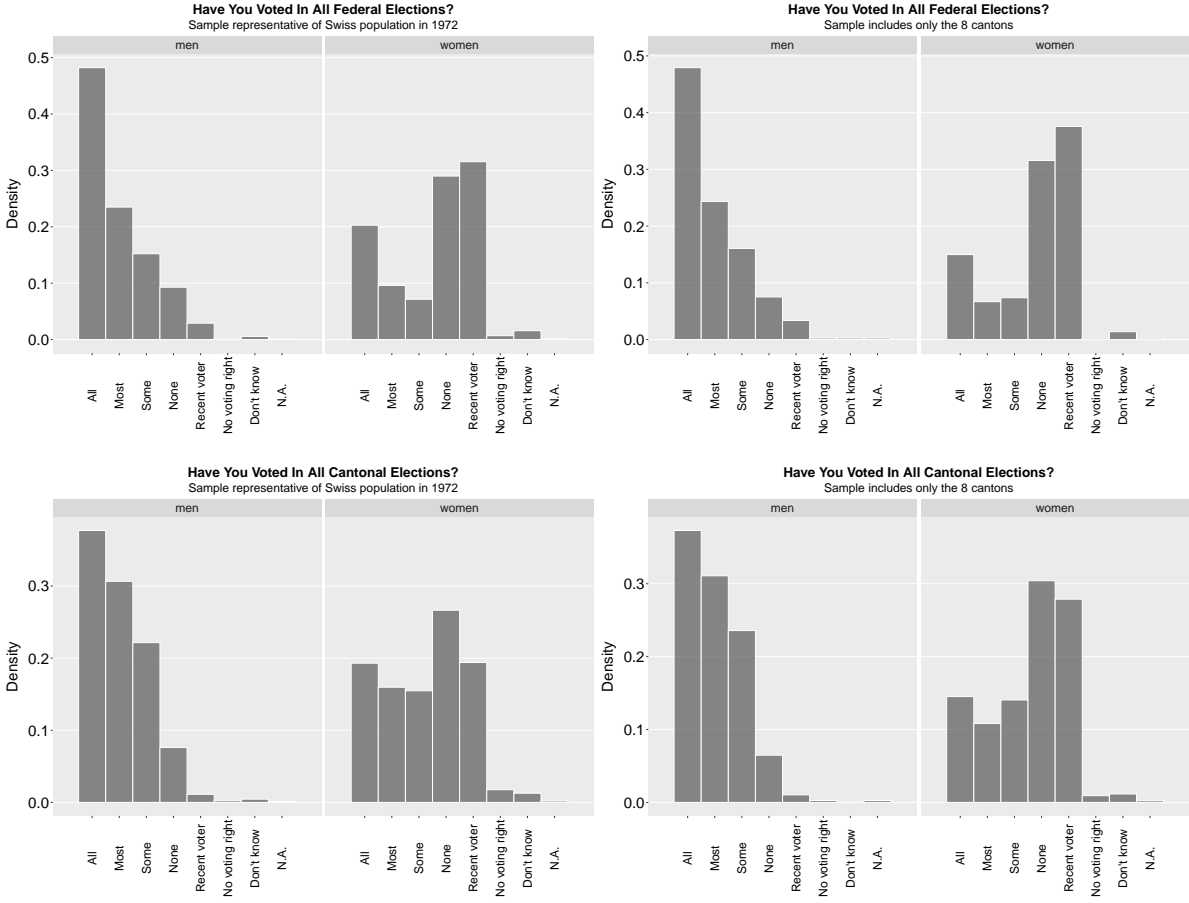


Figure A.11.17.: **Turnout:** Distribution of female and male responses to survey question on federal and cantonal election turnout, from the Swiss Voting Study in 1972 by Kerr et al. (1976).

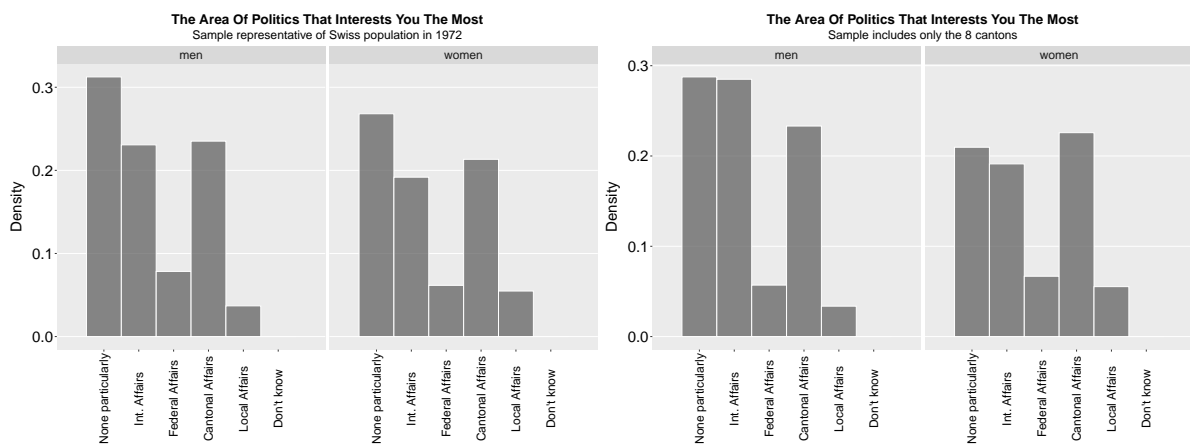


Figure A.11.18.: **Area of interest:** Distribution of female and male responses to survey question on area in politics, which they are most interested in, from the Swiss Voting Study in 1972 by Kerr et al. (1976).



# A.12. Swiss National Trends in Party Vote Shares

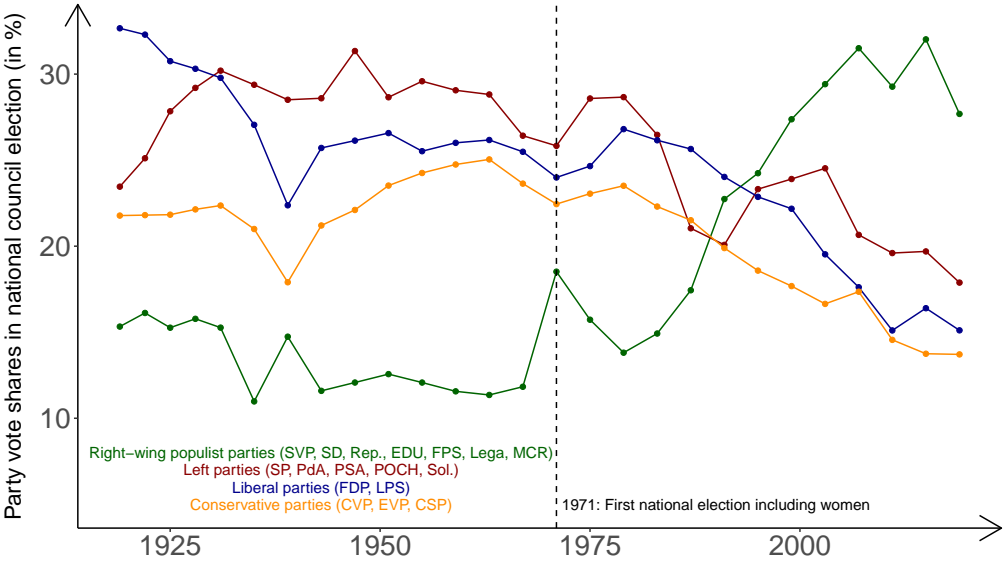


Figure A.12.1.: Vote shares of the four main party blocks (right-wing populist, socialist, liberal and conservative) in Swiss national council elections 1919-2019. In 1971, Swiss women are allowed to vote for the first time in national council elections, even though women are still not enfranchised to vote in cantonal elections and referenda in eight remaining cantons.

## A.13. Party Labels

Left Parties		
Canton	Parties (in German/French)	Parties (in English)
AG	Partei der Arbeit	Labour Party
	Progressive Organisationen der Schweiz (POCH)	Progressive Organisations of Switzerland
	Sozialistische Arbeiterpartei (SAP)	Socialist Labour Party
	Soz. (Sozialdemokratische)	Social-democratic
	Sozialdem. (Sozialdemokratische)	Social-democratic
	Sozialdemokraten	Social Democrats
	Sozialdemokraten des Bezirks Muri	Social Democrats of the District of Muri
	Sozialdemokrat. Partei & Gewerkschaftskartell	Social-democratic Party & Trade Union Council
	Sozialdemokraten & Gewerkschafter	Social Democrats & Trade Unionists
	Sozialdemokratisch	Social-democratic
	Sozialdemokratische Partei (SP)	Social-democratic Party
	Sozialdemokratische Partei des Bezirks Aarau	Social-democratic Party of the District of Aarau
	Sozialdemokratische Partei des Bezirks Zurzach	Socialdemocratic Party of the District of Zurzach
	Sozialdemokratische Partei & Arbeitnehmerorganisationen	Social-democratic Party & Workers' Organisations
	Sozialdemokratische Partei & Arbeitervereinigung	Social-democratic Party & the Workers' Association
Sozialdemokratische Partei & Gewerkschaftskartell	Socialist Party & Trade Unions	
Sozialdemokratische Volkspartei	Social-democratic People's Party	
BE	Freiwirtschaftsverbund	Free Economic Association
	Jungsozialisten	Young Socialists
	Marxistische Liga	Marxist League
	Partei der Arbeit	Labour Party
	Parti Ouvrier et Populaire	Open Population Party
	Parti Socialiste	Socialist Party
	Parti Socialiste Autonome	Autonomous Socialist Party
	Parti Socialiste Romand	French-Swiss Party
	Progressive Organisationen der Schweiz (POCH)	Progressive Organisations of Switzerland
	Sozial-liberale Partei Europäischer Föderalisten	Social-liberal Party of European Federalists
Sozialdemokratische Partei	Socialdemocratic Party	
Sozialistische Arbeiterpartei	Socialist Labour Party	
SG	Gerwerkschaftsbund (unabhängige ArbeitnehmerInnen, MieterInnen & RentnerInnen)	Trade Union (independent Labour, Tenants & Retirees)
	Kommunistische Partei	Communist Party
	Partei der Arbeit (PdA)	Labour Party
	Sozialdemokraten & Gewerkschafter	Social Democrats & Trade Unionists
	Sozialdemokraten & Umweltschützer	Social Democrats & Environmentalists
	Sozialdemokratinnen & Gewerkschafterinnen	Female Social Democrats & Trade Unionists
	Sozialdemokratische Partei (SP)	Social-democratic Party
	Sozialdemokratische Partei & Gewerkschaften	Social-democratic Party & Trade Unions
	SP Frauenliste	Social-democratic Party Women's List
	SP Männerliste	Social-democratic Party Men's List
	Sozialdemokratische Volkspartei	Social-democratic Population Party
	SP, Gewerkschaften & Kleingewerbe	Social-democratic Party, Trade Unions & Small Businesses
Vereinigte Linksopposition	United Opposition from the Left	

Left Parties		
Canton	Parties (in German/French)	Parties (in English)
SO	Jungsozialisten (JUSO)	Young Socialist Party
	Progressive Organisationen der Schweiz (POCH)	Progressive Organisations of Switzerland
	Sozialdemokratische Partei (SP)	Social-democratic Party
	SP & Grüne	Social-democratic Party & Greens
	SP & Unabhängige	Social-democratic Party & Independents
	SP/JUSO	Social-democratic Party/Young Socialist Party
	Arbeiter- & Gewerbeartei	Labour & Business Party
	Arbeiterkartells	Worker Cartel
	Arbeiterpartei	Labour Party
	Arbeiterpartei & unabhängige Bauern, Gewerbe- & Bürgerpartei	Labour Party & Independent Farmers, Business & Citizens Party
SZ	Arbeiterpartei Vorderthal	Labour Party of Vorderthal
	Gewerbeverein Oberiberg	Business Association of Oberiberg
	Gewerbler, Bauern & Angestellte von Morschach & Stoos	Tradesmen, Farmers & Employees of Morschach & Stoos
	Sozialdemokraten & der Gewerkschaften	Social Democrats & Trade Unions
	Sozialdemokratisch-gewerkschaftliche Liste	Social-democratic Trade Union List
	Sozialdemokratische Arbeiterpartei	Social-democratic Labour Party
	Sozialdemokratische Bewegung Steinen	Social-democratic Movement of Steinen
	Sozialdemokratische Partei	Social-democratic Party
	Sozialdemokratische Partei (SP) der Gemeinde Schwyz	Social-democratic Party of the Municipality of Schwyz
	Sozialdemokratische Volkspartei Ingenbohl-Brunnen	Social-democratic People's Party of Ingenbohl-Brunnen
	Sozialdemokratischen Partei Wangen	Social-democratic Party Wangen
	Sozialdemokratischer Wahlvorschlag	Social-democratic Election Proposal
	SP Arth-Goldau	Social-democratic Party of Arth-Goldau
	SP Arth-Goldau & Gewerkschaften	Social-democratic Party of Arth-Goldau & Trade Unions
	SP der Gemeinde Feusisberg	Social-democratic Party of the Municipality of Feusisberg
	SP der Gemeinde Freienbach	Social-democratic Party of the Municipality of Freienbach
	SP der Gemeinde Freienbach	Social-democratic Party of the Municipality of Freienbach
	SP der Gemeinde Wangen	Social-democratic Party of the Municipality of Wangen
	SP des Bezirkes Einsiedeln	Social-democratic Party of the District of Einsiedeln
	SP Ingenbohl-Brunnen & Unabhängige	Social-democratic Party of Ingenbohl-Brunnen & Independents
	SP Küssnacht-Immensee	Social-democratic Party of Küssnacht-Immensee
	SP Reichenburg	Social-democratic Party of Reichenburg
	SP Reichenburg	Social-democratic Party of Reichenburg
	SP Schübelbach	Social-democratic Party of Schübelbach
	SP & Kritisches Forum Küssnacht	Social-democratic Party & Critical Forum of Küssnacht
	SP & Gewerkschaften	Social-democratic Party & Trade Unions of the Municipality of Arth
	SP & Gewerkschaften der Gemeinde Arth	Social-democratic Party & Trade Unions of the Municipality of Arth
	SP & Gewerkschafter des Bezirkes Küssnacht	Social-democratic Party & Trade Unionists of the District of Küssnacht
	SP & Unabhängige	Social-democratic Party & Independents
	SP von Altendorf	Social-democratic Party of Altendorf
	SP Wangen	Social-democratic Party of Wangen
	TG	Liste der Arbeit
Liste der Arbeiter, Gewerbebetreiber & Kleinbauern		List of Workers, Small Business Owners & Farmers
Liste der Gewerkschaften & der Arbeiterpartei		List of the Trade Unions & the Labour Party
Liste der SP		List of the Social-democratic Party
Liste der Sozialdemokraten & Gewerkschafter		List of Social Democrats & Trade Unionists
Liste des Werktätigen Volkes		List of the Working People
SP & Freie Gewerkschaften		Social-democratic Parties & Free Trade Unions
TI	SP & Gewerkschaften	Social-democratic Party & Trade Unions
	Sozialdemokratische Partei (SP)	Social-democratic Party
	Volk der Arbeit (Sozialdem., Gewerkschaft, Freiwirtschaft)	People of Labour (Social Dem., Business, Free Economy)
	CST (Comunita dei socialisti ticinesi)	Socialist Community of Ticino
TI	PDL (Partito del Lavoro)	Labour Party
	PDL - IS	Labour Party
	Partito Socialista (PS)	Socialist Party
	Partito Socialista Autonomo (PSA)	Autonomous Socialist Party
	Partito Operaio e Popolare (PST)	Labour & Population Party
	Partito Socialista Unitario (PSU)	United Socialist Party

Table A.13.1.: Left-labelled parties by canton.

Conservative Parties		
Canton	Parties (in German/French)	Parties (in English)
AG	Christlich-demokratische Volkspartei (CVP)	Christian-democratic People's Party
	Christlich-soziale Partei (CSP)	Christian-socialist Party
	Christlichsoziale	Christian-socialists
	CVP - CSP Bünzthal	Christian-democratic People's Party - Christian Socialist Party Bünzthal
	CVP - CSP Reusstal	Christian-democratic People's Party - Christian Socialist Party Reusstal
	CVP Bünzthal	Christian-democratic People's Party Bünzthal
	CVP Limmathal	Christian-democratic People's Party Limmathal
	CVP Limmattal	Christian-democratic People's Party Limmattal
	CVP Reusstal	Christian-democratic People's Party Reusstal
	CVP Reussted	Christian-democratic People's Party Reussted
	Evang. Volkspartei des Bezirks Brugg	Evang. People's Party of the District of Brugg
	Evangelische	Evangelicals
	Evangelische Volkspartei (EVP)	Evangelic-democratic Party
	Evangelische Volkspartei des Bezirks Brugg	Evang.-dem. Party of the District of Brugg
	JCVp (Junge Christlichdem. Volkspartei)	Young Christian-dem. People's Party
	Katholisch Christlichsoziale Volkspartei	Catholic Christian-socialist People's Party
	Katholisch & Christlichsoziale	Catholic & Christian-socialists
	Katholisch-Konservative Volkspartei	Catholic-Conservative People's Party
	Katholische	Catholics
	Katholische Konservative	Catholic Conservatives
	Katholisch-Konservative Partei	Catholic Conservative Party
	Katholisch-Konservative & Christlichsoziale Partei	Catholic Conservative & Christian-socialist Party
	Katholisch-Konservative & Christlichsoziale Volkspartei	Catholic Conservative & Christian-socialist People's Party
	Katholische Konservative & CVP des Bezirks Zurzach	Cath. Cons. & Christian-democratic People's Party of the District of Zurzach
	Katholische Konservative Volkspartei	Catholic Conservative People's Party
	Katholische & Christlichsoziale Partei	Catholic & Christian-socialist Party
	Katholische & Christlichsoziale Volkspartei	Catholic & Christian-socialist People's Party
Katholische Volkspartei	Catholic People's Party	
Katholische Volkspartei & Christlichsoziale	Catholic People's Party & Christian-socialists	
KK (Katholisch Konservative)	Catholic Conservatives	
KK. Region Limattal	Catholic-Conservatives in the region of Limattal	
KK. Region Reusstal	Catholic-Conservatives in the region of Reusstal	
Konservativ-Christliche (K-Chr.)	Conservative Christian-democratic	
Konservativ-Christlichsoziale	Conservative Christian-socialists	
Konservativ-christlichsoziale Volkspartei	Conservative Christian-socialist People's Party	
Konservativ-christlichsoziale Volkspartei des Bezirks Muri	Conservative Christian-socialist People's Party of the District of Muri	
Konservative	Conservatives	
Konservative Christlichsoziale Partei	Conservative Christian-socialist Party	
Konservative Volkspartei	Conservative People's Party	
BE	Christlich-demokratische Volkspartei (CVP)	Christian-democratic People's Party
	Evangelische Volkspartei (EVP)	Evangelic-democratic Party
	Parti Démocrate-chrétien	Christian-democratic People's Party
	Parti Chrétien-social	Christian-socialist People's Party
	Parti Chrétien-social Indépendent	Independent Christian-socialist People's Party
SG	Christlichdemokratische Volkspartei (CVP)	Christian-democratic People's Party
	Christlichsoziale Partei (CSP)	Christian-socialist Party
	CVP (Landsgemeinden)	Christian-democratic People's Party (Rural Municipalities)
	CVP (Stadt Gossau)	Christian-democratic People's Party (City Gossau)
	CVP A	Christian-democratic People's Party A
	CVP B	Christian-democratic People's Party B
	CVP Gams	Christian-democratic People's Party Gams (Town)
	CVP Land	Christian-democratic People's Party Countryside
	CVP Nord	Christian-democratic People's Party North
	CVP Oberer Gaster	Christian-democratic People's Party Gaster (Town)
	CVP Oberer Seebezirk	Christian-democratic People's Party Upper Lake District
	CVP Stadt	Christian-democratic People's Party City
	CVP Süd	Christian-democratic People's Party South
	CVP & CSP	Christian-democratic People's Party & Christian-socialist People's Party
	CVP Unterer Gaster	Christian-democratic People's Party Lower Gaster (Town)
	CVP Unterer Seebezirk	Christian-democratic People's Party Lower Lake District
	CVP Wil-Land	Christian-democratic People's Party Rural Wil (Town)
	CVP Wil-Stadt	Christian-democratic People's Party Urban Wil (Town)
	EVP	Evangelic-democratic Party
	Freie Konservative	Free Conservatives
Kahtolische Volkspartei	Catholic People's Party	
Konservativ-christlichsoziale Volkspartei	Conservative Christian-socialist Party	
Konservativchristliche Volkspartei	Conservative-christian People's Party	

Conservative Parties		
Canton	Parties (in German/French)	Parties (in English)
SO	Christlichdemokratische Volkspartei (CVP)	Christian-democratic People's Party
	CVP & JCVP	Christian-dem. People's Party & Young Christian-dem. People's Party
	Evangelische Volkspartei (EVP)	Evangelic-democratic Party
	Solothurnische Volkspartei & Christlichsoziale	Solothurn People's Party & Christian-socialists
SZ	Christlichdemokratische Volkspartei (CVP)	Christian-democratic People's Party
	Christlichdemokratische Volkspartei Muotathal	Christian-democratic People's Party of Muotathal
	Christliche Bürger-, Bauern-, & Arbeiterpartei	Christian-socialist Party of Citizens, Farmers & Labour
	Christlichsoziale Volkspartei Sattel	Christian-democratic People's Party of Sattel
	Christlichsoziale Arbeiter- & Gewerbetypen	Christian-socialist Party of Labour & Trade
	Christlichsoziale Freie & Unabhängige Wählerinnen & Wähler	Christian-socialist Free & Independent Voters
	Christlichsoziale Freie & Unabhängige Wählerinnen & Wähler	Christian-socialist Free & Independent Voters
	Christlichsoziale Partei	Christian-socialist Party
	Christlichsoziale Partei Altendorf & freie Wählerinnen & Wähler	Christian-democratic People's Party & Free Voters
	Christlichsoziale Partei Arth-Goldau	Christian-socialist Party of Arth-Goldau
	Christlichsoziale Partei & konservative Volkspartei	Christian-socialist Party & Conservative People's Party
	Christlichsoziale & freie Wähler	Christian Social & Free Voters
	Christlichsoziale & Freie Wähler	Christian-socialists & Free Voters
	Christlichsoziale & freie Wähler von Altendorf	Christian-socialist & Free Voters of Altendorf
	Christlichsoziale & Konservative Partei	Christian-socialist & Conservative Party
	Christlichsoziale Volkspartei Ingenbohl-Brunnen	Christian-democratic People's Party of Ingenbohl-Brunnen
	CSP	Christian-socialist Party
	CVP der Gemeinde Lauerz	Christian-democratic People's Party of the Municipality of Lauerz
	CVP der Gemeinde Schübelbach	Christian-democratic People's Party of the Municipality of Schübelbach
	CVP der Gemeinde Wangen	Christian-democratic People's Party of the Municipality of Küssnacht
	CVP Freienbach	Christian-democratic People's Party of Freienbach
	CVP Gersau	Christian-democratic People's Party of Gersau
	CVP Küssnacht	Christian-democratic People's Party of the District of Küssnacht
	CVP Küssnacht	Christian-democratic People's Party of Küssnacht
	CVP Reichenburg	Christian-democratic People's Party of Reichenburg
	CVP Reichenburg	Christian-democratic People's Party of Reichenburg
	CVP Rothenthurm	Christian-democratic People's Party Rothenthurm
	CVP Schübelbach	Christian-democratic People's Party Schübelbach
	CVP & Jung-CVP des Bezirkes Einsiedeln	Christian-democratic People's Party & Young Christian-democratic People's Party of the District of Einsiedeln
	CVP Unteriberg	Christian-democratic People's Party of Unteriberg
	CVP Alpthal	Christian-democratic People's Party of Alpthal
	CVP Arth-Goldau	Christian-democratic People's Party of Arth-Goldau
	CVP Arth-Oberath-Goldau	Christian-democratic People's Party of Arth-Oberath
	CVP der Gemeinde Feusisberg	Christian-democratic People's Party of the Municipality of Feusisberg
	CVP der Gemeinde Freienbach	Christian-democratic People's Party of the Municipality of Freienbach
	CVP der Gemeinde Sattel	Christian-democratic People's Party of the Municipality of Sattel
	CVP der Gemeinde Steinen	Christian-democratic People's Party of the Municipality of Steinen
	CVP des Bezirkes Einsiedeln	Christian-democratic People's Party of the District Einsiedeln
	CVP des Bezirkes Einsiedeln	Christian-democratic People's Party of the District of Einsiedeln
	CVP des Bezirkes Küssnacht	Christian-democratic People's Party of the District of Küssnacht
	CVP Illgau	Christian-democratic People's Party of Illgau
	CVP Morschach	Christian-democratic People's Party of Morschach
	CVP Nr. 1	Christian-democratic People's Party No. 1
	CVP Nr. 2	Christian-democratic People's Party No. 2
	CVP Oberiberg	Christian-democratic People's Party of Oberiberg
	CVP Oberiberg	Christian-democratic People's Party of Oberiberg
	CVP Sattel	Christian-democratic People's Party of Sattel
	CVP Steinen	Christian-democratic People's Party of Steinen
	CVP Steinen	Christian-democratic People's Party Steinen
	CVP Steinerberg	Christian-democratic People's Party of Steinerberg
	CVP Steinerberg	Christian-democratic People's Party of Steinerberg
	CVP Vorderthal & Liberale Bauern, Gewerbe & Bürgerpartei Vorderthal	Christian-democratic People's Party of & Liberal Farmers, Business & Citizen Party
	CVP-Gruppe Oberiberg	Christian-democratic People's Group of Oberiberg
	Evangelische Volkspartei (EVP)	Evangelical People's Party
	Freie Volkspartei	Free People's Party

Conservative Parties		
Canton	Parties (in German/French)	Parties (in English)
SZ	Katholisch-Konservative Bauernpartei	Catholic-Conservative Peasant Party
	Katholisch-Konservative Volkspartei	Catholic Conservative People's Party
	Katholisch-Konservative Volkspartei & CSP	Catholic Conservative People's Party & Christian-socialist Party
	Katholisch-Konservative Volkspartei & CSP	Catholic Conservative People's Party & Christian-socialist Party
	Katholische unabhängige Bürger	Catholic Independent Citizens
	Katholische unabhängige Volkspartei	Catholic Independent People's Party
	Konservativ-Christlichsoziale Volkspartei	Conservative & Christian-socialist People's Party
	Konservative	Conservatives
	Konservative Arth-Goldau	Conservatives of Arth-Goldau
	Konservative Bauernvereinigung	Conservative Farmers Union
	Konservative Partei	Conservative Party
	Konservative & Christlichsoziale Volkspartei (CSP)	Conservative & Christian-socialist People's Party
	Konservative & Jungkonservative Partei	Conservatives & Young Conservatives Party
	Konservative & Jungkonservative Volkspartei	Conservative & Young Conservative People's Party
	Konservative Volkspartei	Conservative People's Party
	Konservative Volkspartei	Conservative People's Party
	Konservative Volkspartei & CSP	Konservative Volkspartei & Christlichsoziale Partei
	Konservative Volkspartei & CSP	Conservative People's Party & Christian-socialist Party
	Konservative Volkspartei & Jung-konservative Bewegung	Conservative People's Party & Young Conservative Movement
	Konservative Volkspartei, Jung-konservative Bewegung	Conservative People's Party & Young Conservative Movement
Konservative Volkspartei, Jung-konservative Bewegung & Christlichsoziale Partei	Conservative People's Party, Young Conservative Movement & Christian-socialist Party	
Konservative Volkspartei, Christlichsoziale Partei & Jung-konservative Bewegung	Conservative People's Party, Christian-socialist Party & Young Conservative Movement	
Konservative-Christlichsoziale & Liberale Volkspartei	Liberal, Christian-socialist & Conservative People's Party	
Konservative, Christlichsoziale & Jung-konservative Volkspartei	Conservative, Christian-socialist & Young Conservative People's Party	
Konservative, Jung-konservative & CSP	Conservative, Young Conservative & Christian-socialist Party	
Konservativen Volkspartei & unabhängigen Wählerinnen & Wähler von Altendorf	Conservative People's Party & independent Voters of Altendorf	
Konservativen, Christlichsoziale & Liberale Partei	Conservative, Christian-socialist & Liberal Party	
Unabhängige Katholisch-Konservative Partei	Independent Catholic Conservative Party	
TG	Christlichdemokratische Volkspartei (CVP)	Christian-democratic People's Party
	Christlichsoziale Liste	Christian-socialist List
	Christlichsoziale Liste der Werktätigen	Christian-socialist List of the Working People
	Evang. Bauern, Gewerbe- & Bürgerliste	Evangelical List of Farmers, Business & Citizens
	Evang. Bauern, Gewerbetreiber & Bürger	Evangelical Farmers, Business & Citizens
	Evangelische Bauern, Bürger, des Gewerbes & Freisinn	Evangelical Farmers, Citizen, Business & Liberals
	Evangelische Volkspartei (EVP)	Evangelic-democratic Party
	Katholische Volkspartei	Catholic People's Party
	Liste der Christlich-sozialen Partei	List of the Christian-socialist Party
	Liste der Christlichsozialen	List of Christian-socialists
Liste der Christlichsozialen & Werktätigen	List of the Christian-socialists & Working People	
Liste der Demokraten & EVP	List of Democrats & Evangelic-democratic Party	
Liste der EVP	List of Evangelic-democratic Party	
Liste der Evangelisch-sozialen Vereinigung	List of the Evangelical-socialist Association	
Liste der katholischen Arbeiter & Angestellten	List of Catholic Workers & Employees	
Liste der katholischen Volkspartei	List of the Catholic People's Party	
TI	PPD (Partito Popolare Democratico)	Christian-democratic People's Party
	PPD - Sopra	Christian-democratic People's Party - Sopra
	PPD - Sotto	Christian-democratic People's Party - Sotto

Table A.13.2.: Conservative-labelled parties by canton.

Liberal Parties		
Canton	Parties (in German/French)	Parties (in English)
AG	Freisinnig-Demokratische Partei (FDP)	Free-democratic Party
	FDP - Land	Free-democratic Party - Countryside
	FDP - Stadt	Free-democratic Party - City
	Freidemokratische (FD)	Free-democratics
	Freisinnig Demokratische	Liberal Democrats
	Freisinn - Reusstal	Liberals - Reusstal
	Freisinn - Büntzal	Liberals - Büntzal
	FDP & Jungliberale	Free-democratic Party & Young Liberals
	FDP - Bezirk	Free-democratic Party - District
	Freisinnige	Liberals
	FDP & Jungliberale Bewegung	Free-democratic Party & Young Liberal Movement
	FDP Bezirk Muri	Free-democratic Party of the District of Muri
	FDP Bezirk Zurzach	Free-democratic Party of the District of Zurzach
	FDP des Bezirks Muri	Free-democratic Party of the District of Muri
	Freisinnige Partei	Liberal Party
	Freisinnige Partei & Jungliberale Bewegung	Liberal Party & Young Liberal Movement
Freisinnige & Jungliberale	Liberals & Young Liberals	
Freisinnige Volkspartei	Liberal People's Party	
Freisinnige Partei & Jungliberale	Liberal Party & Young Liberals	
BE	Freisinnig-Demokratische Partei (FDP)	Free-democratic People's Party
	Jungfreisinn	Young Liberals
	Liberal-sozialistische Partei	Liberal-socialist Party
	Parti Liberal	Liberal Party
	Parti libéral-radical	Radical-liberal Party
	Parti Libéral-radical Indépendent	Independent Radical-liberal Party
Parti Radical	Radical Party	
SG	Freisinnig-Demokratische Partei (FDP)	Free-democratic People's Party
	FDP Land	Free-democratic People's Party Rural
	FDP Stadt	Free-democratic People's Party City
	FDP & Jungliberale Bewegung	Free-democratic People's Party & Young Liberal Movement
	FDP Wil-Land	Free-democratic People's Party Rural Wil
	FDP Wil-Stadt	Free-democratic People's Party Urban Wil
	Jungfreisinn	Young Liberals
Liberales Liste	Liberal List	
SO	Freisinnig-Demokratische Partei (FDP)	Free-democratic People's Party
	FDP & Jungfreisinnige List	Free-democratic People's Party & Young Liberals
	Jungliberale	Young Liberals

Liberal Parties			
Canton	Parties (in German/French)	Parties (in English)	
SZ	Bürgerliche Opposition	Civic Opposition	
	Liberaler Bauern-, Gewerbe- & Bürgerpartei	Liberal Party of Farmers, Business & Citizens	
	Liberaler Bauern-, Gewerbe- & Bürgerpartei Siebnen-Wangen-Nuolen	Liberal Farmers, Business & Citizens Party of Siebnen-Wangen-Nuolen	
	Liberaler Partei	Liberal Party	
	Liberaler Partei & Jungliberaler	Liberal Party & Young Liberals	
	Liberaler Partei von Goldau	Liberal Party of Goldau	
	Liberaler & freie Wähler	Liberals & Free Voters	
	Liberaler & freie Wähler von Altendorf	Liberals & Free Voters of Altendorf	
	Liberaler & Jungliberaler Partei	Liberal & Young Liberal Party	
	Liberaler & Jungliberaler Volkspartei	Liberal & Young Liberal People's Party	
	Liberaler & Konservative Volkspartei	Liberal & Conservative People's Party	
	Liberaler Volks- & Arbeiterpartei	Liberal People's & Labour Party	
	Liberaler Volkspartei	Liberal People's Party	
	Liberaler Volkspartei	Liberal People's Party	
	Liberaler Volkspartei Arth-Oberarth-Goldau & Jungliberaler Bewegung Arth-Goldau	Liberal People's Party Arth-Oberarth-Goldau & Young Liberal Movement of Arth-Goldau	
	Liberaler Volkspartei der Gemeinde Lauerz	Liberal People's Party of the Municipality of Lauerz	
	Liberaler Volkspartei der Gemeinde Sattel	Liberal People's Party of the Municipality of Sattel	
	Liberaler Volkspartei der Gemeinde Schübelbach	Liberal People's Party of the Municipality of Schübelbach	
	Liberaler Volkspartei des Bezirkes Einsiedeln	Liberal People's Party of the District of Einsiedeln	
	Liberaler Volkspartei des Bezirkes Küssnacht	Liberal People's Party of the District of Küssnacht	
	Liberaler Volkspartei Einsiedeln	Liberal People's Party of Einsiedeln	
	Liberaler Volkspartei Freienbach	Liberal People's Party of Freienbach	
	Liberaler Volkspartei Gersau	Liberal People's Party of Gersau	
	Liberaler Volkspartei Goldau & Umgebung	Liberal People's Party of Goldau & Surroundings	
	Liberaler Volkspartei Ingenbohl-Bruppen	Liberal Party of Ingenbohl-Bruppen	
	Liberaler Volkspartei Lachen	Liberal People's Party of Lachen	
	Liberaler Volkspartei Muotathal	Liberal People's Party Muotathal	
	Liberaler Volkspartei Schübelbach	Liberal People's Party of Schübelbach	
	Liberaler Volkspartei & Arbeiterpartei Steinen	Liberal People's Party & Labour Party of Steinen	
	Liberaler Volkspartei & freie Wähler	Liberal People's Party & Free Voters	
	Liberaler Volkspartei & Freie Wähler	Liberal People's Party & Free Voters	
	Liberaler Volkspartei & Jungliberaler Bewegung	Liberal People's Party & Young Liberal Movement	
	Liberaler Volkspartei & Jungliberaler Bewegung Wangen	Liberal People's Party & Young Liberal Movement of Wangen	
	Liberaler Volkspartei von Altendorf	Liberal People's Party of Altendorf	
	Liberaler Volkspartei von Arth & Oberarth & Umgebung	Liberal People's Party of Arth & Oberarth & Surroundings	
	Liberaler Bauern-, Gewerbe- & Bürgerpartei & Jungliberaler Bewegung	Liberal Farmers, Business & Citizens Party & Young Liberal Movement	
	Liberaler Volkspartei	Liberal People's Party	
	Liberaler Volkspartei Arth-Oberarth-Goldau	Liberal People's Party of Arth-Oberarth-Goldau	
	Liberaler Volkspartei der Gemeinde Feusisberg	Liberal People's Party of the Municipality of Feusisberg	
	Liberaler Volkspartei der Gemeinde Freienbach	Liberal People's Party of the Municipality of Freienbach	
	Liberaler Volkspartei des Bezirkes Einsiedeln	Liberal People's Party of the District of Einsiedeln	
	Liberaler Volkspartei des Bezirkes Küssnacht	Liberal People's Party of the District of Küssnacht	
	Liberaler Volkspartei Steinen	Liberal People's Party of Steinen	
	TG	Bürgerlich-freisinnige Liste	Civic-liberal List
		Bürgerlich-freisinnige Partei	Civic-liberal Party
		Bürgerliche Liste	Citizen List
		Freisinnig-Demokratische Partei (FDP)	Free-democratic People's Party
FDP - Land		Free-democratic People's Party - Countryside	
FDP - Stadt		Free-democratic People's Party - City	
Freie demokratische Wähler		Free-democratic Citizens	
Freisinnig-bürgerliche Partei		Liberal-civic Party	
Freisinnige aller Stände		Liberals of all Ranks	
Freisinnige-demokratische Liste		Liberal-democratic List	
Liste der Bauern, Gewerbebetreiber & Freisinnige Bürger aller Stände		List of Farmers, Business & Self-employed Citizens	
Liste der Bürgerlichen		Citizens' List	
Liste der Freien Bürger & des Mittelstandes		List of the Free Citizens & the Middle Class	
Liste der Freisinnigen Bürger, Bauern & Gewerbebetreiber		List of the Self-Employed Citizens, Farmers & Business	
Liste der Freisinnigen Demokratischen Partei & der Gewerbebetreiber		List of the Liberal-democratic Party & Business	
Liste der Freischaffenden Bürger & Gewerbebetreiber		List of the Self-employed Citizens & Business	
Liste der Freisinnig-Bürgerlichen		List of Liberal Citizens	
Liste der FDP		List of the Liberal-democratic Party	
Liste der Freisinnige Bürger aller Stände		List of the Liberal Citizens of all Ranks	
Liste der Freisinnigen		Liberals' List	
Liste der Freisinnigen aller Stände		List of the Liberals of all Ranks	
Liste der Freisinnigen & Gewerbetreibenden Bürger		List of Liberals & Business	
Liste der Freisinnigen & Unabhängigen aller Stände		List of the Liberals & Independents of all Ranks	
Liste der Freisinnigen & Gewerbetreibenden	List of Liberals & Business		
Liste der Gewerbetreibenden & Bürger aller Stände	List of Business & Citizens of all Ranks		
Liste der Jung-Liberalen Bewegung	List of the Young Liberal Movement		
Liste der Jungliberalen	List of Young Liberals		
Liste der Liberalsozialisten & freien Bürger	List of Liberal Socialists & Free Citizens		
Liste des Bürgerlichen Miteinander & des Gewerbes	List of Civic Togetherness & Business		
Liste des Bürgerlichen Blocks	List of the Civic Bloc		
Liste von Freisinn & Gewerbe	List of Liberalism & Business		
TI	Liberaler Sopranoceri	Liberal Party of Sopra	
	Liberaler Sottonoceri	Liberal Party of Sotto	
	Partito Liberale Italiano (PLI)	Italian Liberal Party	
	Liberali Radicali (PLR)	Free-democratic People's Party	
	Liberali Radicali Ticino (PLRT)	Free-democratic People's Party Ticino	
Polo Della Liberta (Polo)	Pole of Freedom		
Partito Radicale (PR)	Radical Party		

Table A.13.3.: Liberal-labelled parties by canton.



Populist Parties		
Canton	Parties (in German/French)	Parties (in English)
AG	Aargauische Republikanische Bewegung des Bezirks Muri	Republican Movement of the District of Muri in Aargau
	Aarg. Rep. Bewegung & Nationale Aktion (NA) Bezirksgruppen	Republican Movement & National Action District Groups in Aargau
	Bauern	Farmers
	Bauern & Bürgerpartei	Farmer & Citizen Party
	Bauern & Gewerbetartei	Farmer & Business Party
	Bauernheimatbewegung (Jungbauern)	Farmers' Homeland Movement (Young Farmers)
	Bauerns-, Gewerbe- & Bürgerpartei (BGB)	Farmer, Business & Citizen Party
	Bauerns-, Gewerbe- & Bürgerpartei Bezirk Muri	Farmer, Business & Citizen Party of the District of Muri
	Bauerns-, Gewerbe- & Bürgerpartei Bezirk Zurzach	Farmer, Business & Citizen Party of the District of Zurzach
	Bauerns-, Gewerbe- & Bürgerpartei dez Bezirks Brugg	Farmer, Business & Citizen Party of the District of Brugg
	Jungbauern	Young Farmers
	Nationale Aktion (NA)	National Action
	Nationale Front	National Front
	REP (Republikaner)	Republicans
	Republikaner & NA	Republicans & National Action
	Republikaner	Republicans
	Schweizerische Bauernheimatbewegung (Jungbauern)	Swiss Farmers' Homeland Movement (Young Farmers)
Schweizerische Bauernheimatbewegung	Swiss Farmers' Homeland Movement	
Schweizerische Bauernheimatbewegung (Jungbauern) des Bezirks Brugg	Swiss Farmers' Homeland Movement (Young Farmers) of the District of Brugg	
Schweizerische Volkspartei (SVP)	Swiss People's Party	
SVP des Bezirks Kulm S.V.P. (B.G.B)	Swiss People's Party of the District of Kulm	
SVP des Bezirks Muri S.V.P. (B.G.B)	Swiss People's Party of the District of Muri	
BE	Bürgerparteien	Citizen Parties
	Eidgenössisch-demokratische Union	Swiss-democratic Union
	Jungbauern	Young Farmers
	Nationale Aktion (NA)	National Action
	Parti National Romand	French-Swiss National Party
	Promotion Biennoise/Pro Biel	Pro-Biel Party
	Republikanische Bewegung	Republican Movement
Schweizerische Volkspartei (SVP)	Swiss People's Party	
Union Démocratique du Centre	Democratic Union of the Centre	
SG	Arbeiter- & Bauernpartei	Labour & Farmer Party
	Auto-Partei	Automobile Party
	Auto-Partei/Die Freiheitlichen	Automobile Party/The Free Ones
	Bauern- & Mittelstandspartei	Farmer, Business & Citizen Party
	Bauern-, Gewerbe- & Arbeiterpartei	Farmer, Business & Labour Party
	BGB Partei	Farmer, Business & Citizen Party
	BGB & Mittelstandspartei	Farmer, Business & Citizen Party & Middle-Class Party
	Demokratische Fortschrittspartei	Democratic Advancement Party
	Demokratische Partei	Democratic Party
	Demokratische & Arbeiterpartei	Democratic & Labour Party
	Jungbauern	Young Farmers
	Jungbauern & Demokraten	Young Farmers & Democrats
	Nationale Aktion (NA)	National Action
	Republikaner & NA	Republicans & National Action
	Schwarzenbach-Republikaner	Schwarzenbach Republicans
	Schwarzenbach-Republikaner & Parteilose	Schwarzenbach Republicans & Independents
	Schweizer Demokraten	Swiss Democrats
Schweizerische Republikanische Bewegung	Swiss Republican Movement	
Schweizerische Volkspartei (SVP)	Swiss People's Party	
SVP & Junge Mitte	Swiss People's Party & Young Center	

Populist Parties		
Canton	Parties (in German/French)	Parties (in English)
SO	Schweizerische Volkspartei (SVP)	Swiss Population Party
	Auto-Partei/Die Freiheitlichen	Automobile Party/The Free Ones
SO	Nationale Aktion (NA) für Volk & Heimat	National Action for Population & Home Country
	Nationale & Jungnationale Aktion	National & Young National Action
SO	Schweizer Demokraten	Swiss Democrats
	Bauern-, Arbeiter- & Konservative Volkspartei	Farmers, Workers & Conservative People's Party
SO	Bauern-, Arbeiter-, & Gewerbeartei	Farmers, Workers & Business Party
	Bauern-, Bürger- & Gewerbeartei	Farmers, Citizens & Business Party
SO	Bauern-, Gewerbe- & Bürgerpartei	Farmers, Trade & Citizens Party
	Bauernvereinigung	Farmers Association
SO	Bürger- & Bauernpartei	Citizens & Farmers Party
	Demokratische Autopartei & SVP	Democratic Car Party & Swiss People's Party
SO	Fortschrittliche Volks- & Bauernpartei	Progressive People's & Farmers Party
	Freiheitspartei (FPS)	Freedom Party (FPS)
SO	Freiheitspartei Schwyz (FPS)	Freedom Party of Schwyz (FPS)
	Konservative Volkspartei & unabhängige Wähler & Wählerinnen	Conservative People's Party & Independent Voters
SO	Konservative Volkspartei & unabhängige Wählerinnen & Wähler von Altendorf	Conservative People's Party & Independent Voters of Altendorf
	Konservative Volkspartei & unabhängige Wähler & Wählerinnen von Altendorf	Conservative People's Party & Independent Voters of Altendorf
SO	Konservative Volkspartei & unabhängige Wählerinnen & Wähler	Conservative People's Party & Independent Voters
	Konservativer Wahlvorschlag	Conservative Election Proposal
SO	Kritische Forums Küssnacht	Critical Forum of Küssnacht
	Kritisches Forum Arth-Goldau (kfag)	Critical Forum of Arth-Goldau (kfag)
SO	Kritisches Forum Brunnen	Critical Forum of Brunnen
	Kritisches Forum Einsiedeln	Critical Forum of Einsiedeln
SZ	Kritisches Forum Höfe & Freie & unabhängige Wähler Wollerau	Critical Forum Höfe & Free & Independent Voters of Wollerau
	Kritisches Forum Höfe/Freienbach	Critical Forum of Höfe/Freienbach
SZ	Kritisches Forum Ibach	Critical Forum of Ibach
	Kritisches Forum Ibach (KFI)	Critical Forum of Ibach (KFI)
SZ	Kritisches Forum Schwyz	Critical Forum of Schwyz
	Kritisches Forum Schwyz - Liste Ingenbohl	Critical Forum of Schwyz - List Ingenbohl
SZ	Kritisches Forums March	Critical Forum of March
	Liberale Bauern-, Gewerbe- & Bürgerpartei	Liberal Farmers, Business & Citizens Party
SZ	Liberale Volkspartei & SVP	Liberal People's Party & Swiss People's Party
	Schweizer Autopartei	Swiss Automobile Party
SZ	Schweizerische Volkspartei (SVP)	Swiss People's Party
	Schweizerischen Volkspartei Schübelbach	Swiss People's Party of Schübelbach
SZ	Schweizerischen Volkspartei Arth-Oberarth-Goldau	Swiss People's Party of Arth-Oberarth-Goldau
	Schwyzerische Volkspartei	People's Party of Schwyz
SZ	Schwyzerische Volkspartei (Bauern-, Bürger-, & Gewerbeartei)	Swiss People's Party (Farmers, Citizens & Business Party)
	SVP Bezirk Einsiedeln	Swiss People's Party of the District of Einsiedeln (SVP)
SZ	SVP der Gemeinde Freienbach	Swiss People's Party of the Municipality of Freienbach
	SVP des Bezirkes Einsiedeln	Swiss People's Party of the District of Einsiedeln (SVP)
SZ	SVP des Bezirkes Einsiedeln	Swiss People's Party of the District of Einsiedeln
	SVP Ingenbohl-Brunnen	Swiss People's Party of Ingenbohl Brunnen
SZ	SVP Rothenthurm	Swiss People's Party of Rothenthurm (SVP)
	SVP & Demokratische Autopartei	Swiss People's Party & Democratic Automobile Party
SZ	SVP von Altendorf	Swiss People's Party of Altendorf (SVP)
	SVP Ybrig	Swiss People's Party of Ybrig
SZ	Unabhängige Arbeiter-, Bauern-, Gewerbe- & Bürgerpartei	Independent Labour, Farmers, Business & Citizens Party
	Vereinigten Bäuerlichen Institutionen & Arbeitnehmer Morschach/Stoos	United Farmers Associations & Employees of Morschach/Stoos
TI	Agrario Popolare Ticinese	Farmer Party
	Azione Nazionale Ticinese (ANT)	National Action of Ticino
TI	Contadini, Artigiani et Patrizi	Farmer, Business & Citizen Party
	Democratici Svizzeri (DS)	Swiss Democrats
TI	Lega dei Ticinesi (LEGA)	League of Ticino
	Operaio e Contadino	Worker & Farmer Party
TI	Partito Svizzero della Liberta (PSL)	Swiss Party of Freedom Party (Automobile Party)
	Unione Democratica di Centro (UDC)	Swiss People's Party

Table A.13.4.: Populist-labelled parties by canton.

Independent Parties		
Canton	Parties (in German/French)	Parties (in English)
AG	Aktion Freie Stimmbürger	Action Free Voters
	Alternative	Alternative
	Freie Himmiber	Free Himmibens
	Freie Stimmberechtigte	Free Entitled Voters
	Landesring	National Ring
	Landesring der Unabhängigen (LdU)	National Ring of Independents
	Ohne Parteibezeichnung	Without Party Label
	Team	Team
	TEAM 67	Team 67
BE	Alliance des Indépendants	Alliance of Independents
	Parti Autonome (APO)	Autonomous Party
	Défense des Intérêts	Defence of the Interests
	Freie Bürger	Free Citizens
	Freie Stimmberechtigte	Free Voters
	Junges Bern	Young Bern
	Landesring der Unabhängigen (LdU)	National Ring of Independents
	Parteilos	Without Party
	Sektion Mühlberg	Section Mühlberg
Unabhängige Bürger	Independent Citizens	
	Unité Jurassienne	Jura Union
SG	Denken mit Herz & Verstand	Think with Heart & Common Sense
	Die "andere" Liste - für eine lebendige Mitwelt	The "other" List - for a Lively Environment
	Die Unabhängigen	The Independents
	Europäische Föderalisten Partei	European Federalists Party
	Festbesoldete	Women with Permanent Jobs
	Freie Liste	Free List
	Freie Liste/Landesring der Unabhängigen (LdU)	Free List/National Ring of Independents
	Freie Wähler	Free Voters
	Junge Liste	Young List
	Junges Werdenberg	Young Werdenberg
	Landesring der Unabhängigen (LdU)	National Ring of Independents
	Landesring der Unabhängigen (LdU)/Lust auf Zukunft	National Ring of Independents/Eager for a Future
	Radikale Wahlliste	Radical Voting List
Sachbezogene Politik, parteilos	Policy-oriented Politics, without Party Affiliation	
Überparteiliche Aktion	Action without Party Affiliation	
Unabhängige Demokratische Gruppe	Independent Democratic Group	

Independent Parties		
Canton	Parties (in German/French)	Parties (in English)
SO	Freiheitspartei	Freedom Party
	Humanistische Hanfpartei	Humanist Cannabis Party
	Individual	Individual Candidate
	Landesring der Unabhängigen (LdU)	National Ring of the Independents
	Landesring Solothurn	National Ring of Solothurn
	Offene Liste	Open List
	Oppositionspartei	Opposition Party
	Parteilos	No Party Affiliation
	Unabhängige Liste	Independent List
SZ	Allgemeine Volkspartei	General People's Party
	Bürger von Lauerz	Citizens of Lauerz
	Dorfkreis Illgau	Village District of Illgau
	Eigenwerkfreunde	Friends of Eigenwerk
	Einzelkandidat	Individual Candidate
	Fortschrittlich-demokratische Volkspartei	Progressive-democratic People's Party
	Freie Bürger	Free Citizens
	Freie Liste	Free List
	Freie Stimmberechtigte	Free Voters
	Freie Wähler des Bezirkes Küssnacht	Free Voters of the District of Küssnacht
	Gemeinderat	Municipal Council
	Gemeinsamer	Wahlvorschlag Joint Election Proposal
	Gewerbeverein	Trade Association
	Kein Wahlvorschlag	No Election Proposal
Keine Wahlliste	No Electoral List	
Landesring der Unabhängigen	National Ring of Independents	
Volksbewegung für eine gesunde Gesellschaftsgestaltung	People's Movement for the Creation of a Healthy Society	
TG	Freie Wähler	Free Citizens
	Landesring der Unabhängigen (LdU)	National Ring of Independents
	Liste der Demokratisch-Unabhängigen	List of the Democratic Independents
	Liste der Freien Wähler	Free Voters' List
	Liste der Unabhängig-Wirtschaftspolitischen	List of the Politically-economic Independent
	Liste des freien Volkes	Free People's List
	Liste des LdU	List of the National of Ring of Independents
Noldi Holtz	Noldi Holtz (individual candidate)	
TI	Alternativa (ALTER)	The Alternative
	Il Centro (CH-TI)	The Center
	Comunita dei Pensionati Invalidi Ticinesi (CP IT)	Community of Disabled People of Ticino
	Doveri e Diritti Democratici (DDD)	Duties & Democratic Rights
	Diritti democratici ticinesi (DDT)	Ticino Democratic Rights
	Indipendente	Independents
	Mobilizzazione degli assenti (MDA)	Mobilization of Absentees
	Movimento degli indipendentisti (MDI)	Movement of Separatists
PAD	Unknown	
	Partito ticinese per la protezione dei cittadini (PTPC)	Ticino Party for the Protection of Citizens

Table A.13.5.: Independent-labelled parties by canton.

		Party Coalitions
Canton	Parties (in German/French)	Parties (in English)
	Alle Politischen Parteien	All Political Parties
	Aller Parteien	All Parties
	Arbeiterpartei der Christlichsozialen Partei (CSP) & der unabhängigen Bauern-, Gewerbe- & Bürgerpartei	Labour Party of the Christian Social Party & the Independent Farmers, Business & Citizens Party
	Arbeiterpartei & unabhängige Bauern-, Gewerbe-, & Bürgerpartei	Labour Party & Independent Farmers, Business & Civic Party
	Arbeiterpartei, Konservative Volkspartei & liberale Partei	Labour Party, Conservative Party & Social-democratic Party
	Arbeiterpartei, Liberale Volkspartei, freie Bürger & Bauernpartei & Konservativ-CSP	Labour Party, Liberal People's Party, Free Citizens & Farmers Party & Conservative Christian-socialist Party
	Bestehende 4 Parteien	Existing 4 Parties
	CSP, liberale Volkspartei & Arbeiterpartei	Christian-socialist Party, Liberal People's Party & Labour Party
	Christlichdemokratische & Liberale Volkspartei	Christian-democratic & Liberal People's Party
	Christlichdemokratische & Liberale Volkspartei	Christian-democratic & Liberal People's Party
	Christlichdemokratische Volkspartei (CVP) Gersau & Liberale Volkspartei Gersau	Christian Democratic People's Party CVP Gersau & Liberal People's Party Gersau
	CVP Galgenen, SP (SP) Galgenen & Liberale Volkspartei Galgenen	Christian-democratic People's Party Galgenen, Social-democratic Party of Galgenen & Liberal People's Party of Galgenen
	CVP Schübelbach, Liberale Volkspartei Schübelbach & SP Schübelbach	Christian-democratic People's Party Schübelbach, Liberal People's Party Schübelbach & Social-democratic Party Schübelbach
	CVP Vorderthal, Liberale Bauern-, Gewerbe- & Bürgerpartei (BGB) Vorderthal & Arbeiterpartei Vorderthal	Christian-democratic People's Party of Vorderthal, Liberal Farmers, Business & Citizens Party of Vorderthal & Workers Party of Vorderthal
	CVP Wangen, Liberale Volkspartei Wangen & SP Wangen	Christian-democratic People's Party Wangen, Liberal People's Party Wangen & Social-democratic Party Wangen
	CVP, Liberale Volkspartei & SP Lachen	Christian Democratic People's Party, Liberal People's Party & Social Democratic Party Lachen
	Christlichsoziale & konservative Partei	Christian-socialist & Conservative Party
	CVP & Liberale Volkspartei Muotathal	CVP & Liberal People's Party of Muotathal
	CVP & Liberale Volkspartei Muotathal	CVP & Liberal People's Party Muotathal
	CVP & Liberale Volkspartei Tuggen	Christian-democratic People's Party & Liberal People's Party of Tuggen
	Einzelkandidat	Individual Candidate
	Fortschrittlich-demokratische Volkspartei	Progressive-democratic People's Party
	Freier Wahlvorschlag	Free Election Proposal
	Gemeinderätlicher Wahlvorschlag	Municipal Election Proposal
SZ	Katholisch-konservativen Volkspartei, CSP, fortschrittlich-demokratische Partei & Arbeiterpartei	Catholic Conservative People's party, Christian Social party, Progressive Democratic party & Workers' party
	Konservativ-Christlich-Soziale Volkspartei, unabhängige Bürger- & Bauernpartei,	Conservative Christian Social People's Party, Independent Civil & Farmers Party,
	liberale & jungliberale Partei & Arbeiterpartei	Liberal & Young Liberal Party & Workers Party
	Konservativ-Christlich-Soziale, Liberale sowie unabhängige Bürgerpartei & Arbeiterpartei	Conservative Christian-socialist, Liberal & Independent Civil Party & Labour Party
	Konservativ-christlich-soziale, Liberale & Arbeiterpartei	Conservative Christian-socialist, Liberal & Labour Party
	Konservativ-christlichsoziale Volkspartei & Liberale & Bürgerpartei	Conservative-christian-socialist People's Party & Liberals & Citizens Party
	Konservativ-christlichsoziale Volkspartei, Liberale Volkspartei & Jungliberale Ortsgruppe & Arbeiterkartell	Young Liberal Local Group & Labour Cartel
	Konservativ-Christlichsoziale Volkspartei, Liberale & Jungliberale Volkspartei & Sozialdemokratische Arbeiterpartei	Conservative Christian-socialist People's Party, Liberal & Young Liberal People's Party & Social-democratic Labour Party
	Konservative Partei, Fortschrittliche Volks- & Bauernpartei & Arbeiterpartei	Conservative Party, Progressive People's & Farmers Party & Labour Party
	Konservative Partei, liberale Partei & CSP	Conservative Party, Liberal Party & Christian-socialist Party
	Konservative & Arbeiterpartei	Conservative Labour Party
	Konservative & CSP, Arbeiterpartei & Liberale & Jungliberale Bauern- & Bürgerpartei	Conservative & Christian Social Party, Labour Party & Liberal & Young Liberal Peasant & Citizens' Party
	Konservative & CSP, Liberale Volkspartei, Jungliberale Ortsgruppe & Arbeiterpartei	Conservative & Christian Social Party, Liberal People's Party, Young Liberal Local Group & Labour Party
	Konservative & Liberale Partei	Conservative & Liberal Party
	Konservative & liberale Partei	Conservative & liberal Party
	Konservative & liberale Volkspartei	Conservative & Liberal People's Party
	Konservative Volkspartei & CSP, Partei der Bauernvereingung, liberale Partei & SP	Conservative People's Party & Christian-socialist Party, Farmers Union Party, Liberal Party & Social-democratic Party
	Konservative Volkspartei & Bauern-, Arbeiter- & Gewerbetantei	Conservative People's Party & Farmers, Worker & Business Party
	Konservative Volkspartei & Christlichsoziale Arbeiterpartei, Liberale Volkspartei & SP	Conservative People's Party & Christian-socialist Labour Party, Liberal People's Party & Social-democratic Party
	Konservative Volkspartei, CSP & BGB	Conservative People's Party, Christian-socialist Party & Farmers, Business & Citizens Party
	Konservative Volkspartei, Liberale Volkspartei & jungliberale Bewegung, CSP & Arbeiterpartei	Conservative People's Party, Liberal People's Party & Young Liberal Movement, Christian-socialist Party & Labour Party
	Konservative Volkspartei, liberale Partei, Bauern-, Bürger- & Gewerbetantei & allg. Arbeiterpartei	Conservative People's Party, Liberal Party, Farmers, Civic & Trade Party & General Workers Party
	Konservative Volkspartei, Liberale Volkspartei & Jungliberale Bewegung, CSP & SP	Conservative People's Party, Liberal People's Party & Young Liberal Movement, Christian-socialist Party & Social-democratic Party
	Konservative, Arbeiter- & Liberale Partei	Conservative, Liberal Workers Party
	Konservative, Christlichsoziale & Liberale Volkspartei	Conservative-Christian-Social & Liberal People's Party
	Konservative, Jungkonservative, Christlichsoziale, Liberale & Jungliberale Partei	Conservative, Young Conservative, Christian-socialist, Liberal & Young Liberal Party
	Konservative, liberale & freie Volkspartei	Conservative, Liberal & Free People's Party
	Liberale Partei Tuggen & Christlichdemokratischen Volkspartei Tuggen	Liberal Party Tuggen & Christian Democratic People's Party Tuggen

Canton	Party Coalitions	
	Parties (in German/French)	Parties (in English)
SZ	Liberale BGB & konservative Volkspartei	Liberal Farmers, Commercial & Citizens Party & Conservative People's Party
	Liberale Bauern-, Gewerbe-, & Bürgerpartei, CVP & Arbeiterpartei Vorderthal	Liberal Farmers, Business & Citizens Party, Christian-democratic People's Party & Vorderthal Workers Party
	Liberale Bauern-, Gewerbe-, & Bürgerpartei & Konservative Volkspartei	Liberal Farmers, Business & Civil Party & Conservative People's Party
	Liberale Bauern-, Gewerbe-, & Bürgerpartei & der Christlich-demokratischen Volkspartei Vorderthal	Liberal Farmers, Business, & Citizens Party & the Christian-democratic People's Party Vorderthal
	Liberale Partei & Konservativ-CSP	Liberal Party & Conservative Christian-socialist Party
	Liberale & Jungliberale Bewegung, Arbeiterpartei, Konservative & CSP	Liberal & Young Liberal Movement, Labor Party, Conservative & Christian Social Party
	Liberale Volkspartei Tuggen & CVP Gersau	Liberal People's Party Tuggen & Christian Democratic People's Party Gersau
	Liberale Volkspartei Tuggen & CVP Tuggen	Liberal People's Party Tuggen & Christian-democratic People's Party of Tuggen
	Liberale Volkspartei & CVP Tuggen	Liberal People's Party & Christian-democratic People's Party of Tuggen
	Liberale Volkspartei & Konservative Volkspartei	Liberal People's Party & Conservative People's Party
	Liberale Volkspartei von Arth, Oberarth & Umgebung	Liberal People's Party of Arth & Oberarth & Surroundings
	Liberale, Konservative & Arbeiterpartei	Liberal, Conservative & Labor Party
	Librale Volkspartei, CVP & SP	Liberal People's Party, Christian-democratic People's Party & Social-democratic Party
	SP Wangen, CVP Wangen & Liberale Volkspartei Wangen	Social-democratic Party Wangen, Christian-democratic People's Party Wangen & Liberal People's Party Wangen
SG	SP, CSP & Unabhängige Bauern-, Gewerbe-, & Bürgerpartei der Gemeinde Reichenburg	Social-democratic Party, Christian-socialist Party & Independent Farmers, Business, & Citizens Party of the Municipality of Reichenburg
	SP, Liberale Volkspartei & CVP	Social-democratic Party, Liberal People's Party & Christian-democratic People's Party
	Überparteiliche Schwyzer Opposition	Non-partisan Opposition of Schwyz
	Überparteiliches Komitee	Nonpartisan Committee
	Überparteiliches Komitee für die Kantonsratswahl 1996	Non-partisan Committee for the 1996 Cantonal Elections
	Überparteiliches Komitee für die Kantonsratswahl 2000	Non-partisan Committee for the 2000 Cantonal Elections
	Freisinnige & Demokraten	Liberals & Democrats
	Jungliberale Bewegung & EVP	Young Liberals & Evangelic-democratic Party
	L&esring der Unabhängigen (LdU) - Grüne Rheintaler	National Ring of Independents - Green Rheintaler
	LdU/Freie Umweltliste	National Ring of Independents/Free Environment List
Partei der Arbeiter & Kleinbauern & der Parteilosen	Labour Party & Small Farmers & Independents	
Verständigungsliste L&esring, Demokraten, Jungbauern	Coalition List National Ring, Democrats & Young Farmers	

Table A.13.6.: Coalition-labelled party alliances by canton. Parties that are not from the same political ideology running on a combined party list are categorised as “coalition”. Party coalitions are labelled as such when several party blocks run together for cantonal elections on a mutual party list. In the canton of Schwyz (SZ), this was common before 1960. After that, parties started to run for elections with separate party lists.

## 2. What Drives Support For Enfranchisement? The Case of Swiss Female Suffrage

**Abstract:** Democratization literature mostly focuses on the elite's decision to extend the franchise. But in many cases, current voters have to decide whether to grant the vote to a broader population. Little evidence exists on what factors drive the support among those who are already enfranchised. In this paper, I exploit the change in municipal Yes-vote shares among male voters for two Swiss national referenda on female suffrage between 1959 and 1971. I show that municipalities, which quasi-randomly introduced local female suffrage in between the two referenda, increased their support much more. This increase is driven by municipalities in which a majority of men was initially opposed to national suffrage. Conditioning on similar initial support, I further show that this difference cannot be explained by a "ceiling effect". My findings can also not corroborate that the rise in support is driven by post-suffrage change in municipal party vote shares, expenditure, or cultural proxies, such as female labour market participation.

### 2.1. Introduction

What drives voting right holders' support for a franchise extension? The introduction of universal suffrage, usually first for men and later for women, is a milestone in democratic history of many countries. In the common case, the franchise was extended through the passing of a law in parliament, such as in the UK for all voting right Acts between 1832 and 1928, or in the US for the 15<sup>th</sup> and 19<sup>th</sup> Amendment in 1870 and 1920.

Both theoretical and empirical findings have suggested what drives representatives towards granting suffrage to a wider population. Among those factors are a credible threat for revolution (Dower et al., 2020; Acemoglu et al., 2006; Acemoglu and Robinson, 2001, 2000), a conflict within the elite on the scope and goal of government (Lizzeri and Persico, 2004), and the anticipated chance of parties to increase their vote shares (Teele, 2018; Przeworski, 2009).

However, we have little evidence on what explains public opinion among those voters who already have the vote. We know that parliaments take voters' preferences into account when passing legislation<sup>1</sup>. Hence, many of the factors driving the decisions of their representatives may also explain why they support enfranchisement. For example, the British elite in the 19<sup>th</sup> century was likely to fear revolution as much as their representatives in parliament. The hope for a change in party vote shares, on the other hand, was unlikely to find support by the current average voter.

Historically, there are several examples in which public opinion played an important role for franchise extensions. The British general election of 1831 was generally perceived as a referendum on the 1832 Great Reform Act, which extended voting rights to a broader male population (Aidt and Franck, 2015). Prior to the Fifteenth Amendment, several US states held referenda on the extension of voting rights to the black population between 1846-1870 (Walton et al., 2012). The Twenty-sixth Amendment, reducing the US voting age from 21 to 18, was further regarded as a franchise extension largely driven by public opinion (Keyssar, 2000).

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<sup>1</sup>For empirical evidence that voters' preferences do drive representatives' decision-making, see e.g. Caughey et al. (2017), Miller (2008).



Knowing what explains the support among those who already have a right to vote is important for several reasons. Representatives take current voters' opinions into account when passing enfranchisement laws. Once a law is passed, public opinion among those previously privileged voters may matter for how the newly enfranchised turn out and vote. Opposition by the previously privileged may further cause direct (e.g. violence) or indirect (e.g. extremist voting) backlash against the new voters.

In this paper, I therefore study the change in support for national female suffrage among Swiss male voters between a first national referendum in 1959 and a second one in 1971. While the first referendum was rejected with an approval from only 33.1% of male voters, the second one passed with a 65.7% Yes-vote share.<sup>2</sup> Both referenda asked voters to either approve or reject the same constitutional amendment: *The introduction of voting and eligibility rights for women in federal matters*.<sup>3</sup> And in both, only men at or above the age of 20 could vote.

The approval of the national referendum granted Swiss women the franchise only in federal elections and referenda. At the cantonal and the municipality level, voting right laws could only be changed through the cantonal constitution. The last Swiss canton extended its local franchise to women in 1990.

The Swiss case has several advantages to study what drives the support for franchise extensions. I observe the change in male Yes-vote shares between the two referenda at the municipality level. Moreover, I exploit the fact that eight Swiss cantons quasi-randomly introduced local female suffrage through cantonal referenda between 1966-1971. All eight of these referenda had very close outcomes, with an approval or rejection margin

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<sup>2</sup>In both, the turnout rate was relatively high with 66.7% in 1971, and 57.7% in 1959.

<sup>3</sup>Swiss Federal Council archives of national referenda outcomes since 1848. Referendum from 1 February 1959, and from 7 February 1971.

of 3% or below. By the time of the second national referendum in 1971, only four of the eight cantons had introduced local female suffrage.

Within this sample of eight cantons, I identify the impact local female suffrage had on male approval of a national franchise extension. I further test if change differs between municipalities, in which a male majority initially voted against the national referendum in 1959, and municipalities, which already favoured national women's suffrage back then.

Quasi-random exposure to local female suffrage reveals a few possible channels for the change in support of women's vote. Men may update their beliefs about the new voters' political preferences. Updating might always be noisy, but seems more likely if men observe large enough changes in election and policy outcomes at the local level. Men may further update their beliefs about women's abilities in and contributions to politics. Finally, men may not only update on the political, but also the cultural change, which women's suffrage might induce. For example, enfranchisement might foster women's emancipation in the labour market, which could result in increased female labour market participation and lower marriage rates.

My findings show that exposure to local female suffrage increased support for the national franchise extension. Moreover, this increase is much stronger in municipalities, in which a male majority had initially rejected the national referendum in 1959. By conditioning the sample of municipalities on similar Yes-vote shares in 1959<sup>4</sup>, I show that this result is not driven by a simple "ceiling effect".

From another study, we know that Swiss female suffrage caused a political shift to the

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<sup>4</sup>To still have a sufficiently large sample size, I run the analysis with municipalities, which had a Yes-vote share between 30-60% in 1959.

right at the local level (Hofstetter, 2020). I therefore also test if the positive impact of local suffrage on men's support for a national franchise extension is associated with the municipal change in party vote shares or expenditure, before and after local women can vote. I only find weak, indicative evidence that a stronger increase in the conservative party vote share mediated the effect.

Finally, I also interact treatment with local female suffrage with a change in cultural proxies, such as female employment and marriage rates within the municipality. I find no evidence that changes in these variables drove the impact local female suffrage had on men's support.

## **2.2. Literature Review**

The current literature on what drives franchise extensions concentrates mainly on an elite. This focus is motivated by the early history of democratisation in Western Europe and Latin America when only a very small percentage of the population possessed voting rights. Usually, this group was not only politically but also economically privileged.

Acemoglu and Robinson (2000) provide a theory that the early suffrage reforms were strategic decisions by the elite to prevent social unrest, or even a revolution. This was during a time when socialist ideas gained popularity among the large, disenfranchised working class. Granting the lower class voting rights allowed the elite to credibly commit to not only current but also future wealth redistribution. Minor corrections to their model were more recently proposed (Dower et al., 2020; Acemoglu and Robinson, 2017).

In a related theory, Acemoglu and Robinson (2001) further show that the revolutionary threat is high when opportunity costs are low among the disenfranchised poor.

However, highly unequal societies are less likely to extend the franchise, even when opportunity costs for a revolution are low, because a disproportionately wealthy elite has an incentive to overturn any democratically elected government with a coup.

Empirical evidence provides support for these theories. Aidt and Franck (2015) show that constituencies' proximity to the widespread Swing riots in 1830 led to electoral success of pro-reform politicians in the British general election of 1831. The UK Great Reform Act was passed in 1832. It was the first reform to extend voting rights to a broader male population. On the one hand, this finding suggests that revolutionary threat can lead to suffrage extensions. On the other hand, it shows how public opinion among the already enfranchised matters for the expansion of voting rights.

An alternative model by Lizzeri and Persico (2004) argues that elites may want to expand suffrage even in the absence of revolutionary threats. Extending the franchise can induce net welfare benefits for the elite by changing incentives of politicians away from particularistic politics. Instead, political competition for the provision of public goods increases, improving their quality.

Democratisation was not complete after suffrage was granted to working class men. In often more recent history, women, ethnic minorities, younger people or foreigners (Vernby, 2013) were enfranchised. The canonical models on democratisation may not equally apply to these voting right extensions. The literature on women's suffrage, for example, emphasises the role of political parties instead. Teele (2018) and Przeworski (2009) both argue that suffrage reform succeeded when parties in power believed female voters could secure their electoral fate.

We also have indicative evidence that public opinion played a direct or indirect role in several of these reforms. An example were 27 referenda on voting right extensions to black people in US states between 1846-1870 (Walton et al., 2012). Only two of them were approved.<sup>5</sup> US Congress followed in 1870 to pass the Fifteenth Amendment, which extended voting rights nationwide to the former slave population. We have however no evidence on what caused white voters to approve or reject black suffrage at that time. Similar to female suffrage, revolutionary threats seem less plausible in this case.

Keyssar (2000) further argues that American student protests around the Vietnam war in the late 1960s contributed to the passing of the Twenty-sixth Amendment in 1971. The new law reduced the US voting age from 21 to 18, the minimum age at which young Americans could get drafted. As for female and black suffrage, we have however no causal evidence for what drove current voters' opinion in this case.

In summary, the democratisation literature suggests that revolutionary threat or expected net benefits by the elite led to the early franchise extensions. Other mechanisms, such as party competition, were possibly more likely to induce suffrage reforms later on. Many cases throughout history indicate that public opinion among the already enfranchised played an important role. This paper contributes to the current literature with causal evidence on what may drive current voters towards approving franchise extensions, apart from fear of revolution. It shows that exposure to the newly enfranchised can change current voters' support.

It further tests for different possible mechanisms, which could lead to this change. In a separate study, Hofstetter (2020) identifies the political impact of local female suffrage in Swiss municipalities. Using the same empirical strategy as in this paper, it finds that

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<sup>5</sup>In the state of Minnesota in 1868, and in the district of the Dakotas in 1867.

women's franchise led to a shift to the right in both municipal party vote shares and expenditure. I exploit these findings to test if current male voters change their support for suffrage upon observing this political effect at the local level.

## **2.3. Extending the Franchise in the Swiss Context**

### **2.3.1. The Swiss Political System**

Similar to the US, Switzerland is a democracy with strong federalism.<sup>6</sup> The political system of the country is split into three administrative units: The federal level, the cantons, and the municipalities. Politically the most powerful of the three is the canton. Each of the today 26 cantons has its own constitution, which also regulates the local voting rights. Both the cantons and their municipalities further have strong financial autonomy, both in terms of taxation and expenditure. Both political and policy outcomes at the Swiss municipality level can therefore vary considerably.

In Switzerland, laws and policy decisions can be passed at all three administrative levels. Most legislative decisions are made by a parliament, which is elected at both the national and the cantonal level. Some municipalities also have an elected parliament. The majority, however, holds municipal assemblies around 1-2 times per year to vote on local laws and policy decisions (Ladner, 2016).

Because Switzerland is a direct democracy, it also frequently holds referenda, both at the local and the national level. Both the federal and the cantonal level have a requirement to hold a referendum in order to approve a constitutional amendment, or an

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<sup>6</sup>For a more detailed description of Swiss federalism, see for example Hofstetter (2020), or Moeckli (2008).

international agreement. But Swiss citizens can also launch a legal initiative or require a referendum on parliamentary decisions, conditional on collecting a sufficient number of signatures.

All Swiss referenda are binding and in order to pass, they require approval of above 50% of the voters who turn out. National referenda further require a majority of cantons to approve the referendum. In the federal constitution, six of the 26 cantons are half-cantons and therefore only count half. Hence, adding the votes from half- and full cantons means that at least 12 need to vote in favour of the referendum.<sup>7</sup> The approval or rejection of a referendum is not conditioned on a minimum turn-out rate.

Extending the franchise to women required a constitutional amendment. Any change to female suffrage rights therefore needed to pass a referendum, in which only men could vote. At the national level, the minimum age to vote was 20 until 1991.

### **2.3.2. Swiss Female Suffrage - Local and National**

Due to their constitutional autonomy, cantons could extend the franchise to women independent of voting right amendments in the Swiss federal constitution. The Swiss federal constitution only regulates the national-level franchise in the country. Hence, when women got the vote at the cantonal or municipality level, they attained the right to vote in cantonal or municipal elections, referenda and assemblies. However, they could not vote in national elections nor in national referenda.

The same holds the other way around. In 1971, when Switzerland extended the fran-

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<sup>7</sup>Before the secession of Jura from the canton of Bern in 1979, Switzerland had only 25 cantons, i.e. 6 half-cantons and 19 full cantons. Therefore, at least 11.5 cantonal votes were required to pass the referendum.

chise to women at the national level, the women in eight remaining cantons could still not vote in their canton. The last canton extended its franchise to women in 1990.<sup>8</sup>

Switzerland held two national referenda on female suffrage, the first in 1959 and the second in 1971. Both proposals for a constitutional amendment first passed a majority in the two chambers of national parliament. Both proposed the same constitutional amendment: *The introduction of voting and eligibility rights for women in federal matters.*<sup>9</sup>

The referendum in 1959 followed the national debate on extending the requirement for civil service to women.<sup>10</sup> It was considered to be fair to grant women full political rights in exchange for this requirement (Ruckstuhl, 1991). However, the referendum in 1959 was rejected. Only 33.1% of male voters had voted in favour of the national franchise extension to women. The cantonal majorities in the referendum are shown on top in Figure 2.3.1. A majority of 57.7% of the male voting population participated in the referendum.

After this defeat, it took a long time until the Swiss Federal Council suggested again to parliament to grant women's suffrage. The reason this time was that Switzerland considered to sign the UN Human Rights Charter. Since Swiss women still had no national voting rights, the Council however considered to include a clause excluding equal voting rights among citizens. This triggered a national protest of women's rights movements,

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<sup>8</sup>Appenzell-Innerrhoden rejected female suffrage in its last referendum on this matter in 1990, but was then forced by the Swiss supreme court to introduce it. The court argued that the canton's constitution violated a basic right (i.e. the right to vote independent of gender) in the national constitution. This intrusion by the supreme court into cantonal matters was without precedence and hence a surprise at the time.

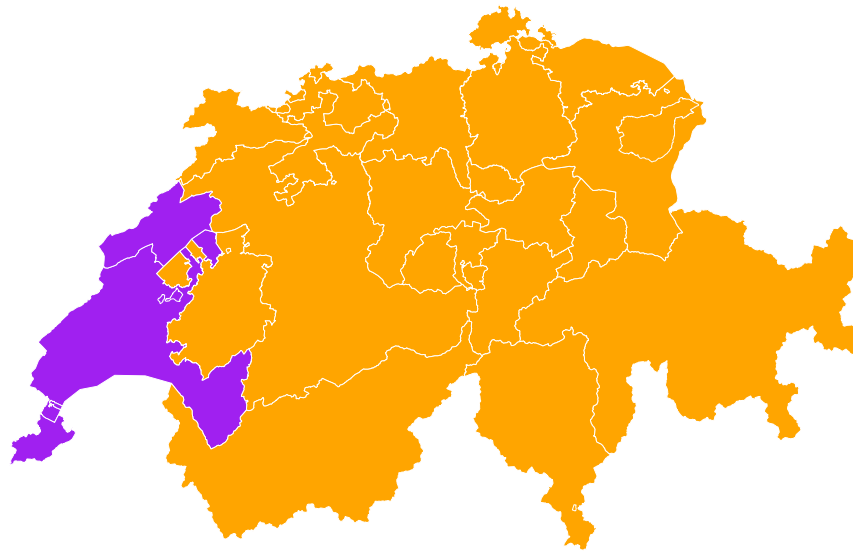
<sup>9</sup>Swiss Federal Council archives of national referenda outcomes since 1848. Referendum from 1 February 1959, and from 7 February 1971.

<sup>10</sup>Until today, Switzerland maintained the draft, which however only applies for men. Men can choose civil over military service, but women are not required to do either. They can however volunteer.

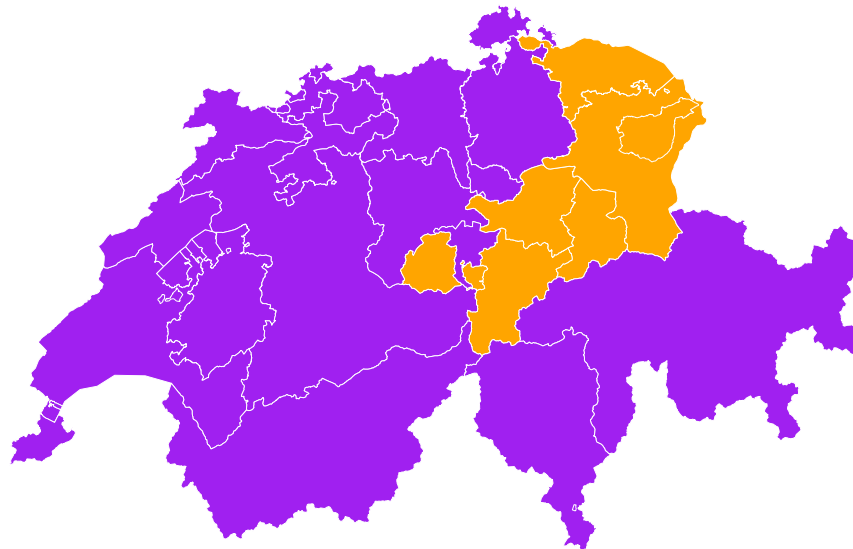


which resulted in 5,000 men and women participating in the “March to Bern” in March 1969 (Banaszak, 1996; Ruckstuhl, 1991).

Following this political pressure, both chambers in parliament passed the constitutional amendment granting women the right of vote at the federal level. In the male population, this second referendum passed in 1971 with a 65.7% Yes-vote share. The cantonal majorities in this referendum are shown at the bottom in Figure 2.3.1. In this referendum, 66.7% of male voters turned out.



**Cantonal majority:** ■ rejected national female suffrage ■ approved national female suffrage



**Cantonal majority:** ■ rejected national female suffrage ■ approved national female suffrage

Figure 2.3.1.: Cantonal majorities in the national referenda on female suffrage in 1959 and in 1971.

Meanwhile, at the cantonal level, local referenda on the question of cantonal and/or municipal female suffrage started in 1919.<sup>11</sup> However, none of these referenda were successful until 1959. On 7 February 1959, the same data as the national referendum, the two partially French-speaking cantons of Waadt and Neuenburg extended their cantonal franchise to women.

After 1959, cantonal referenda continued to take place and varied by year. By far not all of them succeeded. In 1990, however, all Swiss women eventually attained full voting rights. Figure 2.3.2 shows the number of cantonal referenda each year since the beginning of the 20<sup>th</sup> century and the accumulative number of cantons, which introduced cantonal female suffrage.

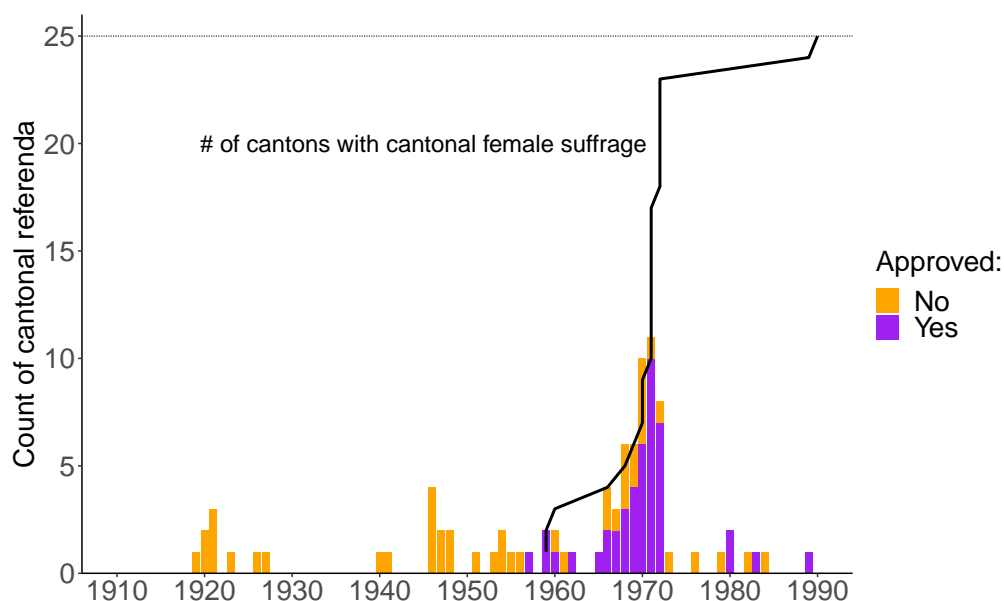


Figure 2.3.2.: **History of Swiss local female suffrage:** Timeline of cantonal referenda with Yes-vote share (in %) at the cantonal level and count of cantons with cantonal female suffrage.

<sup>11</sup>Neuenburg held a cantonal referendum on introducing the cantonal and municipal voting right for women in June 1919, which was however rejected with a 69.2% majority in the popular vote, and not a single municipality voting in favour.

## 2.4. Empirical Strategy

The following section has three parts. I first introduce the empirical model I use to estimate difference in differences, which identify the effect local female suffrage had on municipal Yes-vote shares in the national referenda of 1959 and 1971. I then describe my sample, which first includes the municipalities of all Swiss cantons. Endogeneity in the treatment with local female suffrage could be a concern in this sample. In a second step, I therefore reduce it to eight cantons, which quasi-randomly extended their local franchise. The last part provides information on the dataset I created to estimate the effect local female suffrage had on male support for national suffrage.

### 2.4.1. Specifications

My empirical model is split into two specifications. First, I identify the impact of a local franchise extension to women on the municipal Yes-vote shares in the two national referenda on female suffrage. My second specification tests for heterogeneity in this effect.

To identify the impact of local women's suffrage, I exploit the fact that the Swiss cantons extended their franchise to women in different years. The earliest canton to introduce local female suffrage was Basel-Stadt in 1957. In the national referendum of 1959, all but this canton had therefore not been exposed to women's vote yet. In 1971, only five cantons had not yet introduced any kind of local suffrage.

I use panel data on municipal Yes-vote shares in the national referenda on a national franchise extension to women in 1959 and 1971 to estimate the difference in differences between municipalities in cantons with and without local female suffrage. I use the

following specification in an OLS regression:

$$\text{Yes-vote share}_{m,c,y} = \alpha_m + \gamma_y + \beta \text{Enfranchised}_{c,y} + \epsilon_{m,c,y} \quad (2.1)$$

where  $\text{Yes-vote share}_{m,c,y}$  is the Yes-vote share for the national referendum on female suffrage in municipality  $m$  in canton  $c$  in year  $y$ .  $\alpha_m$  are municipality fixed effects and  $\gamma_y$  are year effects. There are only two years in the data, the national referenda years 1959 and 1971.  $\beta$  is the difference-in-differences estimator of local female suffrage. Thus,  $\text{Enfranchised}_{c,y}$  is a dummy variable, which takes on the value of 1 in year  $y$  if local female suffrage was successfully introduced by a cantonal referendum before the date of the national referendum in year  $y$ .  $\epsilon_{m,c,y}$  is the error term for each municipality-year observation.

In a second step, I estimate the following model:

$$\begin{aligned} \text{Yes-vote share}_{m,c,y} = & \alpha_m + \gamma_y + \beta \text{Enfranchised}_{c,y} \\ & + \rho(\text{Enfranchised}_{c,y} \times \text{In favour}_m) + \epsilon_{m,c,y} \end{aligned} \quad (2.2)$$

where  $\text{In favour}_m$  is a dummy variable, which equals 0 (1) if a municipality's majority voted against (in favour of) the franchise extension in the national referendum of 1959.

The coefficient of interest in this model is  $\rho$ . It is the difference-in-difference-in-differences estimator. In other words, it captures the between-municipality difference in the effect of female suffrage on  $\text{Yes-vote share}_{m,c,y}$ . Whether a municipality favoured or voted against female suffrage remains fixed over time. The individual effect of  $\text{In favour}_m$  on  $\text{Yes-vote share}_{m,c,y}$  is therefore absorbed in the municipality fixed effect  $\alpha_m$ . However, I can exploit the variation in the enfranchisement status of cantons ( $\text{Enfranchised}_{c,y}$ )

over the time period in the panel data. This allows me to identify the interaction effect between enfranchisement ( $\text{Enfranchised}_{c,y} = 1$ ) and municipalities, which favoured national female suffrage already in 1959 ( $\text{In favour}_m = 1$ ).

## 2.4.2. Sample Description

I first estimate my specifications for all Swiss cantons, which reported municipal Yes-vote shares in the national referenda of 1959 and 1971.<sup>12</sup> Within the cantons, I identified the municipalities in which a majority of men had voted in favour of national female suffrage in 1959, and municipalities in which a majority of men had voted against it. With this variation, I can identify the heterogeneity in the effect of female suffrage, which is specified as interaction effects in model (2).

However, difference in differences rely on the parallel trends assumption (Steigerwald et al., 2020; Angrist and Pischke, 2009). This assumption could be challenged if it is not random which cantons introduced local female suffrage earlier or later. If that is the case, these cantons may follow different instead of parallel trends in the Yes-vote shares, and the estimated effect will be biased.

A common practice to address this concern is to provide evidence against differential trends before suffrage was introduced. There were however only two national referenda on female suffrage. I therefore cannot show evidence against differential trends in Yes-vote shares before cantons extended their local franchise.

In a second step, I therefore reduce the sample to eight cantons, which had very narrow referenda outcomes on female suffrage. All of the cantonal referenda happened within a

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<sup>12</sup>Four cantons held cantonal assemblies to vote on the referenda, and therefore did not report their municipal Yes-vote shares.

relatively short time frame between 1966-1971. I provide more detail in the Appendix section B.1, in which Table B.1.1 shows for each canton the year in which the cantonal referendum was held, the Yes-vote share in the referendum and the suffrage bill that was voted on. Each of the eight referenda had a margin of 3% or less. However, only three of them were narrowly approved and therefore extended their local franchise. The other five were narrowly rejected. These cantons introduced local female suffrage in later years.

Using the municipalities in these eight cantons to estimate the difference in differences brings a few improvements for identification. All eight cantons voted on local female suffrage around the same time. This makes selection bias from calling a referendum earlier or later less likely. Moreover, all expressed almost identical (dis)approval of a local franchise extension. In other words, none of these cantons was a female suffrage enthusiast, but instead rather hesitant to give women the vote. Finally, the very narrow margin of all referenda suggests that it was extremely difficult to anticipate the outcome of the referendum.

In summary, the narrow referenda margins in these cantons make the introduction of female suffrage credibly quasi-random. In expectation, these cantons should therefore be similar. More importantly, they should not follow differential political trends. To corroborate the plausibility of this assumption, I provide evidence against pre-trending in other political outcomes at the municipality level in Appendix section B.4.

### **2.4.3. Data**

#### **Full and Reduced Sample**

For the sample containing all Swiss cantons, and the subsample of eight cantons, I collected the following data.

**Referenda Yes-vote shares at the municipality level.** I created a data-set from the referenda records of each cantonal and each national referendum ever held on female suffrage, which I retrieved from the different cantonal archives in Switzerland. For each referendum, I coded the Yes-vote share of each municipality. Based on this data, I identified the municipalities, in which a majority of men had voted in favour of the national referendum in 1959, and the ones, which had voted against. Based on the cantonal referenda outcomes on local suffrage, I further selected the eight close referenda for my reduced sample.

**Adjustment for municipal mergers.** In 1960, Switzerland had 3,095 municipalities. Due to municipal mergers, the number had shrunk to 3,021 by 1990. Based on information by the Swiss Federal Statistical Office (2020), I therefore identified all Swiss municipalities that had undergone a merger. For those, I aggregated all outcome data under the names of the new municipalities that existed by 1990.

### **Reduced Sample**

For my subsample of eight cantons, I further use the following data.

**Change in municipal party vote shares.** A possible mechanism through which men may become more or less supportive of national suffrage is through updated beliefs on women's political preferences. I therefore calculated the change in municipal party vote shares between the last election before local female suffrage and the first cantonal election afterwards.

I don't include more elections for two reasons. Male voters may forget the results of pre-suffrage elections lying too far behind the introduction of local suffrage. It is



therefore most likely that male voters compare post-suffrage election results with the most recent election before local women had the vote. I can further not include more post-suffrage elections, since they all take place long after 1971. By the time of the national referendum in 1971, male voters can therefore not observe the results or forecasts of these elections.

For this purpose, I created an original panel data-set on cantonal parliament elections between 1967-1974. All election records were retrieved from the eight cantonal archives.<sup>13</sup> For seven of the eight cantons, I was able to collect and code the municipal vote shares of each party in the pre- and post-suffrage election. For the canton of Schaffhausen (SH), electoral results were only recorded at the district level. For my analyses of party vote share changes at the municipality level, I therefore had to drop this canton from the sample.

Cantonal elections are held every four years. They all use PR system. Switzerland has four main parties, which run in almost all localities along with several fringe parties. These four parties are the Socialist Party (*SP*), the Christian-Democrats (*CVP/EVP*), the Free Democratic Party (*FDP*, former *FDP/LPS*) and the Swiss People's Party (*SVP*, former *BGB/DP*). The order on a left-right scale of these four parties would be the same as the order they were mentioned in.

For the fringe parties, the number and type running in cantonal elections varies between years and cantons. But fringe parties can almost always be associated with one of the four main parties. As a second step, I therefore aggregated them together with the main parties into four party blocks: *Socialist*, *conservative*, *liberal* and *right-wing populist* parties.

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<sup>13</sup>The same dataset on cantonal elections and municipal expenditure is used in Hofstetter (2020).

In addition, I created a fifth party block for usually smaller parties, which could not be associated with any of the four main parties. This block is called *independent*. The largest among these independent parties was the Alliance of Independents (*LdU*), which existed from 1936-1999 and ran a policy platform that could be located at the center of a left-right scale.

Table 2.4.1 lists the pre-suffrage averages for the five party blocks in the sample cantons that narrowly rejected (approved) their cantonal referendum.<sup>14</sup> At the time, the right-wing populist block had the highest average vote share, followed by the conservatives, the liberals, the left, and independent parties. This distribution reflects the rather conservative Swiss political landscape. However, we can also observe considerable variation in vote shares across and within the cantons.

Variable	Cantons Narrowly				Overall	
	Rejected Referendum		Approved Referendum			
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Left parties' vote share	16.3	14.9	25.1	18.4	21.9	17.7
Conservative parties' vote share	37.0	23.9	18.9	25.2	25.2	26.2
Independent parties' vote share	2.1	9.7	1.4	4.0	1.6	6.7
Liberal parties' vote share	38.2	20.8	14.8	14.7	23.2	20.5
Populist parties' vote share	4.2	8.7	39.8	28.8	26.9	29.2

Table 2.4.1.: Pre-suffrage means and standard deviations for municipal party vote shares (in %) for the sample cantons with a narrowly rejected or approved referendum on female suffrage, since 1940.

**Change in municipal expenditure.** Male voters may further update their beliefs about women after observing changes in local policy. Since party platforms could change as a response to local suffrage, men may rely more on policy outcomes to observe actual change in political outcomes. Unlike party vote shares in an election, municipal expen-

<sup>14</sup>For a municipal party vote share averages listed by canton, see Table B.2.1 in Appendix section B.2

diture is a direct policy outcome.

I therefore calculated the difference in municipal expenditure in the year before and in the year after local suffrage was introduced. Again, I only use the last year before and the first year after, because men are most likely to remember and associate the most recent change with the introduction of women’s vote. Including more years after suffrage would further go beyond 1971 for some cantons. To keep year observations across cantons balanced, I therefore include only the first year after suffrage for all eight cantons.

To retrieve this data, I located the annual budget reports for each municipality and each year I could find in the cantonal archives and the Swiss National Library. Out of these, I coded an original panel data-set on total expenditure between 1967-1970 for all eight cantons in my sample, and social welfare expenditure for all but the canton of Ticino (TI). Ticino’s municipalities only kept records of their total expenditure.

Table 2.4.2 lists the pre-suffrage averages for municipal expenditure in the sample cantons that narrowly rejected (approved) their cantonal referendum.<sup>15</sup>

Variable	Cantons Narrowly				Overall	
	Rejected Referendum		Approved Referendum			
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Total expenditure	4,730,724	36,445,307	3,048,340	13,144,636	146,560	1,544,652
Total expenditure p.c.	462	704	1,182	3,621	552	1,460
Social welfare	929,273	4,170,934	281,627	1,259,229	737,833	3,578,959
Social welfare p.c.	27	54	73	487	43	291

Table 2.4.2.: Pre-suffrage means and standard deviations for municipal expenditure (in CHF) for the sample cantons with a narrowly rejected or approved referendum on female suffrage, since 1940.

<sup>15</sup>For a municipal expenditure averages listed by canton, see Table B.2.3 in Appendix section B.2

**Change in municipal census data.** At last, male voters may associate changes outside of politics with the introduction of local suffrage. For example, changes in the local gender culture may affect men’s support for a national franchise extension to women. In order to proxy such cultural change at the municipality level, I use trends in female labour market participation and the size of the female and the married population at the municipality level between 1960 and 1970.

I coded the historical census data at the Swiss municipality level for all eight cantons in my sample for the census years in 1960, 1970, and 1980. Figure B.3.1 in the Appendix section B.3 shows the trends in all three census outcomes over the years in municipalities of cantons, which narrowly approved (rejected) local female suffrage in their cantonal referenda between 1966-1971.

Variable	Cantons Narrowly				Overall	
	Rejected Referendum		Approved Referendum			
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Employed women	329	997	528	2,716	391	1,724
Employed women p.c.	0.22	0.07	0.22	0.07	0.22	0.07
Women	1,207	3,002	982	4,152	1,055	3,816
Women p.c.	0.50	0.03	0.50	0.19	0.50	0.16
Married residents	1,207	4,089	879	3,702	987	3,835
Married residents p.c.	0.44	0.24	0.44	0.15	0.44	0.19

Table 2.4.3.: Pre-suffrage means and standard deviations for municipal female labour market participation, female and married population for the sample cantons with a narrowly rejected or approved referendum on female suffrage, in 1960.

## 2.5. Results

The main findings are shown in Table 2.5.1 for all Swiss cantons, and in Table 2.5.2 for the subsample of eight cantons, which had narrow cantonal referendum outcomes on lo-

cal female suffrage between 1966-1972. In aggregate, female suffrage caused an increase in the Yes-vote share for a national franchise extension to women in 1971.

However, municipalities, which already favoured female suffrage in 1959 show a negative effect of local enfranchisement on their growth in support. This differential impact could be driven by a ceiling effect. A ceiling effect could occur if municipalities, which had already high approval rates in 1959, could not increase much more. Since Yes-vote shares can only reach a maximum of 100%.

I therefore re-ran the analysis after conditioning the sample on municipalities, which had a similar Yes-vote share between 30-60% in 1959. As we can see in the second column of both tables, the total effect in those municipalities turns positive, but remains smaller than in municipalities, which opposed national suffrage in 1959.

This differential impact suggests that initially unfavourable municipalities experienced local female suffrage differently from favourable ones. This could for example be due to the information, which the local franchise extension revealed about women's political preferences. This possible mechanism connects with findings in Hofstetter (2020). The study shows that women's suffrage caused a right-wing shift in electoral and expenditure outcomes at the municipality level.

Observing political changes could induce men to update their beliefs about the new voters. For example, if public opinion believed that women have more left-wing preferences than men. Male voters on the right of the political spectrum may therefore increase their support of women's vote after updating their belief about women's left-wing preferences. Indeed, anecdotes from pre-suffrage years suggest that many people believed

that Swiss women were going to vote more left than men, and therefore expected an opposite effect.<sup>16</sup>

Another possible mechanism could be that male voters updated on the cultural effects female suffrage has. An example could be if enfranchisement had a broader emancipating effect on women, such as increasing their labour market participation. In the next section, I therefore test for those potential mechanisms behind the main effects.

Table 2.5.1.: All Swiss cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>			
	Yes-vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	10.345*** (0.936)	11.114*** (0.919)	7.786** (3.507)	8.369** (3.520)
Enfranchised x In favour in 1959		-16.652*** (4.302)		-5.416** (2.243)
Municipality FEs	✓	✓	✓	✓
Year effects	✓	✓	✓	✓
Match on 1959 Yes-voteshare			✓	✓
Within R-squared	0.084	0.136	0.02	0.045
Observations	4361	3956	968	968

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

<sup>16</sup>For anecdotal evidence, see e.g. New Zurich Newspaper (NZZ), “Gegnerinnen der Gleichberechtigung” (Enemies of (Gender) Equality), 6 February 2011, Banaszak (1996) or Ruckstuhl (1991).

Table 2.5.2.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>			
	Yes-vote share (in %)			
	(1)	(2)	(3)	(4)
Enfranchised	6.222*** (0.988)	7.095*** (0.941)	8.481** (3.951)	9.114** (3.970)
Enfranchised x In favour in 1959		-13.378*** (4.964)		-4.688* (2.741)
Municipality FEs	✓	✓	✓	✓
Year effects	✓	✓	✓	✓
Match on 1959 Yes-voteshare			✓	✓
Within R-squared	0.068	0.13	0.056	0.088
Observations	2054	2036	431	431

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

## 2.6. Possible Mechanisms

Results in this section are exclusively shown for the sample of eight cantons. Three different possible mechanisms are tested. All three suggest an information-related narrative: Male voters changed their support for national suffrage upon observing local changes after women's franchise was granted in their municipality.

**Change in municipal party vote shares.** The first way by which local female suffrage could reveal information is through a change in election outcomes. In Table 2.6.1, we can see only weak evidence that the change in municipal party vote shares is driving the effect of local suffrage on approval rates for a national franchise extension.

The negative and weakly significant coefficient suggests that municipalities experiencing a larger increase in their conservative parties' vote share experienced a lower increase in support for national female suffrage. Hofstetter (2020) finds that female suffrage caused a positive impact on the municipal vote share of conservative parties. Hence, these two findings match, even though the association is weak.

One percentage point deviation from the cantonal average change in conservative parties' vote share decreased the municipal Yes-vote share by 0.169%. As we can see in Table 2.6.2, municipalities that were in favour of suffrage in 1959 show no significantly different association. But their coefficient is positive and relatively large. Hence, in favourable municipalities, one percentage point deviation from the cantonal average change in conservative parties' vote share is associated with a 0.124% increase in support for suffrage.



Table 2.6.1.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>				
	Yes-vote share (in %)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	6.155*** (1.025)	6.155*** (1.022)	6.155*** (1.023)	6.155*** (1.024)	6.155*** (1.023)
Enfranchised x $\Delta$ Left vote share	0.011 (0.105)				
Enfranchised x $\Delta$ Conservative vote share		-0.169* (0.095)			
Enfranchised x $\Delta$ Independent vote share			0.336 (0.205)		
Enfranchised x $\Delta$ Liberal vote share				-0.072 (0.089)	
Enfranchised x $\Delta$ Populist vote share					0.110 (0.076)
Municipality FEs	✓	✓	✓	✓	✓
Year effects	✓	✓	✓	✓	✓
Within R-squared	0.067	0.076	0.073	0.069	0.074
Observations	1954	1954	1954	1954	1954

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table 2.6.2.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>				
	Yes-vote share (in %)				
	(1)	(2)	(3)	(4)	(5)
Enfranchised	7.044*** (0.974)	7.033*** (0.970)	7.039*** (0.971)	7.042*** (0.973)	7.037*** (0.971)
Enfranchised x $\Delta$ Left vote share	0.003 (0.103)				
Enfranchised x $\Delta$ Conservative vote share		-0.173* (0.098)			
Enfranchised x $\Delta$ Independent vote share			0.316 (0.200)		
Enfranchised x $\Delta$ Liberal vote share				-0.059 (0.086)	
Enfranchised x $\Delta$ Populist vote share					0.105 (0.071)
Enfranchised x In favour in 1959	-13.559** (5.254)	-13.693** (5.389)	-13.548** (5.294)	-13.486*** (5.204)	-13.550** (5.318)
Enfranchised x $\Delta$ Left vote share x In favour in 1959	0.122 (0.668)				
Enfranchised x $\Delta$ Conservative vote share x In favour in 1959		0.297 (0.450)			
Enfranchised x $\Delta$ Independent vote share x In favour in 1959			-0.190 (2.173)		
Enfranchised x $\Delta$ Liberal vote share x In favour in 1959				-0.158 (0.476)	
Enfranchised x $\Delta$ Populist vote share x In favour in 1959					-0.074 (0.586)
Municipality FEs	✓	✓	✓	✓	✓
Year effects	✓	✓	✓	✓	✓
Within R-squared	0.13	0.138	0.135	0.074	0.073
Observations	1936	1936	1936	1936	1936

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

**Change in municipal expenditure.** In the same paper, Hofstetter (2020) further finds that local suffrage caused a drop in municipal expenditure. Men may therefore update on women's policy preferences after a local franchise extension. The results in Table 2.6.3 provide however no evidence that an increase in total or social welfare expenditure mediated the effect suffrage had on male approval of national suffrage.

The coefficients are negative, but not significant. However, their magnitude is large: One percentage point deviation from the cantonal mean percentage change in total expenditure is associated with a 1.812% decrease in the municipal Yes-vote share. For social welfare expenditure, the decrease per percentage point deviation from the cantonal average is even 4.213%.

Results in Table 2.6.4 do not indicate any differences in this effect between municipalities favourable or unfavourable towards suffrage in 1959. Due to the small sample size, this analysis is however too low-powered to make any conclusions.

Table 2.6.3.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>	
	Yes-vote share (in %)	
	(1)	(2)
Enfranchised	5.347* (2.856)	5.812** (2.773)
Enfranchised x $\Delta \log(\text{Total expenditure})$	-1.812 (10.854)	
Enfranchised x $\Delta \log(\text{Social welfare})$		-4.213 (3.076)
Municipality FEs	✓	✓
Year effects	✓	✓
Within R-squared	0.061	0.08
Observations	720	705

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table 2.6.4.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>	
	Yes-vote share (in %)	
	(1)	(2)
Enfranchised	5.805* (2.975)	6.256** (2.922)
Enfranchised x $\Delta \log(\text{Total expenditure})$	-1.540 (10.787)	
Enfranchised x $\Delta \log(\text{Social welfare})$		-3.718 (2.775)
Enfranchised x In favour in 1959	-5.980 (3.953)	-3.530 (5.108)
Enfranchised x $\Delta \log(\text{Total expenditure})$ x In favour in 1959	-18.329 (12.608)	
Enfranchised x $\Delta \log(\text{Social welfare})$ x In favour in 1959		-7.324 (6.792)
Municipality FEs	✓	✓
Year effects	✓	✓
Within R-squared	0.068	0.085
Observations	704	689

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

**Change in municipal census data.** Finally, men may also learn about the effects female suffrage had on cultural outcomes, such as gender roles. I proxy these changes with municipal changes in female employment and the married population between the Swiss census years in 1960, 1970 and 1980. Table 2.6.5 shows no evidence that the effect of local suffrage is mediated by any of these two proxies. I further test if changes in the size of the female population within a municipality drove the effect. An increasing share of women in a municipality could also change the local gender culture.

I find no evidence for this hypothesis. But magnitudes of the interaction effects are again quite large: One percentage point deviation from the cantonal average percentage change in employed women is associated with a 0.864% decrease in the municipal Yes-vote share. Similarly, a one percentage point deviation from the cantonal mean change in the number of women is associated with a 0.645% increase in the municipal Yes-vote share. For the number of married persons, the associated increase is 5.973%.

My data has no observations for female employment in municipalities, which were in favour of suffrage in 1959. Table 2.6.6 therefore only shows the triple interaction between local suffrage, being favourable and the change in number of female and married residents. Coefficients for municipalities unfavourable towards suffrage look very similar to the aggregate analysis. Again, interaction effects are under-powered and therefore allow no conclusions.

Table 2.6.5.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>		
	Yes-vote share (in %)		
	(1)	(2)	(3)
Enfranchised	4.276 (2.639)	6.145*** (1.182)	6.097*** (1.151)
Enfranchised x $\Delta \log(\text{Employed women})$	-0.864 (7.638)		
Enfranchised x $\Delta \log(\text{Female population})$		0.645 (1.705)	
Enfranchised x $\Delta \log(\text{Married population})$			5.973 (4.022)
Municipality FEs	✓	✓	✓
Year effects	✓	✓	✓
Within R-squared	0.046	0.063	0.075
Observations	765	1758	1796

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.

Table 2.6.6.: Eight cantons - Impact of female suffrage on municipal yes-vote share in national referendum

	<i>Dependent variable:</i>		
	Yes-vote share (in %)		
	(1)	(2)	(3)
Enfranchised	4.276 (2.639)	7.069*** (1.120)	6.990*** (1.087)
Enfranchised x $\Delta \log(\text{Employed women})$	-0.864 (7.638)		
Enfranchised x $\Delta \log(\text{Female population})$		0.789 (1.659)	
Enfranchised x $\Delta \log(\text{Married population})$			4.790 (3.657)
Enfranchised x In favour in 1959		-13.793** (6.120)	-13.088** (5.919)
Enfranchised x $\Delta \log(\text{Female population})$ x In favour in 1959		-6.873 (36.598)	
Enfranchised x $\Delta \log(\text{Married population})$ x In favour in 1959			19.078 (34.744)
Municipality FEs	✓	✓	✓
Year effects	✓	✓	✓
Within R-squared	0.046	0.131	0.136
Observations	765	1741	1779

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Robust standard errors clustered at the cantonal level in parentheses.



## 2.7. Conclusion

This paper studies mechanisms to explain why voters may support a franchise extension. Specifically, I study men's support for an extension of voting rights to women. I estimate the impact exposure to local female suffrage has on municipal approval rates for a Swiss national referendum on female suffrage between 1959 and 1971. In order to identify a plausibly causal impact, I exploit quasi-random franchise extensions of local female suffrage in eight Swiss cantons through close cantonal referenda between 1966-1971.

My findings show that exposure to local female suffrage caused an increase in male support for a national franchise extension. However, this increase is much larger in municipalities, which did initially not approve national women's vote in 1959. This impact cannot be explained through a simple ceiling effect.

Results show further no evidence that post-suffrage changes in local elections or expenditure mediated the increase in male support. I can therefore not corroborate the hypothesis that revealed information about the new voters' political preferences caused the change in male approval rates. I further find no evidence that the change is driven by cultural trends, proxied by municipal female labour market participation and marriage rates.

## B. Appendix

### B.1. Sample Description

Referendum in	<i>Yes</i> -vote share	Suffrage right voted on	Canton
1968	52.1%	Municipal	Bern (BE)
1969	50.8%	Municipal (education policy)	Thurgau (TG)
1971	51.7%	Cantonal and municipal	Aargau (AG)

Referendum in	<i>Yes</i> -vote share	Suffrage right voted on	Canton
1966	48.3%	Cantonal and municipal	Ticino (TI)
1968	47.3%	Municipal	Solothurn (SO)
1969	47.2%	Cantonal and municipal	Schaffhausen (SH)
1970	47.3%	Municipal	St. Gallen (SG)
1971	47.0%	Cantonal and municipal	Schwyz (SZ)

Table B.1.1.: The eight cantons with a narrow cantonal referendum outcome on female suffrage. At the top: The three cantons, which narrowly approved their referendum with a *Yes*-vote share below 53%. At the bottom: The five cantons, which narrowly rejected their referendum with a *Yes*-vote share at or above 47%.

## B.2. Descriptives

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Left parties' vote share	25.9	16.9	26.2	20.0	11.1	10.3	-	-	24.8	19.8	8.6	13.4	18.5	12.2	15.8	12.0
Conservative parties' vote share	30.6	25.8	9.1	19.7	51.8	25.3	-	-	25.8	20.0	29.5	32.9	30.8	27.1	35.6	18.8
Independent parties' vote share	3.7	5.4	0.3	2.5	3.8	5.1	-	-	0.5	2.2	15.4	34.6	0.0	0.3	0.2	0.7
Liberal parties' vote share	14.3	10.6	14.9	17.3	30.2	18.7	-	-	48.9	21.1	12.7	18.5	15.6	11.2	40.4	17.3
Populist parties' vote share	25.5	20.6	49.4	30.0	1.8	5.0	-	-	0.0	0.0	1.8	8.1	35.0	25.2	8.0	10.9

Table B.2.1.: Pre-suffrage means and standard deviations for municipal party vote shares (in %) for each canton since 1940.

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Entitled voters	396	544	556	2,413	936	1,886	-	-	431	806	831	856	597	672	220	475
Election turnout	85.7	6.6	74.2	13.7	77.2	7.7	-	-	89.7	8.8	62.4	13.7	79.3	6.7	75.8	13.6

Table B.2.2.: Pre-suffrage means and standard deviations for number of entitled voters and election turnout (in %) for each canton since 1940.

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Total expenditure	903,583	1,642,204	9,877,831	25,953,863	809,744	1,697,612	61,082,583	124,936,494	1,046,472	2,609,276	1,107,671	1,596,802	1,991,222	1,769,748	337,654	1,544,652
Total expenditure p.c.	989	1,015	2,031	7,560	444	390	-	-	1,029	1,615	778	1,169	420	322	391	529
Social welfare	25,931	70,994	1,077,764	2,434,568	21,607	61,078	4,099,693	8,198,749	36,651	161,885	124,898	215,664	218,668	270,576	-	-
Social welfare p.c.	19	21	267	1,031	11	28	-	-	16	38	73	79	38	37	-	-

Table B.2.3.: Pre-suffrage means and standard deviations for municipal expenditure (in CHF) for each canton since 1940.

Variable	AG		BE		SG		SH		SO		SZ		TG		TI	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Employed women	323	556	1,099	4,824	526	1,523	214	828	232	551	297	350	256	467	-	-
Employed women p.c.	0.23	0.05	0.18	0.05	0.23	0.06	0.18	0.05	0.23	0.07	0.20	0.07	0.23	0.08	-	-
Women	811	1,188	1,031	4,791	1,932	4,513	830	2,765	824	1,635	1,225	1,289	907	1,469	-	-
Women p.c.	0.49	0.02	0.50	0.22	0.50	0.02	0.49	0.03	0.49	0.03	0.49	0.03	0.49	0.03	-	-
Married residents	735	1,111	923	4,268	2,105	6,707	761	2,600	761	1,510	962	985	800	1,323	-	-
Married residents p.c.	0.43	0.05	0.44	0.18	0.44	0.42	0.43	0.04	0.44	0.04	0.38	0.03	0.43	0.05	-	-

Table B.2.4.: Pre-suffrage means and standard deviations for municipal female labour market participation, female and married population for each canton in 1960.

### B.3. Census Data

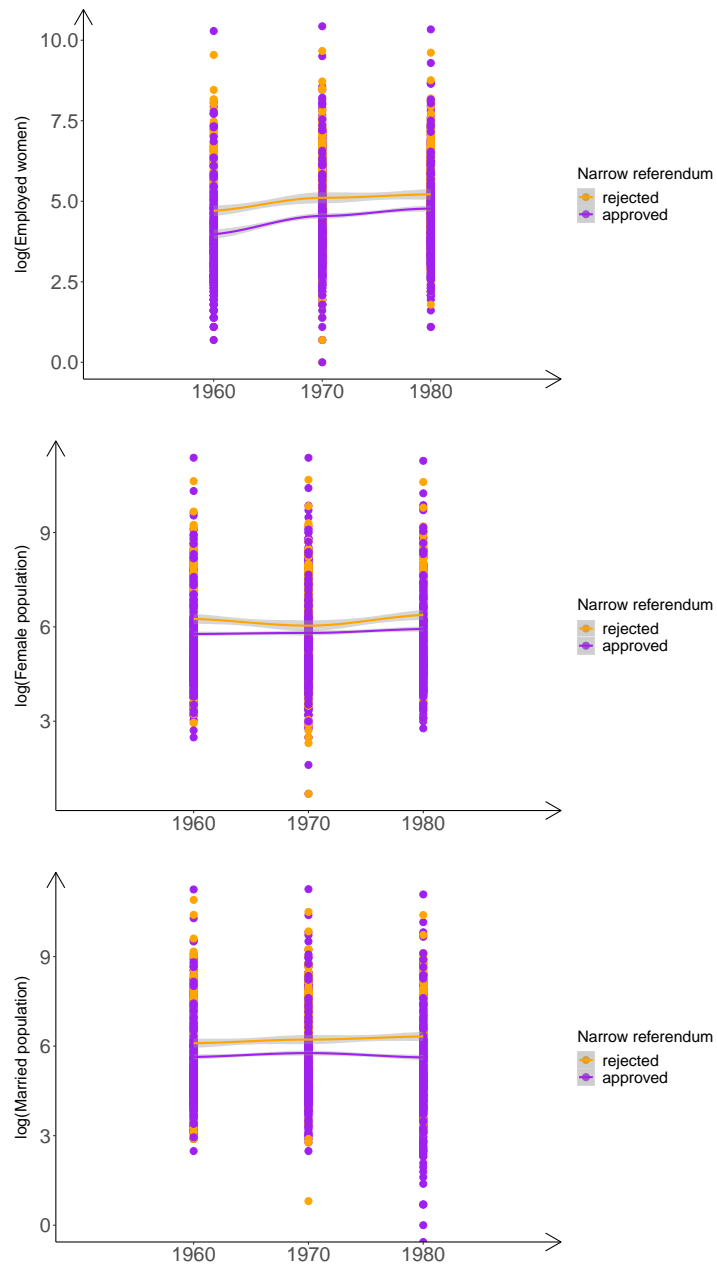


Figure B.3.1.: Municipal trends in number of employed women, number of women, and number of married residents in the eight sample cantons, which narrowly rejected (approved) local female suffrage between 1960-1980.

## B.4. Pre-suffrage Parallel Trends

Difference in differences rely on the parallel trends assumption (Steigerwald et al., 2020; Angrist and Pischke, 2009). This assumption can by definition not be tested, because we never observe a municipality-level Yes-vote share both with and without female suffrage in the same national referendum year. I can further not provide evidence that municipalities had no differential trends in Yes-vote shares before female suffrage was introduced. Because evidence against differential trends would require that I could already observe Yes-vote shares at least two years before local female suffrage was introduced. We have however only one national referendum year before suffrage, which is in 1959.

Instead, I provide evidence against pre-trending in most election and expenditure outcomes within the eight cantons in my sample. Figure B.4.2, B.4.1 and B.4.3 show autocorrelation-robust results (Bertrand et al., 2004) for pre-trending one (Placebo 1-year), two (Placebo 2-year) and three (Placebo 3-year) (election) years before female suffrage was introduced. Most of the placebo effects are not only insignificant, but also close to zero.

An exception are electoral turnout, independent parties' vote share and social welfare. For electoral turnout and social welfare, the placebos suggest a positive pre-trend two years before suffrage was introduced. However, the pre-trending coefficient for turnout is almost zero. For social welfare and independent parties' vote share, the effect is larger. Still, the overall evidence against differential pre-suffrage trends dominates. This finding allows for more confidence that the estimated difference in differences are not confounded by underlying differential trends between treated and control cantons.

### B.4.1. In Municipal Party Vote Shares

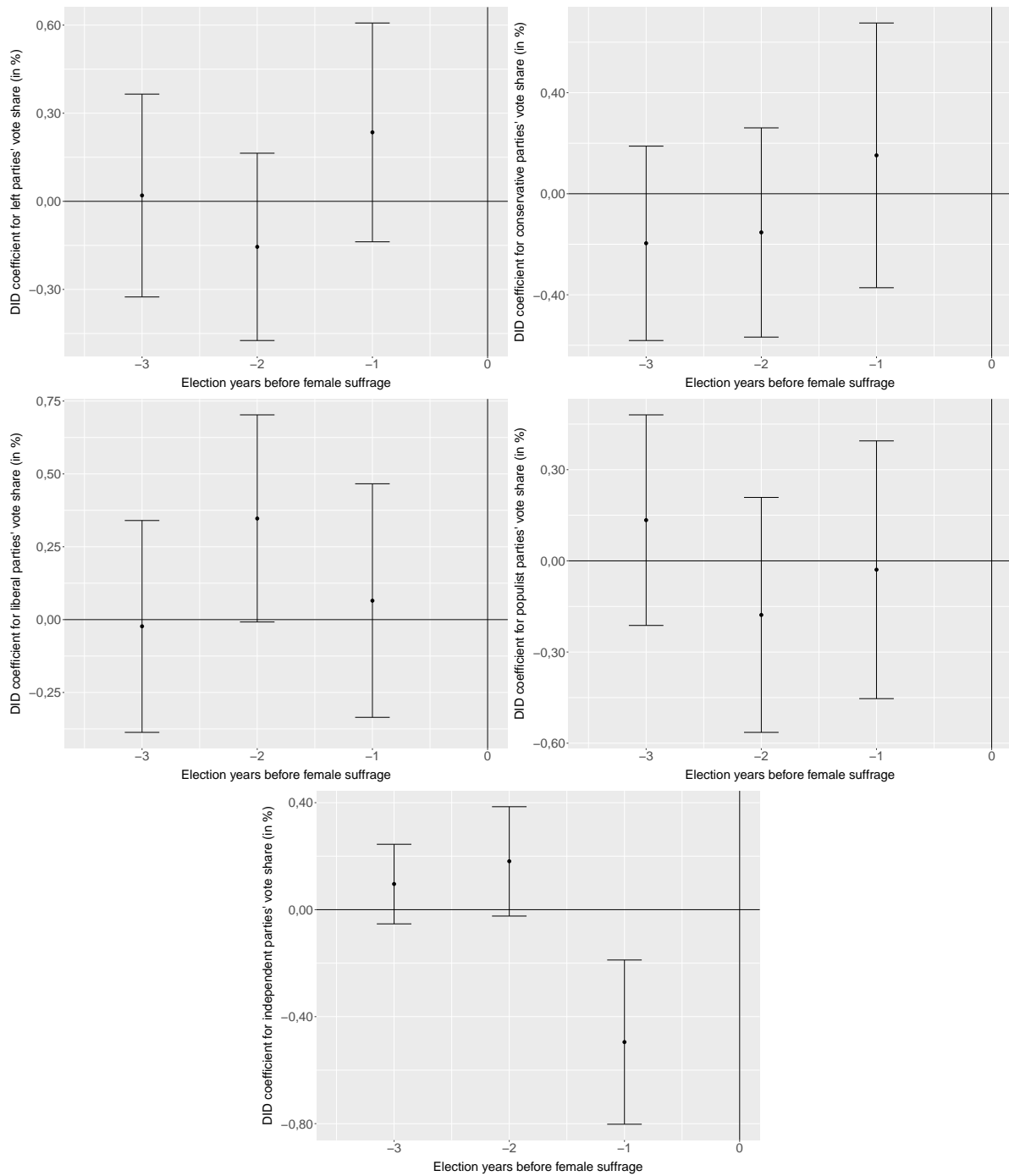


Figure B.4.1.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three elections before women's enfranchisement.

## B.4.2. In Municipal Number of Entitled Voters and Turnout

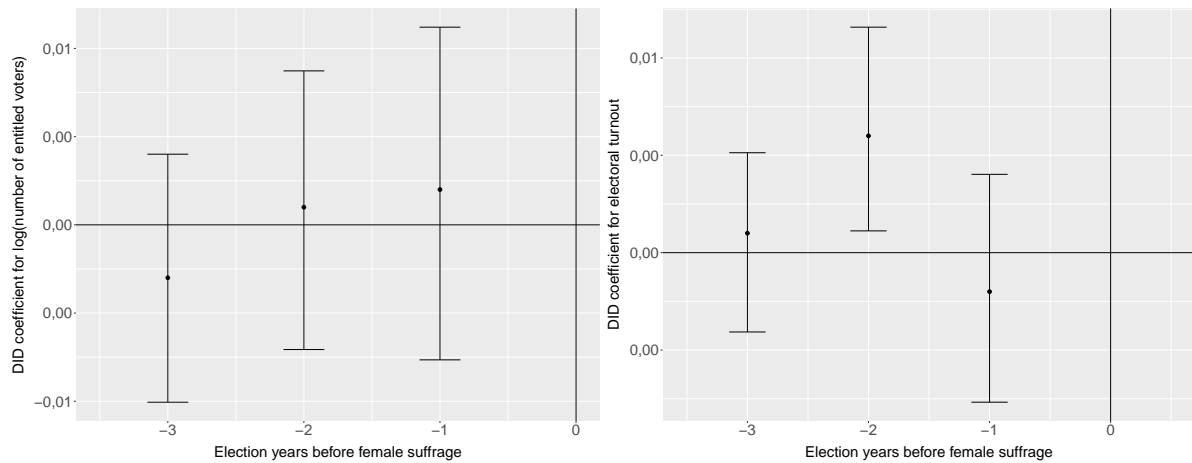


Figure B.4.2.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three elections before women's enfranchisement.

## B.4.3. In Municipal Expenditure

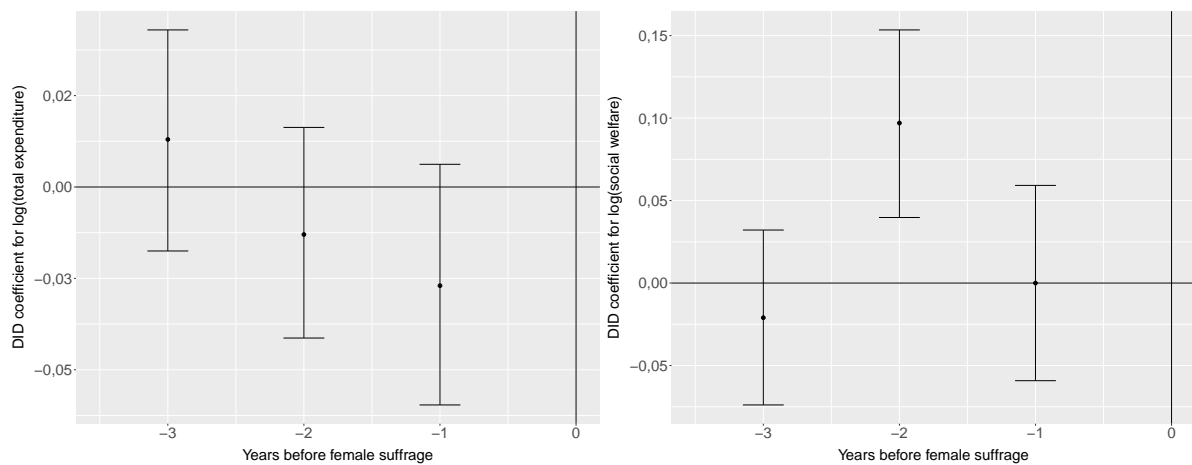


Figure B.4.3.: Autocorrelation-robust DID point estimates (Bertrand et al., 2004) and 0.95-confidence intervals for sample including one, two and three years before women's enfranchisement.



# 3. Partisan Incumbency Disadvantage

## A Revised Empirical Strategy To Identify It

**Abstract:** Partisan incumbency disadvantage is the extent to which a candidate is impeded by her party's incumbency status in an open-seat race. The current literature suggests its prevalence in young democracies and explains it through weak parties or corruption. However, we show that canonical regression discontinuity designs (RD) to estimate this quantity can be downward biased. Cause is an imbalance in voters' uncertainty about the candidate's quality at the RD cut-off. We propose a revised empirical strategy to circumvent bias. With data from Brazilian mayoral elections in 1996-2012, we apply both the canonical and the revised strategy to identify the electoral disadvantage incumbent parties face. We find that using the new approach cuts the effect by three quarters (from -13.2% to -3.1%).

### 3.1. Introduction

Incumbency effects remain among the most widely tested theories in empirical political economy.<sup>1</sup> The literature distinguishes between a personal and a partisan incumbency effect (Magalhaes, 2015; Erikson and Titiunik, 2015; Fowler and Hall, 2014). It is of

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<sup>1</sup>Important contributions include: Erikson (1971); Fiorina (1977); Alford and Hibbing (1981); Cain et al. (1987); Gelman and King (1990); King (1991); Cox and Morgenstern (1993); Cox and Katz (1996); Levitt and Wolfram (1997); Ansolabehere et al. (2000); Ansolabehere and Snyder Jr (2002); Lee (2008); Ferreira and Gyourko (2009).

substantive interest if it is her individual or her party's incumbency status that affect a candidate's chances of being elected.

In the US, studies find a clear incumbency advantage<sup>2</sup>, and research in other established democracies shows similar effects (e.g., Kendall and Rekkas (2012); Hainmueller and Kern (2008)). In younger democracies such as in Latin America or Eastern Europe, however, evidence suggests an incumbency *disadvantage* (e.g., Klasnja and Titunik (2017); Ariga (2015); Klasnja (2015a)).

Given its important implications for young democracies, this article focuses on the latter. More specifically, the quantity of interest is partisan incumbency disadvantage. Following Fowler (2016), this quantity is the extent to which a candidate is impeded by her party's incumbency status in an open-seat race.

Across the literature, most interpretations of incumbency effects are negative for democracy. Partisan incumbency disadvantage, specifically, suggests flawed electoral accountability allowing incumbents to behave badly, for example by slacking off (Klasnja and Titunik, 2017) or by engaging in corruption (Klasnja, 2015b).

In contrast to these conclusions, some authors offer an explanation based on differences in candidate quality (Eggers, 2017; Ashworth and de Mesquita, 2008; Carson et al., 2007). According to them, incumbency effects may occur, because the best candidates win. "Best" candidates have the highest expected performance in office, or are the most successful at generating turnout (Carson et al., 2007).<sup>3</sup>

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<sup>2</sup>For a comprehensive review and critical appraisal of the literature on the US, see Lee (2008); Caughey and Sekhon (2011); Sekhon and Titunik (2012).

<sup>3</sup>Performance could be measured by how close an incumbent moves policy towards the average voter's preference.

In this article, we argue that the current empirical strategy to identify partisan incumbency disadvantage fails to take candidate quality and voters' uncertainty about it into account. Today's dominant empirical strategy to identify incumbency effects is the regression discontinuity design (RD; Lee (2008)). It exploits close elections to estimate the effect of a party's victory or loss in an election on its success in the next one.

Most studies that use this generic RD cannot disentangle a personal from a partisan incumbency effect. We therefore focus on a literature, which uses a variation of this RD to identify the partisan incumbency effect only. Findings from this literature show a large partisan incumbency disadvantage in mayoral elections in Latin America (Klasnja and Titiunik, 2017) and Romania (Klasnja, 2015a), and a null finding (with a negative sign) in US state legislature elections (Fowler and Hall, 2014).

Their empirical strategy uses RD in combination with candidate term limits.<sup>4</sup> In this RD, all close races include an incumbent candidate against contenders. The incumbent's party only maintains incumbency status if she narrowly wins. If she wins, she faces a term limit and cannot run again. Hence, her (still incumbent) party needs to run with a new candidate in the next election.

However, the term limit is not triggered for an incumbent candidate who narrowly loses, and hence becomes the runner-up. Her (no longer incumbent) party can run with her or a new candidate in the next election. Hence, the idea is that parties above the RD cut-off maintained incumbency status, while parties below lost it, both by a narrow margin.

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<sup>4</sup>Candidates can serve for a maximum of two terms.

In this RD, the partisan incumbency disadvantage is the negative difference in the probability of winning between candidates from parties that narrowly maintained incumbency status and candidates from parties which narrowly lost it.

We first show theoretically that this strategy introduces the risk of a downward bias. Cause is an imbalance in voters' uncertainty about the candidate's quality at the RD cut-off. New candidates above the cut-off frequently face the runner-up from the previous election, while candidates below the cut-off are often runner-ups themselves running against the incumbent against whom they just narrowly lost.

In expectation, both voters and parties are more certain about a runner-up's or an incumbent's quality than about a new candidate's (Prato and Wolton, 2018; Carrillo and Mariotti, 2001). While voters learn about new candidates' quality during the current campaign, voters already learned about re-running candidates' during their previous campaigns or while they served in office.

Therefore, risk-averse parties and voters prefer them over new candidates. Hence, an RD estimate is not only capturing the effect of the party's incumbency status, but also the effect of voters' higher uncertainty about the candidate's quality. Fowler and Hall (2014) address this potential bias by assuming that runner-up re-running rates are close to zero in US state legislatures.

We show that downward bias increases with voters' risk aversion as well as their uncertainty about new candidates' quality, both of which might be higher in young than in old democracies. For example, old democracies like the US may conduct a more rigorous recruiting process for new candidates (Carson et al., 2007), which leads to lower variance

in new candidates' quality and hence to smaller downward bias. This could explain why RD estimates in the US are less negative than e.g. in Latin America.

In a second step, we propose a revised empirical strategy without term limits to circumvent the risk of bias. To test our theory empirically, we replicate the study by Klasnja and Titiunik (2017) using Brazilian mayoral elections from 1996-2012 to show that the canonical estimation they use may indeed be biased.

We base this concern on two observations in the data. One, within the close elections of the RD, we find that re-running rates among runner-ups are far beyond the necessary assumption of zero: 24.3% of runner-ups re-run in their municipality's next election after they lost.

The second observation is that in the next election after a close race, candidates of marginally winning incumbent parties are significantly younger (-8.6 years) than their counterfactuals. If age is a strong proxy for years spent in politics, then this finding suggests that new candidates above the cut-off are less experienced. Less experience means that candidates have spent fewer years campaigning or serving in office. Therefore, voters know less about them and, hence, are more uncertain about their quality.

Finally, we apply our revised empirical strategy to the replicated sample and find that the partisan incumbency advantage is cut by three quarters from the initial result (from -13.2% to -3.1%). We further show that our strategy largely increases the RD sample size, allowing for more robust inference, and that candidate's age is now smooth at the RD cut-off.

## 3.2. Theory

### 3.2.1. The Canonical Empirical Strategy

Figure 3.2.1 shows how the current literature estimates the partisan incumbency effect. The canonical empirical strategy is a regression discontinuity design (RD) with a close election in year  $t$ . In the figure, we use party  $A$  as unit of analysis, with  $B$  as competitor party. The model's predictions are the same if elections have more than two parties.

Comparing average election outcomes of candidates from incumbent and non-incumbent parties would be confounded, since the variation across candidates is most likely driven by more than just the difference in their parties' incumbency status. Therefore, state of the art is to control for such endogeneity with a robust bias-corrected RD (Calonico et al., 2014). The RD's forcing variable is the vote share margin between the first- and second-ranked candidate in the mayor elections.

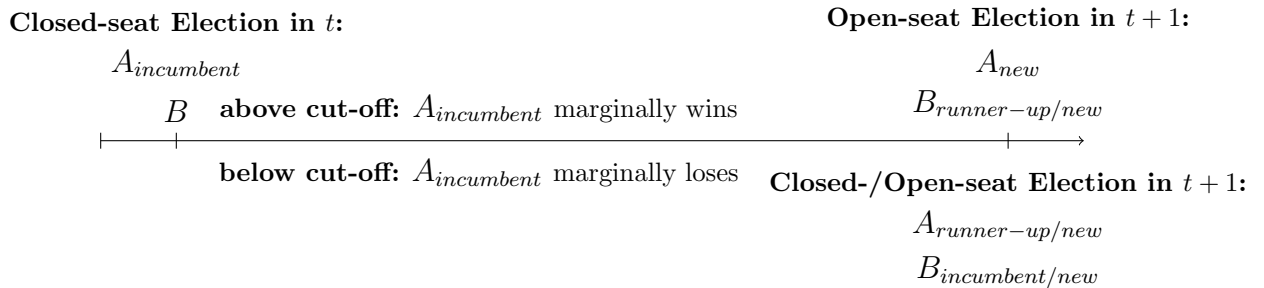


Figure 3.2.1.: **RD estimation from current literature:** The effect of incumbent party  $A$  winning a close election in  $t$  on its probability of unconditional victory in  $t + 1$ .

In the canonical RD, party  $A$  wins the election in  $t - 1$  and is therefore the incumbent party in  $t$  who re-runs for office with its incumbent candidate (i.e.  $A_{incumbent}$ ). Given that politicians can only stay for two consecutive terms in office,  $A$ 's candidate faces a

term limit if she narrowly wins in  $t$ . Hence,  $A$  needs to run with a new candidate in  $t + 1$  (i.e.  $A_{new}$ ). In the counterfactual case,  $A$ 's candidate narrowly loses the election in  $t$  and is therefore the runner-up.  $A$  can run again with the runner-up in  $t + 1$ , or with a new candidate (i.e.  $A_{runner-up/new}$ ).

In both cases,  $A$  can also decide to not run at all. The current literature does not condition on  $A$  (or any of the competitor parties) actually running in  $t + 1$ , since  $A$ 's likelihood to re-run might systematically differ at the cut-off (Magalhaes, 2015).<sup>5</sup> The outcome we study is therefore the likelihood of victory by the incumbent party in the next election, unconditional on actually running in  $t + 1$ .

Relying on a weaker identification assumption (Cattaneo et al., 2019; Sekhon and Titiunik, 2017), we expect that everything but incumbency status varies smoothly at the RD cut-off where the winner and the runner-up tie. If and only if this assumption holds, the partisan incumbency disadvantage is identified. The intuition is that we compare the probability of winning between two very similar candidates in  $t + 1$ , which differ only by their party's incumbency status. Since  $A$ 's candidate faces a term limit if she wins in  $t$ , the estimated effect should be caused by the *party's* incumbency status and not by the candidate's.

### 3.2.2. The Model

We present a simple model to show how term limits can introduce bias to the canonical RD estimator. The model is theoretically founded in a model on electoral competition by Carrillo and Mariotti (2001).<sup>6</sup>

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<sup>5</sup>For example, marginal losers in  $t$  might be less frequent re-runners in  $t + 1$  than marginal winners.

<sup>6</sup>In their model, parties are risk-averse and therefore choose in expectation to re-run with their candidate from the preceding election instead of a new candidate whose quality is uncertain, and thus electoral competition leads to an excessive conservatism of parties in terms of candidate nomination.

There are two parties,  $A$  and  $B$ . In a close election, their candidates are  $a$  and  $b$  respectively. In the election following the close one, the parties can decide whether to retain the old candidate or run with a new candidate  $n$ . In other words, party  $A$  needs to nominate either  $a$  or  $n$ , and party  $B$   $b$  or  $n$ . The parties care only about winning the election and the winning party will enjoy an office rent normalized to 1.

Suppose, as assumed in the canonical empirical strategy, the qualities of the old candidates are  $\theta_a = \theta_b = \theta_o$ . The new candidate is randomly drawn from a candidate pool, which is the same for the two parties. We denote the quality of the new candidate  $\theta_n \sim N(\mu_n, \sigma_n^2)$ . Note that we suppose there is no uncertainty about the old candidates' quality, as voters have known them for years running election campaigns or serving in office.

A representative voter needs to choose from the candidates nominated by the two parties. The voter's payoff depends on the quality of the elected candidate. We use a mean-variance utility function to capture the fact that the voter, who is risk averse, cares about both the quality of the elected candidate and the uncertainty of the new candidate's quality.

The utility function for the voter is  $U_V(\theta_i) = -e^{-\lambda\theta_i}$ , where the utility is increasing in  $\theta_i$ ,  $i \in \{a, b, n\}$ .  $\lambda$  is the degree of risk aversion. The voter dislikes uncertainty more when  $\lambda$  is larger. Suppose the voter will elect an old candidate over a new one when indifferent in an election between a new and an old candidate, and randomize when indifferent in elections with other candidate compositions.



The voter cannot observe the quality of the new candidate directly, but infers it from his or her performance  $x_n$  during the campaign. Formally,  $x_n = \theta_n + \epsilon_n$ , where  $\epsilon_n \sim N(0, \sigma_\epsilon^2)$ . Thus, by observing a performance  $x_n$ , the expected quality of  $n$  is  $E(\theta_n|x_n) = \frac{\mu_n \sigma_\epsilon^2 + x_n \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2}$ , and its variance is  $Var(\theta_n|x_n) = \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2}$ .

We solve for a Perfect Bayesian Equilibrium by first considering the voter's voting strategy. In an election between the old candidate and a new one, based on the property of the mean-variance utility function, the voter will elect the new candidate if and only if  $-e^{-\lambda(\frac{\mu_n \sigma_\epsilon^2 + x_n \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2} - \frac{\lambda}{2} \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2})} > -e^{-\lambda \theta_o}$ . This is equivalent to  $\frac{\mu_n \sigma_\epsilon^2 + x_n \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2} - \frac{\lambda}{2} \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2} > \theta_o$ .

Anticipating this, a party will replace the old candidate only when

$$\mu_n > \frac{(\theta_o + \frac{\lambda}{2} \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2})(\sigma_\epsilon^2 + \sigma_n^2) - x_n \sigma_n^2}{\sigma_\epsilon^2} \equiv \mu_n^*.$$

Given that  $E(x_n) = \mu_n$ , we can verify that  $\mu_n > \mu_n^*$  when  $\mu_n > \theta_o + \frac{\lambda}{2} \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2}$ .

This means the party will only replace the old candidate when the mean quality of the candidate pool  $\mu_n$  is sufficiently higher than the quality of the old candidate. Otherwise, keeping the old candidate is the equilibrium strategy for the parties. However, because of the term limit, the barely winning party is legally bound to run with a new candidate and thus is disadvantaged.

Hence, the model's predictions can be explained in a few short steps: In the canonical RD, barely winning parties are legally bound to run with a new candidate in an open-seat election in  $t + 1$ , due to the term limit their incumbent faces. But with whom will the competitor parties run? The only competitor that matters is the runner-up party from  $t$ . Its first-best choice to run against the new candidate from the incumbent party

in  $t + 1$  is their candidate from  $t$  (i.e. the runner-up) who only barely lost against the incumbent in  $t$ .

Since the incumbent party has to choose the new candidate from the party's pool of candidates, her expected quality will be equal to the party's average. The higher the variance within the candidate pool, the more uncertain is the voter about the new candidate's quality. Hence, in the absence of a strong partisan incumbency advantage, a risk-averse voter will choose the runner-up over the new candidate in expectation.<sup>7</sup>

Now, what about the candidate choice of a barely losing party? They run in a closed-seat election in  $t + 1$  against the in  $t$  barely elected incumbent from the competitor party. Hence, their first-best choice of candidate is also their runner-up candidate from  $t$  who only barely lost against the now-incumbent.

Whenever the party chooses to run with a new candidate instead of the runner-up, the new candidate's expected quality has to be above that of the runner-up.<sup>8</sup>

Hence, we expect that, if the runner-up party from  $t$  chooses to run with a new candidate, she must be very strong and is expected to perform better against the current incumbent than the bare loser from the previous election. Given the close election result in  $t$  and under the assumption of no incumbency advantage, we expect the chances of victory between the incumbent and the runner-up party to be about equal. If there was a personal incumbency advantage, the incumbent would win in expectation.

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<sup>7</sup>A strong partisan incumbency advantage could compensate for the lower relative quality of the incumbent party's new candidate.

<sup>8</sup>Following Carrillo and Mariotti (2001), that is because a risk-averse party would only ever choose a new candidate when either (a) the current candidate has proven to be very bad, or (b) the party has some private information about the new candidate (e.g. if she ran successfully for other offices in the past), which tells the party that she is more competitive than the runner-up.

In Appendix C.6, you can find the formal statement of our model. In Appendix C.7, we further show comparative statics for an increase in voter's uncertainty about candidates' quality or an increase in the voter's degree of risk aversion.

### 3.2.3. The Revised Empirical Strategy

In the model, we discuss term limits and the discovery of high-quality new candidates as exogenous reasons for a party to replace their old candidate. In the real world, there are even more exogenous reasons, such as illness, death or existence of other career options. We leverage exogenous candidate replacements to identify the partisan incumbency effect.

Our revised RD estimation no longer conditions on  $A$  being the incumbent party in  $t$ . Instead, we use close open-seat elections in  $t$ . We then estimate the effect on party  $A$ 's probability of winning when running with a new candidate in an all-new-candidate race in  $t + 1$ . This means that the competitor parties also all run with a new candidate.

The assignment of party incumbency status is equivalent to the canonical RD: Above the cut-off, the new candidate's party is the incumbent party, since she won the last election in  $t$ . While below the cut-off, the new candidate's party narrowly lost the election in  $t$ , and, as a consequence, does not have incumbency status in  $t + 1$ .

If replacements are exogenous, then all new candidates' quality should be the same in expectation. Because all new candidates are drawn from a candidate pool with the same quality distribution. Hence, if the RD identifies a negative difference in the probability of winning of the new candidate above and below the cut-off, it must be because of a

partisan incumbency disadvantage.

Our identification strategy has two limitations. First, exogeneity of candidate replacement is a strong assumption. For example, candidates from the incumbent party might be more likely to face a scandal or alternative career options. In this case, the probability of replacement would be asymmetric at the cut-off and the exogeneity assumption violated.

Second, elections in which only new candidates run are particular. While this does not endanger our identification, we might be estimating a very local average treatment effect with limited external validity.

### 3.3. Empirical Replication

In order to provide evidence for our theory, we replicated the study by Klasnja and Titunik (2017) (henceforth KT) using Brazilian mayoral elections 1996-2012. A more detailed description of the sample replication can be found in Appendix C.5. KT use two different samples in their study.

The *Incumbent Sample* uses the canonical RD. Hence, in this sample, KT estimate the effect of winning a close closed-seat election on the incumbent party's probability of winning the next election.

The *Open-seat Sample* refers to an RD in which the election in  $t$  is an open-seat election. Parties do therefore not face a term limit in  $t + 1$  and are allowed to re-run with their previous candidate. KT show that they cannot identify a partisan incumbency disadvantage in this sample.

In the following, we focus on KT's Incumbent Sample. For all of the following RD estimations, we use the same cut-off as KT.

### 3.3.1. Runner-ups

First, our model predicts that a considerable share of parties run with their runner-up candidates. Table C.2.2 in the Appendix lists the average share of different types of candidates in all elections.

Re-runners include all types of candidates who have run at least once before (i.e. previous and earlier incumbents, runner-ups and other losers). Among the incumbent re-runners, we only count winners from the previous election running for re-election. Runner-ups are the second-ranked candidates in the previous election who run again.

The table shows that the average share of runner-up candidates is 5.2% in closed-seat and 3.9% in open-seat elections. However, parties should be much more likely to re-run with their runner-up after an election was close. Using RD, we find this to be true. Figure C.2.1 in the Appendix shows that on average 24.3% of bare losers from  $t$  re-run with their runner-up in  $t + 1$ .

Our model predicts that voters prefer runner-ups over new candidates who replace the incumbent after a term limit. However, runner-ups' probability of winning might be impeded if competition is stronger in elections that follow a term limit. We therefore measure the ratio of the runner-up to the number of candidates in an election to proxy competition. We find no significant difference at the RD cut-off. As we can see in Figure C.2.3, the share of runner-ups in an election is about 17.4% below and 15% above

the RD cut-off.

Based on our model, we further expect that runner-ups perform well. In Table C.3.1 in the Appendix, we show simple OLS regression estimates of the likelihood of winning an election for different candidate types. All estimates are conditional on actually running in the election.<sup>9</sup> Runner-up candidates from the previous election show a strong performance in both open- and closed-seat elections. However, the estimate is much higher for open-seat elections (+18.8% compared to +6.9%). Again, this is consistent with our model's prediction that voters prefer runner-ups over new candidates.

### 3.3.2. New Candidates

Our model further finds that parties only choose to replace an old candidate if they know that the new one is very strong. We therefore run KT's RD conditioning on candidates being new. This means that we compare the likelihood of winning elections in  $t+1$  when both the barely losing and the barely winning party from  $t$  run with a new candidate. New means that the candidate is neither the runner-up nor another re-running candidate (e.g. a former incumbent). As we can see in Figure C.1.1, the RD effect is insignificant but negative at c. -4.9%.

This result is also consistent with our model: We expect new candidates below the cut-off to perform better than new candidates from above. Since below the cut-off, the replacement of the old with a new candidate is the decision of the party. Above the cut-off, the replacement is enforced by term limits.

However, even in the absence of term limits, running with new candidates is not always

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<sup>9</sup>This condition deflates the otherwise even higher coefficients.

endogenous. A party is sometimes forced to do so for other exogenous reasons (e.g. candidates' death, illness or a scandal). This introduces noise into the RD estimate, which weighs more in smaller samples and may therefore generate insignificant RD effects.

### 3.3.3. Uncertainty About Candidate Quality

Measuring voters' uncertainty about candidates' quality is difficult. We argue that age is a plausible proxy for how many years a candidate spent in politics. Under this assumption, a candidate's age indicates how long voters have been exposed to and hence have learned about the quality of a candidate. For example through the candidate's election campaigns or her years spent in political office.

We therefore used age from the Brazilian mayoral candidates data 1996-2012 and merged it by candidate name, municipality and election year with the electoral data.

Row one and two in Table C.4.1 show that for the canonical RD estimation, the average candidate age in  $t + 1$  is not smooth at the cut-off. Candidates from marginally winning incumbent parties in  $t$  are 8.6 years younger than their counterfactuals from marginally losing parties in  $t$ .

If age proxies years spent in politics, then this result suggests that new candidates above the RD cut-off are not as well-known to the voter as the candidates below. Therefore, voters are more uncertain about their quality.

This difference in candidates' age also persists when we condition on candidates being new in  $t + 1$ . Again, we expect parties to replace an old with a new candidate only if the

new one is of exceptional quality. It is therefore no surprise that barely losing parties choose to replace their runner-up with an at least equally experienced new candidate.

To test for further imbalances at the RD cut-off, we also ran the RD with candidates' education. Education is an imperfect but again plausible proxy for candidates' quality. Row three and four in Table C.4.1 show that we find no significant difference in candidates' education at the RD cut-off. This finding is indicative. It suggests that it is not candidate quality that is driving the RD's downward bias, but voters' uncertainty about it. Thus, a candidate's years spent in politics matters more than her academic qualification.

### 3.4. Revised Estimation

Finally, we used KT's replication sample to estimate the partisan incumbency effect with our revised estimation. Row (3) in Table C.1.1 shows that the revised result is cut by one half from initially -13.2% to -6.1%. This suggests that a large share of the partisan incumbency disadvantage estimated with the canonical RD might indeed be due to differential candidate quality.

With the new approach, we now have partisan incumbency disadvantage working in elections in  $t + 1$  both above and below the RD cut-off. Both above and below the cut-off, the party who narrowly won a close election is now the incumbent party in the next election. Hence, the incumbency disadvantage should work against the party who marginally won in  $t$  and in favour of the party who marginally lost. Following Erikson and Titunik (2015) and Fowler and Hall (2014), we therefore need to divide the estimated effect further by two, in order to avoid a double count. This division further reduces the estimated disadvantage for incumbent parties to -3.05% with a robust con-



fidence interval of  $[-5.15\%, -1.5\%]$ .

For the revised estimation to be valid, it is important that the proxies for candidate quality are smooth at the RD cut-off. In Row (5) and (6) in Table C.4.1, the RD estimates show that we find no significant differences in neither age nor education of candidates running in  $t + 1$ .

Another advantage of our revised empirical strategy is that it increases the sample size. This increase is due to the fact that we no longer exploit term limits and hence do not need to condition on parties being incumbent parties in  $t$ . Hence, with electoral data starting in 1996, we can use the close elections from every election year. A larger sample size allows for more robust inference, both in the estimation of the incumbency effect and the smoothness of covariates at the RD cut-off.

To conclude, we argue that we can identify the partisan incumbency disadvantage through our revised strategy as long as there is no systematic difference in the quality distribution of candidate pools across parties. This assumption only has to hold conditional on a previous close election in districts.

### **3.5. Conclusion**

In this paper, we showed that a canonical RD to estimate partisan incumbency disadvantage is downward biased if voters' uncertainty about the candidate's quality is unbalanced at the cut-off. The reason is that these RDs exploit term limits that force narrowly winning parties to nominate new candidates. At the same time, narrow losers have a choice and will therefore go for the strongest possible competitor who is often

the runner-up.

We propose a revised RD strategy without term limits, but conditioning on all parties nominating new candidates in order to avoid bias. With data from Brazilian mayoral elections in 1996-2012, we apply both the canonical and the revised RD to identify a partisan incumbency disadvantage. Our findings show that using the new approach cuts the effect by three quarters, from -13.2% to -3.05%.

# C. Appendix

## C.1. Results for Canonical & Revised RD

with replicated sample from Klasnja and Titiunik (2017)

Dependent Variable	Election in $t$	Estimate	Robust CI	Robust pval	$h$	Ntr	Nco
(1) Unconditional Victory with Any Candidate in $t + 1$	Pooled	-0.094	[-0.169 , -0.036]	0.002	14.1	1453	1344
	Closed-seat	-0.132	[-0.246 , -0.033]	0.010	13.4	654	498
	Open-seat	-0.056	[-0.151 , 0.010]	0.088	17.3	880	907
(2) Unconditional Victory with New Candidate in $t + 1$	Pooled	-0.045	[-0.106 , 0.004]	0.067	13.6	1199	1004
	Closed-seat	-0.049	[-0.151 , 0.044]	0.281	12.5	603	384
	Open-seat	-0.032	[-0.110 , 0.027]	0.235	15.5	589	663
(3) Unconditional Victory with all New Candidates in $t + 1$	Open-seat	-0.061	[-0.103 , -0.030]	0.000	18.2	3851	4754

Table C.1.1.: Canonical RD effect of incumbent party’s victory in  $t$  on (1) unconditional victory in  $t + 1$  (i.e. KT replication), (2) victory in  $t + 1$  conditional on running with a new candidate, and revised RD effect of party’s victory in  $t$  on (3) victory in  $t + 1$  conditional on all parties running with new candidates.  $h$  is the optimal bandwidth (following Calonico et al. (2014)),  $Ntr$  are number of treated observations within bandwidth, and  $Nco$  are number of controlled observations within bandwidth.

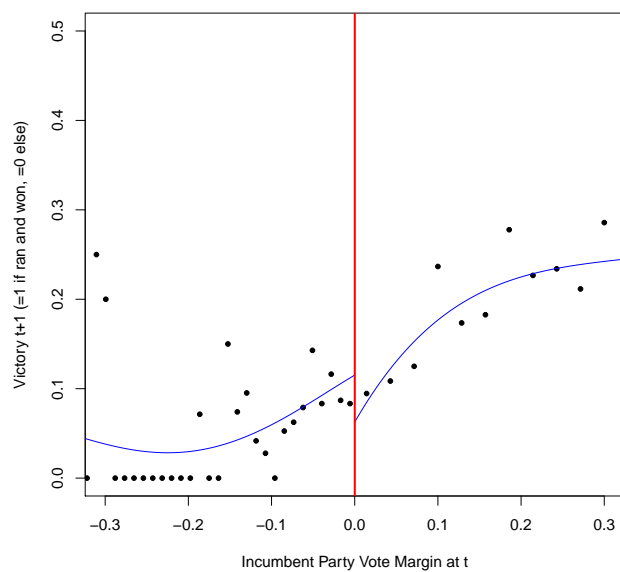


Figure C.1.1.: Partisan incumbency disadvantage estimated with KT's RD in which elections in  $t$  are closed-seat, include only incumbent parties and run with a new candidate in  $t + 1$ .

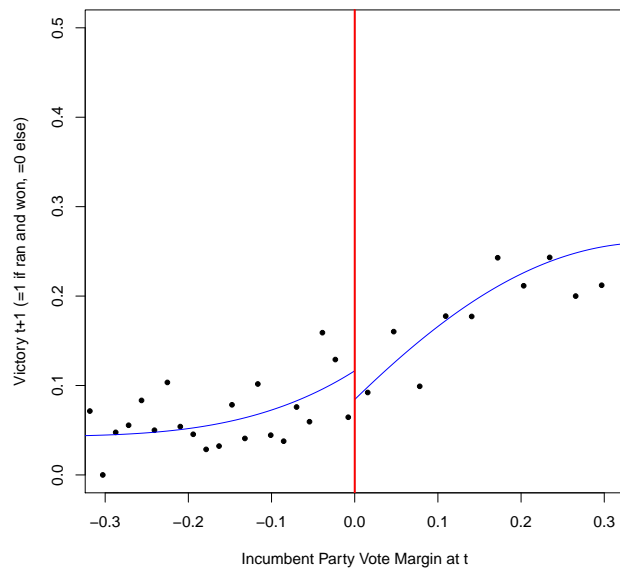


Figure C.1.2.: Partisan incumbency disadvantage estimated with KT's RD in which elections in  $t$  are open-seat, include only incumbent parties and run with a new candidate in  $t + 1$ .

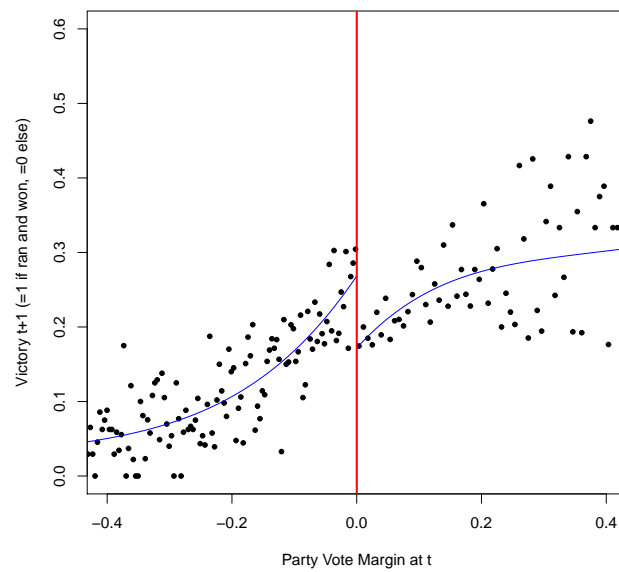


Figure C.1.3.: Partisan incumbency disadvantage estimated with revised RD in which elections in  $t$  are open-seat, include both incumbent and non-incumbent parties and all parties run with new candidates in  $t + 1$ .

## C.2. The Share of Runner-ups in Elections

Dependent Variable	Election in $t$	Estimate	Robust CI	Robust pval	$h$	$N_{tr}$	$N_{co}$
(1) Runner-up runs in $t + 1$	Pooled	-0.150	[-0.204 , -0.106]	0.000	14.8	1503	1377
	Closed-seat	-0.243	[-0.340 , -0.157]	0.000	13.9	675	515
	Open-seat	-0.094	[-0.147 , -0.046]	0.000	17.5	886	917
(2) Share of Runner-ups in $t + 1$	Pooled	-0.003	[-0.045 , 0.052]	0.892	16.6	774	624
	Closed-seat	-0.024	[-0.112 , 0.091]	0.835	11.7	237	180
	Open-seat	0.018	[-0.035 , 0.080]	0.445	17.8	470	401

Table C.2.1.: Canonical RD effect of incumbent party's victory in  $t$  on (1) likelihood of running with the runner-up from  $t$  in  $t + 1$ , and (2) the share of runner-up candidates in election in  $t + 1$ .  $h$  is the optimal bandwidth (following Calonico et al. (2014)),  $N_{tr}$  are number of treated observations within bandwidth, and  $N_{co}$  are number controlled observations within bandwidth.

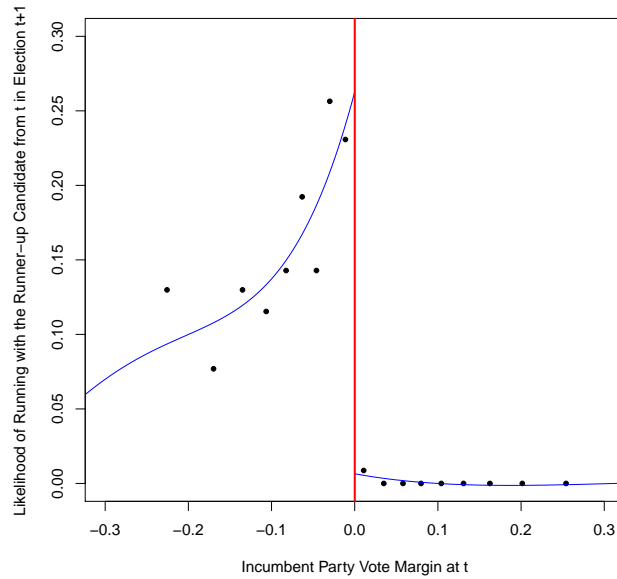


Figure C.2.1.: Likelihood of running with the runner-up from  $t$  in  $t + 1$ , using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

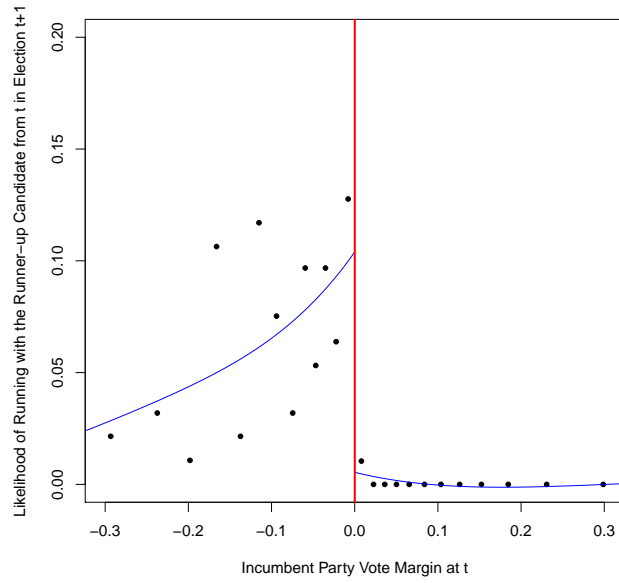


Figure C.2.2.: Likelihood of running with the runner-up from  $t$  in  $t + 1$ , using KT's RD in which elections in  $t$  are open-seat and include only incumbent parties.

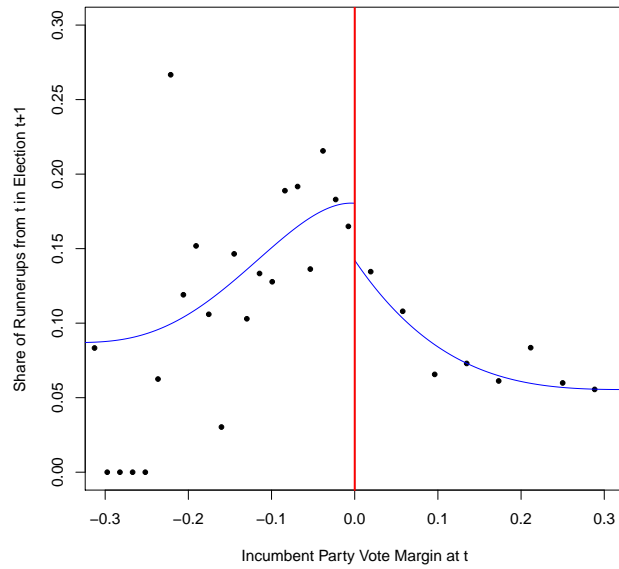


Figure C.2.3.: Share of runner-ups in  $t + 1$ , using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

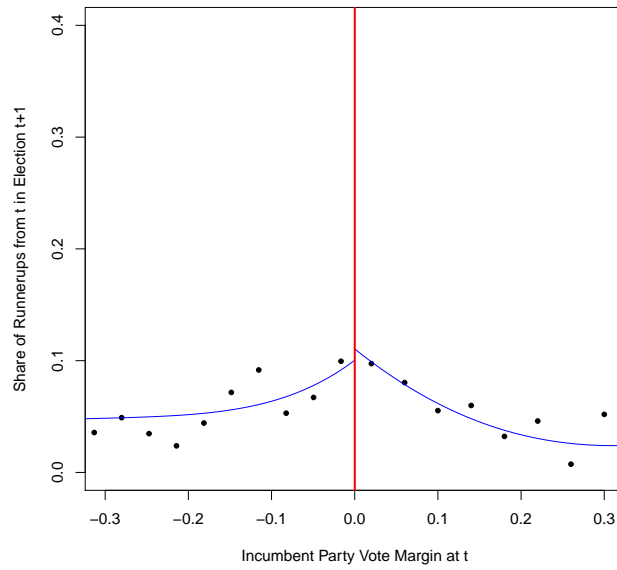


Figure C.2.4.: Share of runner-ups in  $t + 1$ , using KT's RD in which elections in  $t$  are open-seat and include only incumbent parties.

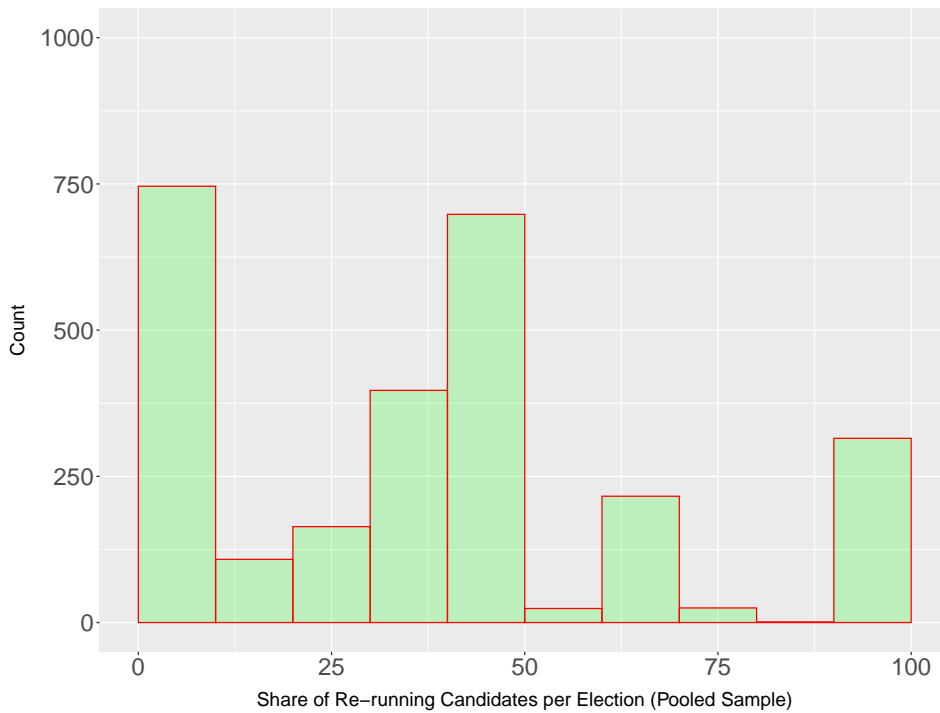


Figure C.2.5.: Distribution of the candidate share of re-runners per election in the KT-replicated sample of incumbent parties in Brazil's mayoral elections between 1996-2012, both open- and closed-seat (pooled).



	Closed seat Elections	Open seat Elections
Share of re-runners	53.0%	11.2%
Share of incumbents	36.4%	0%
Share of runner-ups	5.2%	3.9%
Share of new candidates	100 - 53.0 = 47.0%	100 - 11.2 = 88.8%

Table C.2.2.: Share of different types of candidates in the Brazilian mayoral elections between 1996-2012.

### C.3. Electoral Chances of Runner-up Candidates

	Closed seat Elections	Open seat Elections
Re-runners	+32.6%***	+10.0%***
Incumbents	+37.5%***	-
Runner-ups	+6.9%***	+18.8%***

Table C.3.1.: OLS estimates for the likelihood of winning in Brazilian mayoral elections between 1996-2012 (conditional on running) from a simple regression on different candidate types. \*\*\* :  $p < 0.00$ , \*\* :  $p < 0.01$ , \* :  $p < 0.05$

## C.4. RD Effect on Proxies of Candidate Quality in $t + 1$

Dependent Variable	Election in $t$	Estimate	Robust CI	Robust pval	$h$	Ntr	Nco
(1) Candidate's age in $t + 1$	Pooled	-4.543	[-7.972 , -2.124]	0.001	9.5	487	441
	Closed-seat	-8.646	[-14.859 , -3.924]	0.001	8.7	584	284
	Open-seat	-1.044	[-4.567 , 2.059]	0.458	13.4	380	347
(2) New candidate's age in $t + 1$	Pooled	-3.256	[-7.924 , 0.244]	0.065	10.1	324	217
	Closed-seat	-4.666	[-11.902 , 1.318]	0.117	10.5	204	84
	Open-seat	-0.872	[-7.218 , 4.238]	0.610	13.4	170	155
(3) Candidate's likelihood of higher education in $t + 1$	Pooled	-0.061	[-0.194 , 0.043]	0.211	13.0	638	536
	Closed-seat	-0.029	[-0.226 , 0.162]	0.744	12.5	253	186
	Open-seat	-0.086	[-0.257 , 0.048]	0.181	12.7	368	338
(4) New candidate's likelihood of higher education in $t + 1$	Pooled	-0.059	[-0.255 , 0.090]	0.346	11.5	369	231
	Closed-seat	0.009	[-0.245 , 0.276]	0.909	11.6	222	89
	Open-seat	-0.162	[-0.464 , 0.055]	0.123	9.5	123	127
(5) Candidate's age in $t + 1$	Open-seat	-1.136	[-3.149 , 0.729]	0.221	17.6	1366	1231
(6) Candidate's likelihood of higher education in $t + 1$	Open-seat	0.031	[-0.036 , 0.118]	0.292	17.4	1352	1221

Table C.4.1.: Canonical RD effect of incumbent party's victory in  $t$  on (1) incumbent party's candidate's age in  $t + 1$ , (2) conditional on the candidate being new, (3) the likelihood of the incumbent's party's candidate in  $t + 1$  having higher education, (4) conditional on the candidate being new, and revised RD effect of party's victory in  $t$  on (5) party's candidate's age in  $t + 1$ , and (6) the likelihood of the party's candidate in  $t + 1$  having higher education.  $h$  is the optimal bandwidth (following Calonico et al. (2014)),  $Ntr$  are number of treated observations within bandwidth, and  $Nco$  are number controlled observations within bandwidth.

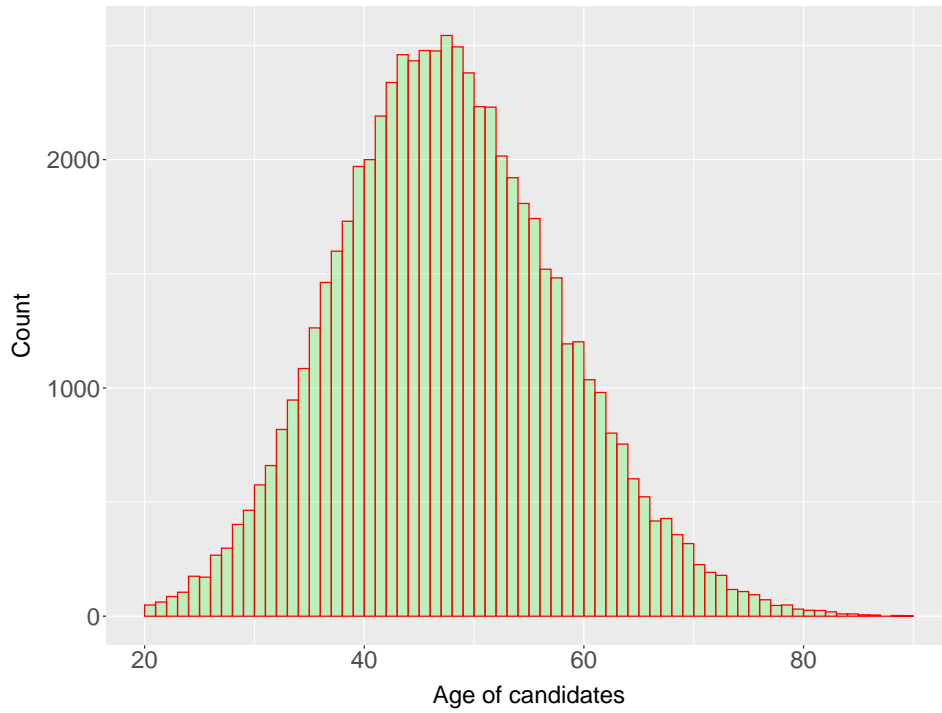


Figure C.4.1.: Distribution of age of candidates within the KT-replicated sample of Brazilian mayoral elections from 1996-2012.

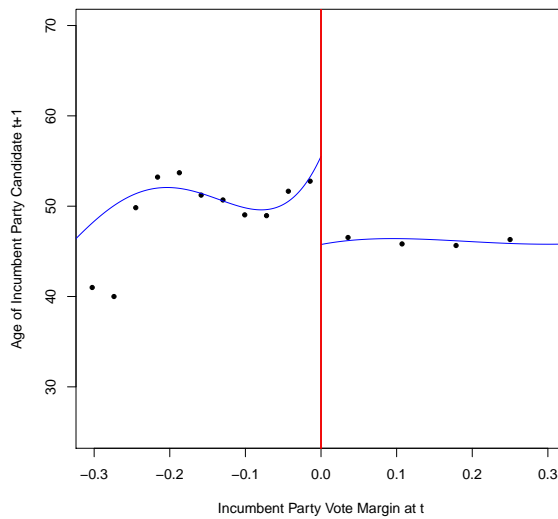


Figure C.4.2.: RD effect on age of incumbent party's (from  $t$ ) candidate in  $t + 1$ , using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

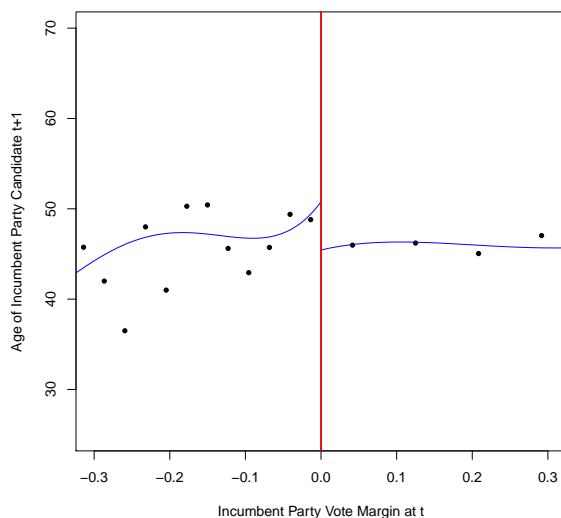


Figure C.4.3.: RD effect on age of incumbent party's (from  $t$ ) candidate in  $t + 1$ , conditional on her being a new candidate, using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

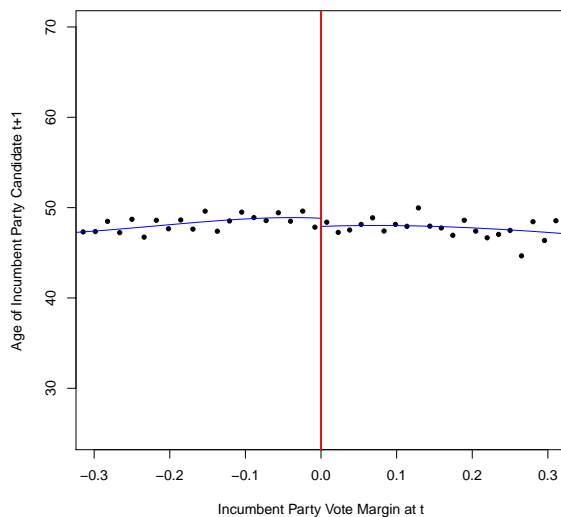


Figure C.4.4.: RD effect on age of party's candidate in  $t + 1$ , conditional on all parties' candidates in  $t + 1$  being new, using the revised RD in which elections in  $t$  are open-seat and include both incumbent and non-incumbent parties.

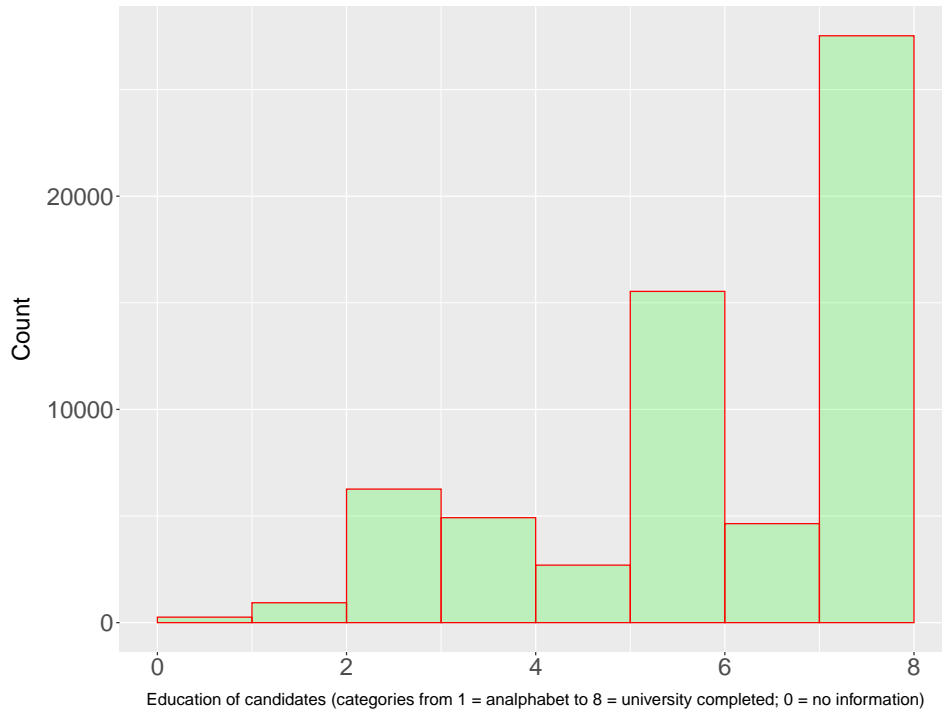


Figure C.4.5.: Distribution of educational attainment of candidates within the KT-replicated sample of Brazilian mayoral elections from 1996-2012.

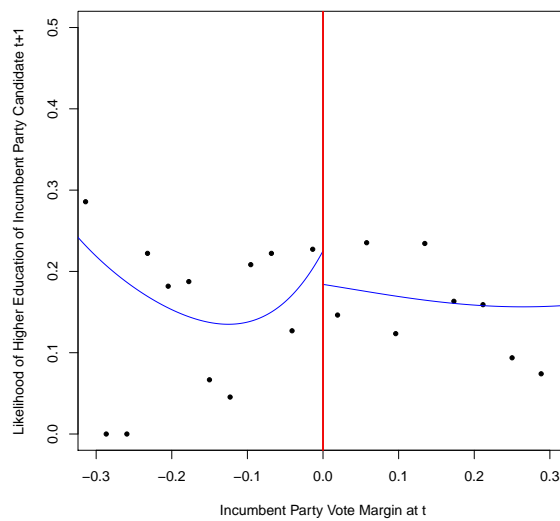


Figure C.4.6.: RD effect on likelihood of higher education of incumbent party's (from  $t$ ) candidate in  $t + 1$ , using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

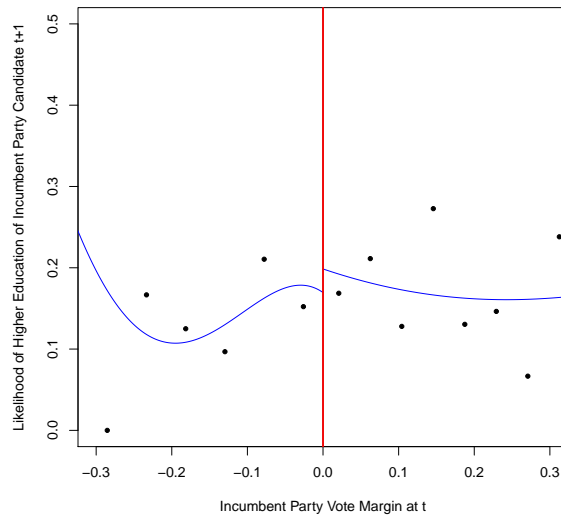


Figure C.4.7.: RD effect on likelihood of higher education of incumbent party's (from  $t$ ) candidate in  $t + 1$ , conditional on her being a new candidate, using KT's RD in which elections in  $t$  are closed-seat and include only incumbent parties.

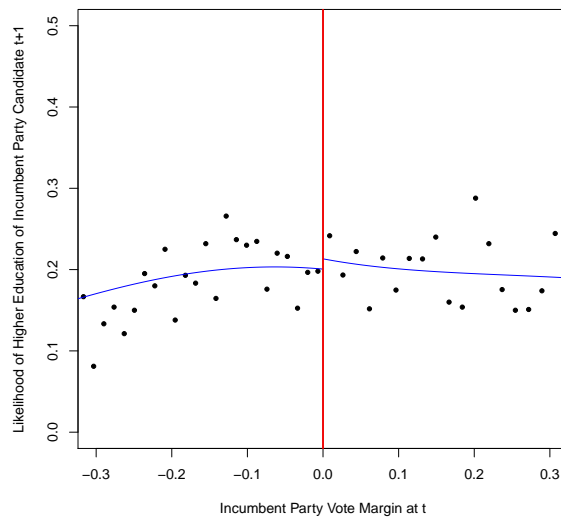


Figure C.4.8.: RD effect on likelihood of higher education of party's candidate in  $t + 1$ , conditional on all parties' candidates in  $t + 1$  being new, using the revised RD in which elections in  $t$  are open-seat and include both incumbent and non-incumbent parties.

## C.5. Replication Procedure of Klasnja and Titiunik (2017)

In order to corroborate our theoretical argument presented above, we replicated the electoral data used by KT from Brazil's government website.<sup>1</sup> We had to replicate the data from the original source, because KT's replication files did unfortunately not yet contain the candidate-level data, which we needed to identify re-runners, runner-ups as well as incumbents. Our sample size is smaller than KT's with 11,186 observations in the pooled election sample of incumbent parties, 2,156 observations in the *Incumbent Sample* and 9,020 observations in the *Open Seat Sample*. KT report a total sample of around 27'455 observations. However, around the cut-off, we have comparable numbers of observations and we receive similar optimal bandwidths as KT using the *rdrobust* package by Calonico et al. (2015) in R.

A reason why our sample is smaller than KT's might be due to incomplete data on Brazil's government website, which shows currently the following statement:

*“Candidate data and election results from 1994 to 2002 are incomplete. A review is being made of the data sources and, as the work is completed, the files will be replaced.”*

Table C.5.1 below lists the number of candidate observations from all parties (and not just incumbent parties) per state and year in Brazil's mayoral elections between 1996 and 2012 in our replicated sample. What seems obvious is that observations in 1996 are not complete. 1996 is used as year  $t - 1$  to identify incumbent parties in 2000 (i.e.  $t$ ). Hence, if 1996 is incomplete, it reduces the number of incumbent parties we can

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<sup>1</sup>National repository for electoral data: <http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-1/repositorio-de-dados-eleitorais>

identify in our sample. It is likely that KT have additional information which parties have won elections in 1996 (e.g. a dummy variable for incumbency status of parties) and that they can therefore identify all incumbent parties that could run for re-elections in 2000. Having less observations of incumbent parties reduces the power of our sample, but does not undermine our theoretical argument as long as it is still representative of the whole sample. This means that the share of runner-up candidates who re-run after close elections is (1) not significantly higher in our sample compared to the complete sample. And (2), runner-up candidates in our sample do not perform significantly better in our sample compared to the complete sample.

State	1996	2000	2004	2008	2012	<b>Total:</b>
AC	19	53	62	66	73	<b>351</b>
AL	8	291	296	299	305	<b>1'501</b>
AM	8	213	189	214	225	<b>1'099</b>
AP	5	64	49	67	75	<b>333</b>
BA	9	1'119	1'254	1'264	1'129	<b>5'984</b>
CE	10	456	501	507	508	<b>2'486</b>
ES	9	230	235	218	235	<b>1'201</b>
GO	12	653	686	642	664	<b>3'344</b>
MA	8	596	665	659	663	<b>3'250</b>
MG	7	2'228	2'353	2'229	2'251	<b>11'480</b>
MS	5	223	207	183	210	<b>1'055</b>
MT	-	355	381	384	369	<b>1'873</b>
PA	8	454	470	437	481	<b>2'389</b>
PB	8	502	552	574	551	<b>2'735</b>
PE	8	486	506	484	513	<b>2'562</b>
PI	212	521	583	579	541	<b>2'984</b>
PR	-	1'000	1'092	1'035	1'024	<b>5'250</b>
RJ	-	324	341	309	366	<b>1'763</b>
RN	6	409	417	408	426	<b>2'103</b>
RO	-	175	158	165	147	<b>799</b>
RR	5	37	57	45	47	<b>267</b>
RS	12	1'329	1'252	1'154	1'186	<b>6'192</b>
SC	-	742	752	727	689	<b>3'656</b>
SE	10	200	193	204	217	<b>1'052</b>
SP	12	1'950	2'069	1'914	2'036	<b>10'171</b>
TO	16	342	333	363	371	<b>1'814</b>
<b>Total:</b>	<b>397</b>	<b>14'952</b>	<b>15'653</b>	<b>15'130</b>	<b>15'298</b>	<b>15'695</b>

Table C.5.1.: Number of candidate observations in all parties and mayoral elections per state and per year in the replicated sample.



## C.6. Formal Statement of the Model

The players of the model are Party  $A$ , Party  $B$ , and a representative voter  $V$ . Party  $A$  must nominate a candidate  $c_A \in \{a, n\}$ , where  $a$  is the old candidate  $A$  nominated in the previous election, and  $n$  is a new candidate randomly drawn from the candidate pool. Party  $B$  must nominate a candidate  $c_B \in \{b, n\}$ , where  $b$  is the old candidate and  $n$  is a new candidate randomly drawn from the same candidate pool. To simplify the exposition, we also denote an old candidate either  $a$  or  $b$  as  $o$ .

The parties are office-seekers, and the winning party will enjoy an office rent normalized to 1. The voter needs to elect either  $c_A$  or  $c_B$ . The voter's utility is represented as a mean-variance utility function, formally  $U_V(\theta_i) = -e^{-\lambda\theta_i}$ , where the utility is increasing in  $\theta_i$ ,  $i \in \{o, n\}$ .  $\lambda$  is the degree of risk aversion. This implies that the voter, who is risk averse, cares about both the quality of the elected candidate and the uncertainty of the new candidate's quality. The voter dislikes uncertainty more when  $\lambda$  is larger. We also suppose the voter will elect an old candidate over a new one when indifferent in an election between a new and an old candidate, and randomize when indifferent in elections with other candidate compositions.

Regarding quality of the candidates. As assumed in the canonical RD strategy, we suppose that the candidates ran in a close election, the quality of the old candidates are the same, i.e.,  $\theta_o = \theta_a = \theta_b$ , and this quality is a common knowledge to all players in the game. New candidates on the other hand are drawn from a candidate pool. Ex ante, the quality of a new candidate is  $\theta_n \sim N(\mu_n, \sigma_n^2)$ . After a new candidate is drawn, a party needs to decide whether to nominate the new candidate  $n$  or the old one  $o$ . The voter does not know  $n$ 's quality if she is nominated. Instead, the voter observes the  $n$ 's performance during the campaign, i.e., receiving a signal  $x_n$  to learn about  $\theta_n$ . Formally,

$x_n = \theta_n + \epsilon_n$ , where  $\epsilon_n \sim N(0, \sigma_\epsilon^2)$ .

The strategy profile of the voter and the parties constitute a Perfect Bayesian Nash Equilibrium if:

1. The voter updates her belief about the competence of the new candidate  $n$  following the Bayes' rules. Observing  $x_n$ , from the conjugate prior of normal distribution, we know that  $n$ 's expected mean quality is  $E(\theta_n|x_n) = \frac{\mu_n\sigma_\epsilon^2+x_n\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2}$ , and its variance is  $Var(\theta_n|x_n) = \frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2}$ . Following the property of the mean-variance utility function, the voter will vote for the new candidate if  $-e^{-\lambda(\frac{\mu_n\sigma_\epsilon^2+x_n\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2}-\frac{\lambda}{2}\frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2})} > -e^{-\lambda\theta_o}$ . This is equivalent to  $\frac{\mu_n\sigma_\epsilon^2+x_n\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} - \frac{\lambda}{2}\frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} > \theta_o$ .
2. Given the voter's strategy, parties use a cutoff strategy to maximize its winning probability: A party will replace the old candidate when it finds a new candidate's mean quality  $\mu_n$  is higher than a threshold  $\mu_n^*$ . By rearranging  $\frac{\mu_n\sigma_\epsilon^2+x_n\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} - \frac{\lambda}{2}\frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} > \theta_o$ , we know that a party will replace the old candidate (in other words, a new candidate will be elected by the voter) only when

$$\mu_n > \frac{(\theta_o + \frac{\lambda}{2}\frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2})(\sigma_\epsilon^2 + \sigma_n^2) - x_n\sigma_n^2}{\sigma_\epsilon^2} \equiv \mu_n^*.$$

The Perfect Bayesian Nash Equilibrium is thus:

1. The voter elects  $n$  if  $\frac{\mu_n\sigma_\epsilon^2+x_n\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} - \frac{\lambda}{2}\frac{\sigma_\epsilon^2\sigma_n^2}{\sigma_\epsilon^2+\sigma_n^2} > \theta_o$  (note that we suppose the voter will elect an old candidate over a new one when indifferent in an election between a new and an old candidate, and randomize when indifferent in elections with other candidate compositions).

2. A party replaces the old candidate when  $\mu_n > \mu_n^*$ .

## C.7. Comparative Statics with Respect to Uncertainty of Candidate's Quality and the Degree of Risk Aversion

What happens if we increase the uncertainty in the quality of new candidates  $\sigma_n$ , and in the voter's degree of risk aversion  $\lambda$ :

Given that

$$\frac{\partial \frac{\sigma_\epsilon^2 \sigma_n^2}{\sigma_\epsilon^2 + \sigma_n^2}}{\partial \sigma_n^2} = \frac{\sigma_n^2(\sigma_\epsilon^2 + \sigma_n^2) - \sigma_\epsilon^2 \sigma_n^2}{(\sigma_\epsilon^2 + \sigma_n^2)^2} = \frac{\sigma_\epsilon^4}{(\sigma_\epsilon^2 + \sigma_n^2)^2} > 0,$$

we know that increasing the uncertainty makes the party's threshold of replacing the old candidate  $\mu_n^*$  to be higher. This indicates that, with higher uncertainty in the quality of a candidate randomly-drawn from the candidate pool, a party will be more conservative in replacing the old candidate.

Given that

$$\frac{\partial \mu_n^*}{\partial \lambda} = \frac{\sigma_n^2}{2} > 0,$$

we know that  $\mu_n^*$  is increasing in the voter's degree of risk aversion. This indicates that, when the voter is more risk averse, a party will be more conservative in replacing the old candidate.

## C.8. Literature

### C.8.1. Quality-based Incumbency Effects

Reference	Summary
Eggers (2017)	Why current RD estimates may suffer from candidate quality-based bias.
Ashworth and de Mesquita (2008)	Close elections between an incumbent and a runner-up select on average high-quality candidates into next election.
Carson et al. (2007)	Unpack how the interaction between party strength and candidate quality mattered for the development of incumbency effects in the US.

Table C.8.1.: Summarised literature on quality-based incumbency effects.

The idea of quality-based incumbency effects is not new. Eggers (2017) derives in a simple theoretical model why RD estimates from this literature may suffer from candidate quality-based bias. Most importantly, he refers to differential candidate replacement rates, which produce quality-based incumbency effects if the candidates who re-run are stronger or weaker than the replacement candidates. According to Eggers, this can occur for 3 reasons: Selection into re-running, changes in the candidate pool over time and selection into marginality.

The first and the third reason are important for the argument we make in this paper. First, marginal losers from close elections tend to re-run, because their chances to win against the marginal winner proved to be good. Second, the average quality of marginal candidates is stronger than the parties' average candidate. On p. 6, Eggers states: "*If one candidate is drawn from the candidate pool and the other is stronger than the candidate pool (e.g., because she is an incumbent), then close elections will disproportionately feature candidates who are stronger than the candidate pool.*" Therefore, we predict that re-runners from narrow elections are on average stronger than new candidates.

Eggers relates his theory to an earlier model by Ashworth and de Mesquita (2008).

Their model predicts that close elections between an incumbent and a runner-up select on average high-quality candidates into the next election. This selection into the follow-up election can of course only occur if candidates are not prevented from re-running due to term limits.

In an impressive empirical contribution, Carson et al. (2007) unpack how the interaction between party strength and candidate quality mattered for the development of incumbency effects in the US. Using a new historical data-set on US congressional candidates in the 19<sup>th</sup> century, they show that highly competitive elections and the strong party system at the time led to the nomination of more equally qualified candidates both on the incumbent and contender side of an election. This caused a small quality gap between candidates and hence a much smaller incumbency advantage than we observe today in US Congress elections.

The contribution of this paper to the literature is to point out a specific quality-based bias in the way partisan incumbency effects are estimated today. Further, we propose an empirical strategy to overcome this problem, which has not been suggested so far.

## C.8.2. The Partisan Incumbency Effect

Reference	Summary
Lee (2008)	Using RD to estimate incumbency effects.
Erikson and Titiunik (2015)	The personal incumbency effect using RD.
Hall and Snyder (2015)	Identifying the “scare-off” effect of incumbents.
Magalhaes (2015)	Why we should estimate incumbency effects unconditional on a party actually re-running.
Klasnja and Titiunik (2017)	Partisan incumbency disadvantage in Brazilian mayoral elections 1996-2012
Klasnja (2015a)	Partisan incumbency disadvantage in Romanian mayoral elections 2008-2012.
Klasnja (2015b)	Model on partisan incumbency disadvantage and corruption.
Fowler and Hall (2014)	Partisan incumbency effect in US state legislature elections 1998-2008.

Table C.8.2.: Summarised literature on the partisan incumbency effect.

At its beginning, the incumbency effect literature using RD made no attempt to disentangle the personal from the party incumbency advantage (Lee, 2008). Estimated coefficients included both, the advantage that an individual candidate had from re-running for office, and the advantage the party had from re-running with the same or a new candidate.

Since it is of substantive interest which of the two benefits (or suffers) from holding office, a more recent literature developed empirical strategies to identify only one or the other. Each of these strategies uses a specific variation of the RD by Lee (2008). For the personal incumbency effect, Erikson and Titiunik (2015) propose to apply an RD to open-seat elections with high re-running rates of incumbent candidates in the next election. The identified effect further includes what is known in the literature as the “scare-off” effect (e.g., Hall and Snyder (2015)), which implies that marginally losing parties in a close election anticipate an advantaged incumbent candidate in the next election and therefore tend to run with a lower quality (or no) candidate. This means that all estimates of incumbency effects working both above and below the RD cut-off

need to be divided by two in order to avoid a double count.<sup>2</sup>

Magalhaes (2015) provides both theory and evidence why we should estimate incumbency effects on the probability of winning, unconditional on a party actually re-running in the next election. Especially outside of the US where re-running rates of parties can vary significantly, conditioning on the party actually running can introduce severe selection bias, e.g. if only strong marginal losers decide to re-run in the next election.

For the study of partisan incumbency effects, several recent articles use an almost identical empirical strategy. All exploit term limits of candidates who win a close election and hence have to be replaced by the incumbent party in the next election.

Klasnja and Titunik (2017) find a large partisan incumbency disadvantage in Brazilian mayoral elections 1996-2012, which supports their theory that voters punish weak parties for their failure to discipline lame-duck incumbents. Klasnja (2015a) identifies a similarly large incumbency disadvantage in Romanian mayoral elections 2008-2012, which increases in mayors' opportunity costs of corruption. This confirms his theory that voters frequently replace mayors with new candidates who may have the same potential but yet lower know-how for corruptive activities than the experienced incumbent (Klasnja, 2015b).

In a far more established democratic context, Fowler and Hall (2014) find a negative but not significant partisan incumbency effect in US state legislature elections from 1998-2008. They suggest that voters may want to balance over time between the Re-

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<sup>2</sup>This may not apply for all incumbency effects. For example, Klasnja and Titunik (2017) theorise that their estimated partisan incumbency disadvantage only occurs after an incumbent candidate has reached her term limit. Hence, below their RD cut-off where a marginal loser runs against an incumbent candidate, the disadvantage for the incumbent party should not be at work.

publican and Democratic party.

The key point in all of their empirical strategies is that the replacement of the narrowly winning party's candidate is exogenous due to term limits, while the selection of all other candidates is endogenous. Hence, both above and below the RD cut-off, all other parties can strategically choose a candidate with whom they enter the next election. It is this endogeneity in candidate quality, which causes the risk of a quality-based downward bias in the estimation they use. The fact that they all estimate a negative RD coefficient in substantively different contexts and for different underlying theories is indicative. We explore the source for this potential bias followed by a theoretical model below.



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