

# Women's Suffrage and its Accompanying Governmental Spillover Effects: Evidence from Switzerland

*Prawo Wyborcze Kobiet oraz Towarzyszące Efekty Zewnętrzne:  
Dowodzenie ze Szwajcarii*

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ABSTRACT

Switzerland introduced women's suffrage in 1971 and was one of the last countries in Europe to do so due to a national federation. Due to the certain characteristics of this country, it is the perfect setting to study the effects of female enfranchisement on the scope and size of the government. We take advantage of such a unique event in order to analyze these dynamics with an exogenous natural experiment that gives us a premise to infer a potential causal relationship. Thus, we expand a former dataset of revenues and expenditures at the cantonal level with new data, and use a difference-in-differences approach to find that women's suffrage potentially affects both the size and scope of the government with different magnitudes. In fact, women's voting preferences are given to be more conservative with respect to men. On the one hand, women's preferences are shown to have a negative effect on the size of the government, but on the other hand, they are shown to positively influence the overall health and wealth of the country as females seem to prefer a more social redistribution. There was a conceivable turnout gap at the very beginning of the adoption of suffrage in the Swiss constitution as not all 25 cantons had actually given women the right to vote. We observe that the effects of women's suffrage on the government tend to be stronger over time.

**Keywords:** women's suffrage, Switzerland, natural experiment, turnout, size and scope of the government.

STRESZCZENIE

Szwajcaria wprowadziła prawa wyborcze kobiet w 1971 roku i była jednym z ostatnich krajów w Europie aby to zrobić, ze względu na federację narodową. Biorąc pod uwagę pewne cechy tego kraju, jest to idealny kraj do badania skutków uwłaszczenia kobiet na podstawie zakresu i rozmiaru rządu. Korzystamy z tego wyjątkowego wydarzenia, aby przeanalizować te dynamiki za pomocą egzogenego, naturalnego eksperymentu, który daje nam podstawę do wnioskowania o potencjalnym związku przyczynowym. W ten sposób rozszerzamy oryginalny zestaw danych o przychodach i wydatkach na poziomie kantonu, z nowymi danymi i stosujemy podejście polegające na różnicy w różnicach, aby stwierdzić, że prawa wyborcze kobiet potencjalnie wpływają zarówno na rozmiar, jak i zakres rządu, ze zmiennym ogromem. W rzeczywistości preferencje głosowania kobiet są bardziej konserwatywne w odniesieniu do preferencji mężczyzn. Z jednej strony okazuje się, że preferencje kobiet mają negatywny wpływ na wielkość rządu, ale z drugiej strony mają pozytywny wpływ na ogólny stan zdrowia i bogactwo kraju, ponieważ kobiety wolą bardziej społeczną redystrybucję. Na samym początku przyjęcia praw wyborczych do Szwajcarskiej konstytucji istniała prawdopodobna luka frekwencji, ponieważ nie wszystkie 25 kantonów dało kobietom prawo do głosowania. Zauważamy, że wpływ praw wyborczych kobiet na rząd staje się z czasem silniejszy.

**Słowa kluczowe:** prawo wyborcze kobiet, Szwajcaria, eksperyment naturalny, frekwencja, rozmiar i zakres działania rządu.

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## Introduction

Democracy is a word derived from ancient Greek and etymologically means “people's authority”, also referred to as direct or indirect popular sovereignty by all of the citizens' vote related to the system of the government. Switzerland is the only one of the

current modern states that is ruled through both a direct and representative democracy, and is often referenced as one of the founding fathers of the effective practice of direct democracy, since citizens can either propose or reject laws that have already been approved by parliament. Controversially, this country was one of the last in Europe to give women the right to vote (on a federal level in 1971)<sup>1</sup>.

Granting women suffrage has aided in gradually reducing social inequality in the form of gender equality, and has created a more democratic framework. The question regarding whether or not democracy is bounded to the concept of equality can be left to

<sup>1</sup> Followed only by Portugal (1976) and Liechtenstein (1984), even though we have to notice that officially the adoption for all Cantons in Switzerland took place only in 1991 with a decision by the Federal Supreme Court of Switzerland that obliged the canton of Appenzell Innerrhoden to extend the right to all women.

theorists. Without a doubt, this event provided the basis for a quasi-natural experimental research study related to the topic of women's suffrage. In fact, the act of women's enfranchisement, which occurred in separate cantons at several points in time, allows us to study the effect of a gender gap, which is defined as the difference between men's and women's voting preferences (Lott and Kenny 1999) with respect to the scope of the government.

Institutional goals are mainly determined by the parties that have gained seats during an election. This, in turn, depends on ideological characteristics of each party throughout time as well as the population's beliefs in that particular moment of time. However, men and women can have different preferences on various topics as well as elect different candidates. Due to this, the scope of government may differ from the actual population's preferences. Therefore, the application of female suffrage in the latest century may have shifted the focus of the government, including women's general inclinations. In this sense, allowing women to vote doubles the poll size<sup>2</sup> and theory shows that high voter turnout may alter the demand for government as it leads to a potential shift in the position of the median voter.

On one hand, observing this phenomenon from the parties' perspectives, some authors (Preworski et al. 2014) provide an explanation for which parties strategically use suffrage to advance their own electoral goals and how their leaders target voters who would not be pivotal in a proportional system (Lizzeri and Persico 2005), such as the Swiss electoral system. Hence, politicians in turn attempt to support a broader social group that may influence policies, like taxation and spending (Iversen and Soskice 2006; Lizzeri and Persico 2001; Milesi et al. 2002; Persson and Tabellini, 2003). In this extent, Inglehart and Norris (2003) studied women's inclinations in the post-war era for right-left parties to see if there was evidence of a gender gap. As voters prefer left-wing representation, we should expect larger government expenditures (Iversen and Soskice 2006).

On the other hand, looking at it from the government's point of view, some authors (Lott and Kenny, 1999) focus more attention on the growth of government driven by enfranchisement (specifically in the US) and how this immediately influenced expenditures and revenues. Berman (1993) shows the importance of such an approach on conservative components of the government in a short-term period. Funk and Gathmann (2005) find evidence of a gender gap in several dimensions and reveal that there are gender differences in the scope and size of the government (in Switzerland). Moreover, Abrams and Settle (1999) conjecture that an expansion of social welfare spending comes with an increase in female political participation. Additionally, gender is relevant at a policymaking level, where female policymakers are found to invest in different areas with respect to male policymakers (Chattopadhyay and Duflo, 2004).

In this paper, we attempt to provide some tentative evidence about the potential effects of female suffrage on the scope and size of the government. The introduction of female suffrage offers an ideal threshold point to observe outcome effects, if any, that occurred by estimating the federal aggregate consequences of enfranchisement in Switzerland.

<sup>2</sup> Women are half of the total population, even if we account only for people that can vote, since also men face the same restriction age in Switzerland.

Switzerland, also known the Swiss Confederation, is a federal Republic composed of 26 Cantons, all of which have been heavily influenced by neighbouring countries. Therefore, different cantons have different cultural and linguistic characteristics derived from German, French, and Italian roots. Moreover, the country's system is structured on three levels that are the following: one State, 26 Cantons<sup>3</sup>, and 2,324 municipalities. This type of environment has certainly contributed to the development of women's enfranchisement that was applied during three different points in time: (i) around the beginning of the '60s<sup>4</sup>, (ii) between '69 and '72 for the majority of the Cantons, and eventually between (iii) '89-'90 in Appenzell Aussenrhoden and Innerrhoden, by constitutional law.

With regard to our study, all of these above mentioned asymmetries are of key importance. We have to carefully account for these differences in our attempt to find a relationship between the introduction of women's suffrage and, to a broader extent, the scope of the government. The recent event of enfranchisement together with the discrepancy in the adoption timeframe of each Canton, during which not all Cantons voluntarily agreed to the suffrage, give us powerful tools to examine any potential causal relationship underlying this natural event.

For this purpose, we expanded our study with more recent observations with a pre-assembled dataset by Funk and Gathmann (2005)<sup>5</sup>, in which information was collected on government expenditures and revenues for each Canton. Furthermore, we make use of a survey containing data of a sample of voters for all the federal elections in Switzerland<sup>6</sup> since information regarding the implementation of federal suffrage laws is publicly available. We therefore estimate via a difference-in-differences approach whether the women's suffrage had an effect on scope and size of the government.

In particular, we test whether the effect of the median voter theory accounts for higher social redistribution female's responses. The expected increase of share of voter turnout due to female suffrage provides the basis of our analysis. We also examine the effects of the gender gap to understand whether they explain part of the government expansion, at a local and national level, since '70s or trends pre-suffrage and post-suffrage are similar and do not depend on necessarily on the enfranchisement of women. Additionally, we analyse these dynamic effects in the long-run by looking at the impact of women's suffrage over time.

We find that the inclusion of female voters after the adoption of suffrage shifts the preferences to a more redistributive and social government. Although our results yield a lower magnitude than do those in Funk and Gathmann (2005). We observe an important reversal in the absolute voter turnout level a decade after the adoption of suffrage. In the long-run, we speculate the effects are of

<sup>3</sup> We anticipate from here that in our study we will use only 25 cantons as the canton of Jura was established in 1976 and has always had women's suffrage.

<sup>4</sup> For those cantons which adopted the suffrage since this first referendum we introduce the definition "early adopters".

<sup>5</sup> We want to show our sincere gratitude to Patricia Funk who kindly provided us with this precious dataset. We want to stress that data previous 1980 are not available in electronic format and they were directly collected by hand by the two authors. Since it is not possible to study any of these effects without data from previous the suffrage, we want to highlight the importance of the availability of this data for our own research project.

<sup>6</sup> More about Data in the sequent section.

a larger magnitude and potentially driven by the recent economic crisis. We observe a gradual expansion of the government significantly in areas such as health and wealth, but, above all, we detect a negative effect on the scope of government with a downward shift of some types of expenditures. These results are mainly in line with the findings by Funk and Gathmann (2005) but differ from those by Lott and Kenny (1999) where women were considered less conservative.

The rest of the paper proceeds as follows: section two provides an important framework about the institutional background of our study divided into political institutions and women's suffrage dynamics, section three reports the data used, section four describes our empirical strategy, section five reports some relevant empirical findings, section six provides improvement in the analysis with robustness checks (on education, income, referendum, turnout), and section seven concludes the paper.

### **Institutional Background**

Given the uniqueness of certain features in the characteristics of Switzerland, we provide some general information that is necessary to better understand the functioning of the political system and the importance of women's suffrage.

#### **Political Institutions**

Switzerland is a federation comprised of 26 states called cantons but was a confederation until 1848. Its power is shared between the federal government (central government), 26 cantons (federal states), and 2,324 municipalities. Each of these levels has legislative (making laws) and executive power (executing laws). Confederation and Cantons also have a judiciary (a set of courts) charged with enforcement power.

At the federal level, the Swiss government is divided into seven departments or ministries. Also at the federal level, legislative power is vested in two chambers: the National Council and the Council of States. The Swiss Cantons retain much of their sovereignty. The general government budget is decided by the Parliament which, in the case of a tax increase, must submit a request to the Swiss people in a referendum. Citizens can either propose laws or reject laws already approved by the parliament. There are numerous ways to consult people at the federal level depending on the issue: people's initiative for a total revision of the Federal Constitution; popular initiative for the partial revision of the Federal Constitution drafted; mandatory referendum; or optional referendum.

The Swiss voting system is unique when compared to that of modern democratic nations. This system is distinguished from others by the presence of direct democracy in which every citizen can challenge any law at any time. Voting will occur about four times a year on various topics; the consultations will also include a referendum, in which decisions are voted directly on by the population and in elections, where citizens elect their representatives. In this context, the so-called principle of "subsidiarity" is applied. Cantons are increasingly becoming more involved in decisions that concern the whole of Switzerland. Direct democracy, in this degree, is more effective in the area of the country with a more German-based

culture, meanwhile more fragile on the side that is more French-based<sup>7</sup>.

Confederation is the Swiss concept of State and Switzerland is a federal State. And this means that state power is divided between the federal government, cantons, and municipalities. The cantons and municipalities have broad expertise along with sources of revenue. They are also key in providing public goods as federal state's expenses account for roughly 40% of the total expenditures (Funk and Gathmann 2005). The Confederation is competent in areas where the Constitution authorizes it to be. For example, in foreign and security policy, in customs and monetary union, within the valid legislation at the national level, and on defense. In essence, tasks that are not specifically attributed to the federal government are within the competence of the cantons. Additionally, tax revenues are collected and distributed, but not shared, among the three levels separately, as the system is decentralized. This means, that while on one hand cantons are in charge of raising taxes on capital income and tax labor; on the other hand, the federal government is in charge of indirect taxes, sale taxes, and other consumption taxes (Funk and Gathmann, 2005).

The federal government has jurisdiction only in areas that have been assigned to them by the Federal Constitution. All other tasks (for example in education, hospitals or police) therefore rest with the cantons that enjoy considerable autonomy. Municipalities are entitled to the tasks that are conferred upon them by the State to which they belong to, or by the federal government; but they can also legislate where the cantonal law does not provide specific rules for a topic that concerns them. In addition to the tasks assigned by the Confederation and the Canton to which they belong, the communes also have their skills, for example, in schools and in social life, in energy supply, construction of roads, in local planning, and taxation.

#### **Women's Suffrage**

It was 1868 when women for the first time sought voting rights in an attempt to revise the cantonal constitution, but these efforts were done in vain. After this and various subsequent efforts, a group of female workers decided to establish a trade union asking for the right to vote for the first time as well as to have the chance to establish the Swiss Association for Women's Suffrage (ASSF). Unfortunately, between the First World War and the '30s, due to the strength of the conservative parties, all of these endeavours were unsuccessful.

During the Second World War, women's associations increased their efforts in the hope of obtaining recognition of their political rights. However, projects in favor of women's suffrage in cantonal and municipal matters were again rejected. In fact, after the war a few votes on women's suffrage in cantonal or communal matters<sup>8</sup> took place, all with negative results.

<sup>7</sup> Notice that were the direct democracy is found to be more strong we observe that cantons have adopted later the suffrage in favour of women. Particularly, in a couple of cantons called "Landsgemeidendekantone" (town-meeting cantons), in which parliament has little power and citizens meet to decide on laws (Funk and Gathmann 2005). Hereof, we recognize that a direct democratic system can hinder the introduction of the women's suffrage.

<sup>8</sup> 1946 Basel City, Basel Country, Geneva, Ticino; 1947 Zurich; 1948 Neuchâtel, Solothurn; 1951 Vaud.

The tenacity of women led to the first popular vote in 1959<sup>9</sup>, but despite the economic recovery of the '50s in Switzerland, the fundamental political orientation remained conservative. With the support of opposing parties, who wanted to allow voters to reject the proposal for women's enfranchisement in Parliament,<sup>10</sup> there was an established approval by both Houses in 1958<sup>11</sup>. The referendum was rejected sharply in 1959 with 67 percent "no" against 33 percent "yes" with a voter turnout of 66.7 percent. Only the cantons of Vaud, Geneva and Neuchâtel were in favor<sup>12</sup>. Nevertheless, in the following years, the State of German-speaking Switzerland and Basel-Stadt became in favor of women's suffrage based on cantonal and municipal polls in 1966. This trend was followed by Basel-Country and Ticino, respectively in 1968 and 1969.

In February 1971<sup>13</sup> Swiss women finally achieved their long-desired goal: voters accepted women's suffrage in a federal poll with 65.7 percent in favor of "yes" against the 34.3 percent of "no." However, the cantons of Appenzell, Glarus, Obwalden, Schwyz, St. Gallen, Thurgau and Uri continued to reject the request.

With this ongoing wave of success, most cantons introduced right to vote for women at the cantonal and municipal level before, during, or after this instance; however, some municipalities delayed the adoption until the '80s. Noteworthy is that Appenzell Aussenrhoden endorsed women's suffrage with only a small majority in 1989. Appenzell Innerrhoden actually required a Federal Court decision in 1991.

## Data

To analyze the effects of women's suffrage on the size and scope of the government in Switzerland, we use a unique dataset on government expenditures and revenues that collect information on each canton (25)<sup>14</sup> from 1950 to 2013<sup>15</sup>. Since the potential channels through which women may have affected policy decisions

<sup>9</sup> Although Swiss women were unable to sign initiatives to introduce a women's suffrage amendment, they were entitled to launch an initiative campaign by gathering signatures of male voters for a suffrage amendment (Banaszak, 1991).

<sup>10</sup> Parties in support of women's suffrage are mainly those who wanted to sing into the European Human Rights Convention, and needed to introduce the right to vote to be able to enter it (Funk and Gathmann 2005).

<sup>11</sup> Before the vote, the Socialist Party, the independent ring and the Labour Party are in favour of women's suffrage. Radical Democratic Party and the Christian-Social Party catholic opt for the freedom to vote, while the Party of the farmers, artisans and bourgeois pronounce for the no.

<sup>12</sup> The canton of Vaud introduced the same day the women's suffrage in cantonal and municipal matters, followed the same year by Neuchâtel and in 1960 for Geneva.

<sup>13</sup> In autumn 1971, Swiss citizens elect in Parliament ten national councillor and a Council of States. Eleventh National Council settles after a few days by taking over a colleague elected to the Council of States. Since then, the percentage of women in the National Council has undergone a rapid increase at first and then a little slower. Today 62 out of 200 deputies are women. At the beginning of the millennium among the 46 members of the Upper House they were sitting already more than ten women. Currently, the Council of States are nine.

<sup>14</sup> We excluded the canton of Jura from our sample since it was created in '76 and women were granted the right to vote from the beginning.

<sup>15</sup> This dataset is an extension of Funk's dataset used for the paper "What women want: Suffrage, female voter preferences and the scope of the government" by Funk and Grahnemann (2005). The two authors manually collected data for each canton for dates before 1980, and used a 50 years that covers until year 2000. We want to thank Patricia Funk who kindly provided us with this data that usually are not directly available under ordinary rese-

arch. We also want to mention that this dataset pertains to the authors, and therefore is used only under extraordinary permission.

after the enfranchisement are varied, the panel data with this wide of a range allows us to estimate government expenditure over a long-time horizon (Funk and Gathmann, 2005) through substantial cross-sectional and time variation. Moreover, we can control for fixed and time effects over time, and include an appropriate variety of economic and socio-demographic control variables.

In fact, the wherewithal of the dataset is that it contains a dummy variable for the introduction of suffrage at the very year it was introduced. The population measures in number and percentages (size, age, urban area, religion, income per capita etc.), government revenues and expenditures (health, culture, education etc.) and other aggregate variables<sup>16</sup>. Related to the interpretation of the results is that data on expenditures and revenues (in logarithmic scale aside from the variable for deficit as it can have negative values) are assembled from the records available from the Federal Department of Finance of Switzerland and are pegged in 1000 and 2000 CHF. prices<sup>17</sup>, and values for missing years were calculated by linear interpolation<sup>18</sup>. Please see Appendix 1 and Table 1 below.

## APPENDIX 1

### Canton-Level Panel Data (by Funk and Gathmann, 2005)

The canton level data on expenditures and revenues are taken from the annual collections on public finances of Switzerland (Federal Department of Finance, various years). Data are available on paper format before 1980 and electronically after 1980. Refer to Table 1 below. Real per capita expenditures (in 1000 CHF. And 2000 prices) are built for the following types: total cantonal expenditures, security, education, culture, welfare, traffic, environment, and agriculture. For the years 1967 and 1968, no separate expenditure data for Cantons and communities were available, but only expenditures for Cantons and their communities together. Values for these years were obtained by linear interpolation. The expenditure-categories "culture" and "environment" were created later, in the years 1977 (culture) and 1970 (environment). Total revenue data are available for all years except the years 1968 and 1969. Cantonal shares from federal revenues are unavailable for the years 1968, 1969 and 1990-1993. As for federal subsidies, data were unavailable for the years 1950-1952, 1968-1977 and 1990-1993. These values were obtained by linear interpolation. Data on the budget deficit data were completely collected for all the years.

For the canton characteristics, most variables are from the decennial population census with intermediate values interpolated. Data for the population in rural and urban areas is only available from 1970. The education variable is measured as the share of high-school graduates in percentage of the 19 year-old population. Data on average per capita income in the cantons is available since 1965.

<sup>16</sup> More recent data for these observation are quite widely available on the Swiss website of historical and statistical data: <http://www.bfs.admin.ch/bfs/portal/en/index.html>

<sup>17</sup> We adjusted our more recent data to match these values in order to preserve continuity in the format of these variables. In fact, these are expressed per capita and deflated to 2000 Swiss Francs using annual consumer price index reported in Schuppli and Studer (2004).

<sup>18</sup> For more details we append a description of the data directly by Funk and Gathmann (2005) in (Appendix 1).

The unemployment rate is calculated as the number of registered unemployed relative to the active population from the State Secretariat for Economic Affairs after 1975 and as the number of unemployed in percentage of employed persons from the population census before 1975. Population density is measured as the log of the number of people (in 1,000) per square kilometre. Variables of the household structure are again from the population census and include: the percentage of single-parent households, the share of married people in the group older than 20, the group of divorced people in the same age group. Also from the population census are data on the percentage of foreigners in the total population, the share of Catholics and citizens in different age classes (i.e. between 0 and 19, between 20 and 39, between 40 and 64, between 65 and 79, older than 80). Female labour force participation is measured as the share of women older than 15 who work.

Information on the existence of a mandatory budget referendum is taken from Trechsel and Serduelt (1999), who systematically collected information for cantons without a town-meeting from 1970 to 1996. For previous years or Cantons not covered by Trechsel and Serduelt (i.e. the town-meeting Cantons), we gathered data from all the Cantonal Public Record Offices and supplemented missing information from old canton laws and constitutions. (End of Appendix 1.)

Furthermore, to expand our resources, we take advantage of widespread data on local expenditure and socio-economic characteristics, and combine them with government expenditure and revenues<sup>19</sup>, taking advantage of the canton-to-canton variation in the timing of approval of women’s suffrage, similarly as applied in Lott and Keny (1999)<sup>20</sup>.

Additionally, we use a complementary dataset of repeated cross-section surveys that were held every four years since 1971 until 2011 for federal votes until 2011<sup>21</sup>. It contains national vote data and detailed demographic information, as well as the economic situations and political beliefs for each of the more than 1,000 respondents<sup>22</sup>. Refer to Table 2 below. In accordance with Funk and Gathmann (2005) we opted to drop non-eligible candidates aged under 21 until March 1991 and under 18 after March 1991. An advantage of this questionnaire is that among the questions all individuals surveyed were asked to express their preference even if they did not vote. In case the gender gap displayed by the sample of voters of the Swiss population revealed totally different results with respect to those recorded in the survey, we would potentially expect that voters weigh in a non-representative way than what the population in the survey reveals.

<sup>19</sup> Nominal budget balances taken from the Swiss Federal Finance Administration.

<sup>20</sup> In particular, we focus on the political decisions of citizens at the federal level, including relevant policies which can usually not be studied using state-level data (Funk and Gathmann, 2005).

<sup>21</sup> This is an electronic format dataset directly available on the FORSbase portal for Switzerland that helps us expanding information about respondents with respect of Funk and Gathmann’s one in which, though, systematic surveys had been done only after 1981.

<sup>22</sup> The surveys contained in the FORSbase were sent to more than 1,000 individuals before 1991, while the number of respondents increases steadily in 1995 (with more than 7,000 observations), and for the sequent years is stable around 4,000 individuals’ answers. Unfortunately, during the gap years some more detailed questions were asked to each individual, and this creates little discrepancies with the full sample of data.

## Empirical Strategy

In this paper we further the hypothesis that women’s suffrage changed the size and the scope of the government, and we try to analyze these potential effects through several indicators related to the Swiss government. We assume that if giving women the right to vote was the principal cause of government growth, this effect should offset any other possible peer factors.

Obviously, other variables are meant to be taken into account, but none of these should be the reason for government expansion. Therefore, to estimate the effect of providing women suffrage, we specify in our main regression the effects of women’s turnout on government expenditure and revenues. The independent variable is a dummy and accounts for the time since the introduction of female suffrage (0 if only male vote, 1 if women could vote)<sup>23</sup>.

We apply a simple difference-in-differences approach to estimate changes in all dimensions of the government, using spatial and temporal variation in time for the enfranchisement at the canton level. Specifically, we estimate the general linear form regression:

$$Y_{c,t} = \beta_0 + \beta_1 * Suffrage_{c,t} + \beta_2 * Z_{c,t} + \alpha_c + \gamma_t + \alpha_c * t + \epsilon_{c,t}$$

$$\lambda^{ct} = \beta^0 + \beta^1 * \lambda^{ct} + \beta^2 * \lambda^{ct} + \alpha^c + \lambda^t + \alpha^c * t + \epsilon^{ct}$$

where  $Y$  is the specific outcome of interest in Canton  $c$  and year  $t$ ,  $Suffrage$  is the main dummy variable indicating whether or not women had the right to vote<sup>24</sup>,  $Z$  are socio-demographic control variables,  $\alpha_c$ ,  $\alpha_c$  and  $\gamma_t$ ,  $\gamma_t$  are canton and time fixed-effects and  $\alpha_c * t$ ,  $\alpha_c * t$  are country-specific trends<sup>25</sup>. In this case, the parameter of interest in our specification is  $\beta_1$ . Canton fixed-effects capture time-invariant differences and heterogeneity between Cantons and the government’s system as well as structure. Meanwhile time fixed-effects control for changes over time in the government’s services and programs trends<sup>26</sup> (Lott and Kenny, 1999).

In this econometric framework, we assume that the implementation of suffrage is to be an exogenous variable that allows us to capture only trend breaks in the outcomes of interest that correspond exactly with the timing of the introduction of women’s suffrage (Miller, 2008). In fact, the dates of the enfranchisement can be considered truly exogenous in the economy since it came far after other European suffrages, and any modification of the federal constitution demands a common male consensus<sup>27</sup> at federal and cantonal levels. Additionally, women’s suffrage appears to not depend on any economic condition per se (Krogstrup and Walti, 2006).

<sup>23</sup> We approximate the female participation rate as the female share of voters accounting for how many women were in age to vote (21 years old before March 1991, 18 years old after that date) and, thus, capturing the delay at which women exercise their right to vote and its impact.

<sup>24</sup> As for now, we start with this model of regression since we are initially interested in pure difference between man and women’s voting preferences. In the sequent regression estimation, we make interact this dummy together with a interaction term for the share of adult women in the voting population (takes value 0 if the suffrage is not implemented, 1 otherwise).

<sup>25</sup> We believe that the identification comes from already existing country specific time trends in social spending, related to women’s suffrage.

<sup>26</sup> Fixed and time effects are helpful in correcting for unobservable variables, but can involuntarily measure changes in government growth outside the variable of interest is women’s suffrage.

<sup>27</sup> In this case is useful to remind that men voted for the suffrage to take place.

In fact, we can consider this setting as a natural event in which we can observe an exogenous variation of the socio-economic conditions under unplanned circumstances: this provides more validity to our estimates.

## Empirical Findings

The discrepancy in voting preferences between men and women arise from diverging perspectives about the role of the government and its authority at the cantonal and federal levels. Women are supposed to support a more expansive government as they are expected to anticipate the benefits from services and facilities provided, and potentially pay less via progressive taxation. Thus, we would be more likely to observe women to have a higher inclination to support government expenditure on social insurance and public provision of public goods such as education, health, and environment protection (Aidt and Dallal, 2007), and we formulate the hypothesis that women's enfranchisement increases social expenditure.

In our attempt to calculate whether women's suffrage had any significant impact on the expansion of the Swiss government during the '70s, we run our main regression without controlling for other factors except for a variable indicating whether or not women had the right to vote. In this sense, we want to measure whether the pure effect of the enfranchisement is strong overall or varies significantly when we add controls (TABLE 4). As we can see from the overall expenditure and revenues in Switzerland (column 1), initially all coefficients are positive and significant for the revenue variables and negative and significant for the expenditure ones. These estimates imply that after women were granted the right to vote there was also a significant shift of the government expenditures in a set direction (at least at an aggregate level).

Nevertheless, in order to provide a more accurate and reliable estimation, we account for all those factors that may capture part of the variation in the spending decisions by the government and report more accurate estimators. In fact, in column 2 and 3 we show the same results controlling for all those external variables that may have a part in explaining our results, and we run our full specification regression with time and fixed effects included in order to remove any potential trends. As we can see, coefficients decrease in magnitude but do not change in sign and remain significant for total expenditure and revenues.

Hereby, to make a more convincing study on the effect of women's suffrage on government expenditure and revenue decisions, we dissect the spending by item and give social spending a narrower definition. On one hand, we define it as collective goods which can be included in spending: health, welfare, education and culture. On the other hand, we use a broader term related to long-term public services including environment, transport, defence, agriculture and administration. Moreover, in TABLE 3 we provide some summary statistics of other demographic characteristics that, among others, we take into account in order to control for potential omitted variables as age groups in percentages over the population, population density<sup>28</sup>, unemployment level, income, religion (ideology may be

an important trigger), and education<sup>29</sup>. We use all these variables as to control for potential time-varying factors related to expenditures and revenues per canton over time.

Hence, to examine the weighted effect of women's voting rights on expenditures (where we remind that the previous independent variable takes value 1 if suffrage is adopted) we run our main specification model accounting for expenditure revenues or deficit<sup>30</sup> per Canton in each year in each subcategory. In an attempt to account for aggregate trends, we use canton and year fixed effects. The advantages of this specification is that it controls for all variables that vary across cantons but not over time. It also controls for all variables that vary over time but not across cantons. It also controls for a variable that changes over time and across states<sup>31</sup>. Finally, we use observations for all the years available given that when more observations are used, the estimates are more precise.

TABLE 5 shows the results from our regression, and we immediately observe that the suffrage in Switzerland had a negative impact on deficit and expenditures but a positive one on revenues, and a negative effect on the size of the government at the aggregate level. In fact, surprisingly women appear to be more conservative in that expenditures and deficits were reduced by 3.4 and 3.5 percent respectively.

However, we can observe much more interesting results when looking at the consequences on the scope of the government. We can observe that for collective goods women have different preferences as the health and welfare areas of the government in which women would invest are positively significant (with an expected increase of 3.9 and 4.8 percent respectively). Meanwhile, education, culture, and defence spending appear to be less favorable to this extent. Education is negatively insignificant with an expected decrease of 3.2 percent. This is unusual as it we expected women to want to increase education rates overall. Health is positively insignificant. The health variable has an expected increase of 3.9 percent which is understandable as women may care about health-related topics and how it affects their country's population. As for long-term public services, we observe only negative and significant coefficients with the environment being an exception. For example, the variable transport is negative and insignificant. There is an expected 3.4 percent decrease for the transport cost. We believe that these results have an explanation, despite the magnitude being considered reasonably small at an aggregate level of expenditures. In fact, women would spend less than men at a cantonal level as they are more conservative and less risk averse; and they prefer to further shift the composition of expenditure from the social perspective of prevention.

Additionally, to provide a broader overview of these results, we can evaluate the coefficients of the control variables included in the regression. Hereby, we can see consistent effects with the theory since a higher unemployment rate is positively related with more spending and a more expansionary government and higher population density reduces the expenses due to existing economies

<sup>28</sup> We decided to add the average population density by canton as Funk and Gathmann (2005) do to control for economies of scale in the provision of public goods.

<sup>29</sup> Following Funk and Gathmann (2005) we kept the definition for all these variables and education is calculated as of fraction of population with a university degree.

<sup>30</sup> The only variable not calculated in logs is deficit has it can assume also negative values.

<sup>31</sup> There could be more omitted variables of this type but at least we are controlling for heterogeneity.

of scale. Besides, religion has a constant negative effect on most of the coefficients (except for health and environment) following the idea that ideology can have a real impact on government provisions.

Therefore, we can conclude that women are found to be more supportive of certain types of expenditures that aim to redistribute wealth, and found to encourage less consumption of government resources for defence spending and agricultural subsidies. We can confirm the view that women are generally more conservative than men after suffrage was adopted.

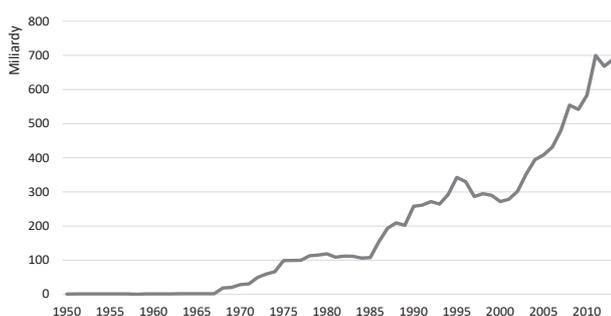
### Progressive Preferences Effects

Funk and Gathmann (2005) together with Lott and Kenny (1999) show that not only women's preferences for government expenditures change over time, but also the turnout gap is reduced over time, and this may provide different effects in the short, medium, and long run. In order to capture these potential effects, we have to run our main regression model keeping the overall categories constant, but introducing the time lag by year with the adoption of suffrage as a dependent variable. We adopt both a linear and a quadratic functional form (TABLE 7), and account for a ten-year lag since the year of adoption in order to evaluate the effect also over average, medium, and long terms using a dummy specification (TABLE 6).

We find that the overall effect on government expenditures and revenues is negatively related, increasing in absolute value the more we move away for the adoption year. A potential explanation is that during the first decade since enfranchisement, women's ideologies were even less conservative than the more recent ones and the turnout gap between male and female has decreased until smoothing completely. In fact, in the first ten years of adoption the expected decrease in expenditure is 1.1 percent, meanwhile after thirty years of suffrage the results show that there is a substantial 9.9 percentage reduction. The findings are in line with the negative coefficients that explain the size and scope of the government as they represent the relationship of government decision on budget spending with one extra year.

Furthermore, when we consider the two categories previously described for the scope of the government, the results are in line with what we examined in the former analysis, and of paramount importance we recognize a positive trend for health and wealth that is gradually increasing over time meaning that women have started to care about social expenditures more recently. See Table 8 and Figure 1 below.

Figure 1. Switzerland GDP



Notes: data source The World Bank. GDP is calculated in billion dollars for the period 1950-2015. Noteworthy, the level of GDP start increasing sharply around 1971, that is when Switzerland adopt women's suffrage.

### Robustness

Even though we have found that at an aggregate level the introduction of women's suffrage has shifted some of the dimensions of government spending, we are still concerned about bias that can alter our results and lead to miscalculated coefficients.

### Education

Educational level and attainment may give way to some concern. In fact, during the time frame of the introduction of suffrage, Swiss women were normally less educated than Swiss men (Stutzer and Kienast, 2005). The introduction may have shifted the aggregate income level as women earned less or suffered more due to unemployment than men, but it also may have had a downward bias effect on our estimates.

Additionally, since women did not usually vote, the acquisition of new human capital to this extent can be exerted over time and not necessarily from the immediate first ballot. In this scenario, we would also expect an imbalance effect of numerous young women to go vote since they had less knowledge about politics compared to a small number of older women that had a greater stock of political capital by virtue of their longer lives (Lott and Kenny, 1999).

To test whether this potential bias may influence our estimates, we used an interaction term with the educational level and the share of female eligible population. We omit the group of men we acknowledge as more educated and thus pertaining to the baseline level. The results are in line with the initial regression with no significant difference between the two groups.

We include an interaction term with women's suffrage and the share of eligible females to vote and two additional interaction variables for the first year of enfranchisement and age groups above 35 years old (we omitted the group between 21-34 as we expect it to have a lower level of political capital). Using the previous regression with these changes produced very similar results, but we can account for a statistically significant coefficient for the group age between 35-55 years old that appears to have responded better to voter turnout. However, there is no evidence of differential effects between women in younger or older categories, and at most, we could speculate a downward bias estimated effect due to enfranchisement.

### Income

Income levels may have induced some disturbance effect as well. As a matter of fact, at the time of women's suffrage, the female population was overall less economically independent. Women were less likely to work, and the gender gap (meant as a social gap here) resulted in them receiving a lesser pay with respect to men. Thus, we may assume that the admittance of women into the electorate altered the income level of all the electorate, and we may also observe a potential link with preferences for the composition or level of public goods (Krogstrup and Walti, 2007). Besides, Edlund and Pande (2002) detected a relationship underlying the changes in gender gap, women's preferences for some government expenditures, and divorce patterns. As women in theory are less risk averse than men, they may prefer government programs that

are based especially on wealth transfers as forms of state insurance.

Our strategy to test for this effect is twofold. First, we control for female income introducing a dummy variable inside the main specification model. Second, we monitor the variation in deficit as low income individuals are supposed to ask the cantonal authority to provide more funds available to help constrained citizens. However, also in this specification are results quite similar to what we found in the first regression outcome, and we witness a higher deficit than is what we expect from women due to aforementioned reasoning. Hence, we have evidence to conclude that the income effect is not likely to significantly transform our results. See Table 11 and Table 12 below.

## Referendum

An important caveat is that the right to vote was granted in a referendum in which only men could vote. Hence, there is a possibility that, at the very time in which enfranchisement occurred, a reverse effect is going on in the underlying preferences of male voters, which in turn, along also influences men’s preferences. For this purpose, we assume that cantons are dissimilar with a one-dimensional preference parameter expressing a liberal attitude towards both government spending and extending the franchise. In the case that a higher demand for government is matched in those liberal cantons more prone to ratify the suffrage, our estimates could be biased. In fact, liberal attitudes toward government spending may have been channelled into the female suffrage decision, and this would bias the results via an over-estimation of the true effect of suffrage since we may have an omitted variable of underlying time varying trends on male preferences.

Additionally, even if in the specification we introduce canton fixed-effects to absorb any time invariant differences in voter preferences across cantons (Funk and Gathmann, 2005), we may still incur biased estimates driven by time-varying heterogeneity across cantons. However, Funk and Gathmann (2005) find that men’s inclinations in fiscal outcomes over government expenditure do not show patterns of time-varying cantonal heterogeneity in male preferences in this data (Krogstrup and Walti, 2007).

Therefore, we follow their testing procedure and use data on voting behavior in federal ballots, controlling for those that would lead to an increase in federal expenditures through the mean support for expensive projects before the adoption of suffrage. We found similar results (TABLE 9 and 10) for fiscal preferences in those cantons that introduced women’s suffrage before 1971. This reveals less conservative behavior exactly for these cantons. Thus, heterogeneous preferences are correctly absorbed into canton fixed effects.

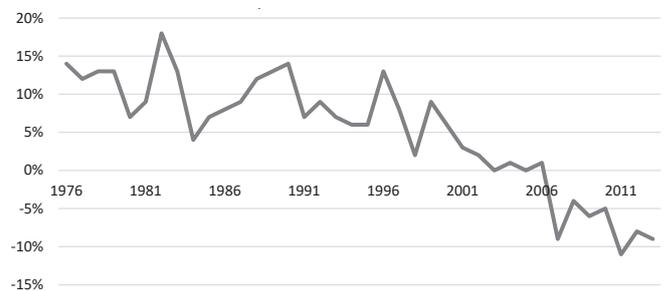
## Turnout

Finally, female turnout in time can make a difference in the short and long term following the adoption of suffrage. In fact, women’s preferences on expenditure are matched by higher participation in the following years immediately after enfranchisement. The results will be driven by this effect in the long term. Additionally, due to potential self-selection among voting women, those indi-

viduals who went to vote may be the share of more (or less) conservative voters, and therefore produce more weight overall in time.

However, Funk and Gathmann (2005) show that the turnout between men and women was gradually, but rapidly, decreasing in the first 20 years after the acquisition of the right to vote. See Figure 2 below. They test for this dynamic effect estimating female turnout in cantonal elections with an expected drop in the overall turnout rate due to women’s absence from the poll (assuming the male participation is unaffected). Hence, they estimate that the adjustment in canton and federal ballot turnout occurred rapidly with similar patterns. Comparing the self-reported political positions of voters who did not actually vote in two different points in time (just before and after suffrage) yields no statistically significant differences revealing non-voters as to be more left-wing.

Figure 2. Turnout Rate Gap in Federal Proposition 1976-2013



Notes: data source FORSbase. The turnout gap rate in Federal Proposition is inspired at Funk and Gathmann (2005) and calculated as the difference between male and female turnout for federal votes in the period 1977-2013.

We test these potential dynamic effects accordingly, and find comparable observations. In our case we observe less emphasis in the ten initial years after the turnout and more predictive power in years a decade later. We assume that our results are driven by a slightly different calculation over the appraisal of the turnout rate, and a wider dataset of surveyed non-respondents. However, our results are not so distant and therefore robust.

## Conclusion

In this paper we provide an analysis of the effect of the adoption of women’s suffrage on the size and scope of government in Switzerland. The Swiss confederation includes unique characteristics that allow us to study this phenomenon for a European country during the period of enfranchisement in the ‘70s. Therefore, we add new evidence to this literature on the fundamentals of what was already done for Switzerland as we adopted it from the perspective of the size of the government and the weight of female voting preferences in numerous ballots that took place in the final twenty years of the 20<sup>th</sup> century. We examine the consequences that suffrage had at a federal and cantonal level on expenditures and revenues by item through expanding a former dataset over the topic to observe what happens in the long-run. We also account for more extensive demographic data that was recently made available in electronic format in order to observe and control for any potential factors that may aid in capturing this variation more accurately.

We run a regression holding the adoption of female suffrage as the main independent variable. We believe enfranchisement to be an exogenous event that provides us with a natural experiment and, thus, leads to more than simple speculation about a possible causal relationship regarding this effect. We control for potential time and cantonal fixed effects to exclude influence arising with trends, and we add control variables to avoid misleading results due to possible measurement or omitted variable bias.

We found that women's suffrage actually had an impact on government decisions in the dimension of scope more so than the size. In fact, even if we account for negative significant results in expenditures and deficit, which means that suffrage yields a more conservative share of the population at the polls, the magnitude is small in the extent of the real economy. However, our findings are more explanatory when we dissect the spending by item. In this case, we find that women seem to be more prone to allocate government resources over wealth and health redistribution programs. Meanwhile they are more inclined to reduce expenses over agricultural subsidies and defence purposes. Accounting for the differing time lag since the adoption contributes to a deeper analysis of these effects, we observe that reducing the turnout gap participation between men and women leads to these outcomes increasing gradually over time as the share of more conservative women changes the overall voter turnout trend. Nevertheless, we notice that the spending in health and wealth keep positive coefficients in line with what we estimated with the former regression.

We performed a series of robustness checks to inspect the validity of our results. In accordance with the literature, we disentangle the position of lower than average income among potential deceptive implications in our estimates, and we execute the same inspection for lower levels of education as well. Furthermore, we control for the referendum effects and the trend position of men throughout the implementation of suffrage in different cantons along with the female turnout increasing trend over time during the first two decades.

Overall, we speculate that our attempt to find some tentative evidence regarding the introduction of women's suffrage in the Swiss constitution on the size and scope of the government resulted in significant documentation of the proof of discrepancy in preferences between men and women. However, given the peculiar circumstances under which this entire process took place, future analyses are needed to prove additional robustness to this conclusion.

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Table 1

Cantons	Year of adoption of Women Suffrage	Percentage of Yes Votes in Federal Referendum of 1959	Percentage of Yes Votes in Federal Referendum of 1971
Neuchatel (NE)	1959	51.3	83.9
Vaud (VD)	1959	52.2	82.0
Geneva (GE)	1960	60.0	91.9
Basle-City (BS)	1966	46.8	82.2
Basle-County (BL)	1968	37.3	79.9
Ticino (TI)	1969	37.1	75.3
Zurich (ZH)	1970	36.2	66.8
Valais (VS)	1970	30.5	79.9
Lucerne (LU)	1970	21.3	62.7
Zug (ZG)	1971	29.8	71.1
Fribourg (FR)	1971	24.3	59.9
Schaffhausen (SH)	1971	31.9	56.7
Aargau (AG)	1971	22.8	50.2
Berne (BE)	1971	35.5	66.5
Glarus (GL)	1971	19.1	41.3
Solothurn (SO)	1971	30.0	64.1
Thurgau (TG)	1971	19.9	44.1
St. Gallen (SG)	1972	19.3	46.5
Uri (UR)	1972	14.6	36.3
Schwyz (SZ)	1972	14.2	42.2
Graisons (GR)	1972	22.4	54.8
Nidwalden (NW)	1972	19.5	55.8
Obwalden (OW)	1972	14.3	46.7
Jura (JU)	1977	N/A	N/A
Appenzell Aussenrhoden (AR)	1989	15.5	39.9
Appenzell Innerrhoden (AI)	1990	4.9	28.9

Notes : The table reports the year women were given the right to vote at the cantonal level and the fraction of voting men that supported the introduction of women suffrage in the two federal referendums 1959 and 1971. Since the canton Jura separated from Bern only in 1977 to become an independent canton, no separate results for the federal referendums are available. Adoption of women suffrage was voluntary in all cantons except one. *Appenzell-Innerhoden* was forced to adopt women suffrage by the Swiss Supreme Court in 1990. Source: Funk and Gatahmann (2005).

Table 2

	Women		Men		T Statistic
	Mean	Std. Dev	Mean	Std. Dev	Difference
<b>Demographics</b>					
Age	51.08	18.09	49.98	17.41	16.82
Catholic	0.48	0.44	0.46	0.44	-2.80
Single	0.32	0.31	0.22	0.36	13.44
Married	0.62	0.45	0.68	0.49	17.56
Divorced	0.12	0.19	0.13	0.12	-13.75
<b>Education, Work and Income</b>					
Education: Compulsory	0.18	0.38	0.09	0.28	-48.23
Education: Apprentice/Spec Schools	0.78	0.49	0.82	0.37	19.43
Education: University	0.12	0.22	0.17	0.23	39.76
Employed	0.61	0.56	0.78	0.52	63.22
Income	1.99	0.81	2.41	1.34	14.43
<b>Region of Residence</b>					
Urban	0.74	0.43	0.77	0.49	-7.88
Non-German	0.29	0.45	0.22	0.40	-5.42
<b>Political Position and Participation</b>					
Self-Placement Left-Right (0-10)	5.09	1.65	5.84	1.97	21.22
Turnout	59.05	48.23	61.71	49.47	34.71

Notes: The summary statistics are based on the sample of voters provided in our FORSbase. Education measures the highest degree, meanwhile employed is a dummy variable capturing the employment status, and income measures household income in 5 income-classes. Married, single and divorced are dummy variables describing the civil status of the respondent. Age is measured in years, catholic, urban area and non-german speaking area are all dummy-variables. Party-Ideology is measured on a 0-10 left-right scale, where higher number indicate a more right-wing political position. The turnout variable whether the respondent voted in federal parliamentary elections. The last column shows the T-test statistic for differences in means between men and women. Source: to create this table we relied to Funk and Gathmann (2005) to have comparable results.

Table 3

	Observations	Mean	Std. Dev	Min	Max
<b>Expenditures Per Capita</b>					
Overall	1604	8077	2365	597	23227
<i>Public Goods</i>					
Environment	923	356	154	0	1789
Agriculture	1357	578	345	0	3899
Welfare	1604	689	432	35	4701
Education	1604	1478	931	45	5437
Health	1604	942	832	15	6356
<i>Long-term public services</i>					
Transport	1233	944	1112	0	13005
Defence	1397	555	243	0	1678
Administration	1454	877	187	0	11356
<b>Revenues and Deficit Per Capita</b>					
Overall	1604	5833	4215	474	24403
Federal Subsidies	1008	859	934	50	7230
Shares on Federal Revenues	1233	413	355	0	5367
Deficit	1296	-53	612	-3284	12475
<b>Control Variables</b>					
Age 0 to 19 (%)	1586	28.2	4.4	16.3	38.5
Age 20 to 39 (%)	1586	28.7	3.6	22.1	35.5
Age 40 to 64 (%)	1586	29.6	3.6	24.2	39.4
Age 65 and Older (%)	1586	9.6	2.9	6.5	17.4
Population Density (per Km <sup>2</sup> )	1586	454	975	22	6942
Unemployment Rate (%)	1586	0.8	1.1	0.0	7.8
Foreigners (%)	1586	15.2	4.5	2.3	39.
Catholics (%)	1586	59.4	27.2	8.0	93.3
Divorced (%)	1586	3.9	3.7	0.3	10.2
Female Labor Force Participation (%)	1586	48.8	5.8	24.0	62.7
Education	1586	10.3	3.4	0.0	35.8
<b>Additional Controls (Robustness)</b>					
Rural (%)	953	39.2	32.4	0.0	100.0
Mean Annual Income	1185	8592	10282	95	82174
Share of Left Parties in Parliament	1372	19.5	11.5	0.0	52.0

Notes: The table shows summary statistics over the whole period in our sample (1950-2013). The unit is a canton-year observation, and all expenditures, revenues and mean cantonal income are deflated to 2000 Swiss Francs. Source: to create this table we relied to Funk and Gathmann (2005) to have comparable results.

Table 4

Government Size	(1)		(2)		(3)	
	Total Revenues	Total Expenditure	Total Revenues	Total Expenditure	Total Revenues	Total Expenditure
Suffrage	0.0767***	-0.0672***	0.0626***	-0.0508***	0.0524***	-0.0439***
	(0.0292)	(0.0287)	(0.0237)	(0.0109)	(0.0206)	(0.0105)
Constant	7.551***	7.583***	5.306***	3.328***	5.306***	3.328***
	(0.0250)	(0.0252)	(0.0204)	(0.105)	(0.0204)	(0.105)
Control Variables	No	No	No	No	Yes	Yes
Time-Effects	No	No	Yes	Yes	Yes	Yes
Canton-Effects	No	No	Yes	Yes	Yes	Yes
Observations	1,604	1,604	1,604	1,604	1,604	1,604
R-squared	0.591	0.614	0.633	0.654	0.702	0.696

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).

Table 5

	Size of Government						Scope of Government					
	Expenditures	Revenues	Deficit	Environment	Transport	Defence	Agriculture	Administration	Education	Health	Welfare	Culture
Women Suffrage	-0.034** (0.017)	0.007* (0.003)	-0.035** (0.022)	0.019* (0.011)	-0.034* (0.021)	-0.026* (0.018)	-0.099** (0.043)	-0.008** (0.003)	-0.032*** (0.013)	0.039*** (0.012)	0.048*** (0.015)	-0.044** (0.034)
Unemployment Rate	0.018** (0.008)	0.008 (0.009)	-0.067** (0.045)	0.038** (0.016)	-0.052*** (0.022)	-0.013* (0.009)	0.007 (0.022)	0.001 (0.001)	-0.052*** (0.007)	0.013 (0.011)	0.024 (0.021)	0.016 (0.02)
Population Density	-0.531*** (0.077)	-0.633** (0.258)	-0.928*** (0.644)	0.979 (0.899)	0.125 (0.233)	-0.222*** (0.101)	-0.999*** (0.128)	-0.289* (0.198)	0.306** (0.197)	0.959*** (0.142)	0.192** (0.094)	0.091 (0.088)
Higher Education	-0.007** (0.003)	0.001 (0.004)	0.005 (0.006)	0.038** (0.018)	-0.018*** (0.005)	-0.002 (0.002)	-0.025*** (0.012)	-0.006 (0.014)	-0.009*** (0.002)	0.011 (0.009)	0.018*** (0.004)	0.032* (0.026)
Divorced	-0.187*** (0.034)	-0.123*** (0.054)	-0.008 (0.079)	-0.373*** (0.0995)	-0.132*** (0.044)	-0.156*** (0.035)	-0.23*** (0.078)	-0.267** (0.099)	-0.168*** (0.032)	-0.393*** (0.088)	0.012 (0.033)	-0.055 (0.058)
Female Labor Force	-0.01*** (0.002)	-0.012*** (0.003)	0.009 (0.01)	-0.04 (0.037)	-0.016* (0.011)	0.001 (0.004)	0.032** (0.017)	0.001 (0.017)	-0.005 (0.004)	-0.034*** (0.009)	0.004 (0.007)	-0.003 (0.007)
Catholic	-0.012*** (0.003)	-0.011*** (0.003)	-0.009 (0.008)	-0.004 (0.009)	-0.004 (0.006)	-0.009*** (0.002)	-0.014*** (0.006)	-0.004** (0.002)	-0.005 (0.006)	0.019** (0.002)	-0.013*** (0.004)	0.005** (0.002)
Share Federal Revenues	0.0009 (0.012)	0.017 (0.022)	0.134* (0.047)	0.035 (0.055)	-0.043 (0.041)	0.002 (0.009)	-0.009 (0.042)	-0.001 (0.003)	0.077 (0.056)	0.099* (0.057)	0.055*** (0.022)	-0.035 (0.032)
Federal Subsidies	0.179*** (0.034)	0.179*** (0.042)	0.04 (0.066)	0.147*** (0.069)	0.227*** (0.099)	-0.033** (0.018)	0.95** (0.054)	0.016 (0.013)	0.09*** (0.009)	0.127*** (0.048)	0.003 (0.019)	0.122* (0.99)
Age Groups	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Canton Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,604	1,604	1,604	1,135	1,604	1,604	1,604	1,604	1,604	1,604	1,604	985
R-squared	0.93	0.89	0.45	0.62	0.77	0.93	0.86	0.82	0.93	0.91	0.93	0.92

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).

Table 6

	Size of Government						Scope of Government					
	Expenditures	Revenues	Deficit	Environment	Transport	Defence	Agriculture	Administration	Health	Education	Welfare	Culture
Years since Adoption	-0.0083*** (0.0014)	-0.0095*** (0.0034)	-0.0123* (0.0101)	-0.0193* (0.0145)	-0.0101 (0.0094)	-0.0022 (0.0019)	-0.0324** (0.0067)	-0.033** (0.012)	0.0252*** (0.0056)	-0.0056** (0.0027)	0.0134*** (0.0044)	-0.047** (0.03)
Years Squared	0.0004 (0.0001)	0.0002 (0.000)	-0.0007* (0.0002)	0.0002 (0.0005)	0.0007** (0.0001)	0.0001 (0.0001)	0.001** (0.0003)	0.009 (0.007)	0.0008** (0.0001)	0.0007* (0.0001)	0.0003** (0.0001)	0.006 (0.004)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Canton Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,532	1,532	1,532	1,005	1,532	1,532	1,532	1,604	1,532	1,532	1,532	985
R-squared	0.91	0.89	0.45	0.62	0.77	0.91	0.88	0.84	0.92	0.92	0.92	0.91

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | Source: We expanded on Funk and Gathmann (2005).

Table 7

	Size of Government						Scope of Government					
	Expenditures	Revenues	Deficit	Environment	Transport	Defence	Agriculture	Administration	Education	Health	Welfare	Culture
Years since	-0.0083***	-0.0095***	0-0.0123*	-0.0193*	-0.0101	-0.0022	-0.0324**	-0.033**	0.0252***	-0.0056**	0.0134***	-0.047**
	(0.0014)	(0.0034)	-0.0101	-0.0145	(0.0094)	-0.0019	(0.0067)	(0.012)	(0.0056)	-0.0027	(0.0044)	(0.03)
Years Squared	0.0004	0.0002	-0.0007*	0.0002	0.0007**	0.0001	0.001**	0.009	0.0008**	0.0007*	0.0003**	0.006
	(0.0001)	(0.000)	(0.0002)	-0.0005	(0.0001)	-0.0001	(0.0003)	(0.007)	(0.0001)	(0.0001)	(0.0001)	(0.004)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Canton Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,532	1,532	1,532	1,005	1,532	1,532	1,532	1,604	1,532	1,532	1,532	985
	0.91	0.89	0.45	0.62	0.77	0.91	0.88	0.84	0.92	0.92	0.92	0.91

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).

Table 8

	(1)	(3)	(4)	(5)
	Overall Turnout	Overall Expenditures	Welfare Expenditures	Health Expenditures
Year-Lag 1 to 10	-9.406***	-0.049*	-0.0351*	-0.061*
	(1.23)	(0.019)	(0.021)	(0.034)
Year-Lag 10 to 20	-8.357***	-0.129***	0.022*	-0.044*
	(1.98)	(0.025)	(0.013)	(0.032)
Year-Lag 20 to 30	-5.467**	-0.197***	0.037	0.052
	(1.958)	(0.028)	(0.045)	(0.098)
More than 30 years	-4.784*	-0.181***	0.08	0.157
	(3.009)	(0.033)	(0.0512)	(0.133)
Control Variables	Yes	Yes	Yes	Yes
Observations	1,230	1,532	1,532	1,532
R-squared	0.95	0.91	0.91	0.89

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).

Table 9

	Voter Preferences	
	(1)	(2)
Early Adopters	0.093*** (0.013)	0.084*** (0.017)
Linear Trend	-	0.003 (0.032)
Trend*Early Adopters	-	0.014 (0.022)
Age Dummies	No	No
Decade Dummies	Yes	Yes
Observations	50	50
R-squared	0.29	0.21

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Source: We expanded on Funk and Gathmann (2005).

Table 10

	Suffrage Adoption			
	(1)	(2)	(3)	(4)
Indicator 1971	0.262*** (0.058)	0.318*** (0.033)	0.301*** (0.097)	0.362*** (0.074)
Voter Preferences	0.435***	0.027	-	-
Growth Rate Expenditures	(0.222)	(0.219)	0.035 (0.077)	-0.011 (0.089)
Border Canton	0.004 (0.043)	-0.009 (0.028)	0.003 (0.031)	-0.008 (0.032)
Population Density	-0.025* (0.019)	0.031** (0.009)	-0.032* (0.018)	0.037** (0.012)
Fraction Higher Education	0.015** (0.004)	0 (0.002)	0.009* (0.004)	0 (0.002)
Age Dummies	Yes	Yes	Yes	Yes
Decade Dummies	No	No	No	No
Observations	50	50	50	50
R-squared	0.78	0.89	0.77	0.90

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Source: We expanded on Funk and Gathmann (2005).

Table 11

	Expenditures			Welfare Expenditures		
	(1)	(2)	(3)	(4)	(5)	(6)
	Income	Left Party	Direct	Income	Left Party	Direct
Suffrage	-0.013*	-0.062*	-0.08***	-0.0567*	-0.0243*	-0.95***
	(0.0083)	(0.028)	(0.0015)	(0.031)	(0.019)	(0.0124)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Canton Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,185	1,472	1,532	1,185	1,472	1,472
R-squared	0.87	0.91	0.91	0.90	0.91	0.91

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).

Table 12

	Expenditures			Welfare Expenditures		
	(1)	(2)	(3)	(4)	(5)	(6)
	Income	Left Party	Direct	Income	Left Party	Direct
Years Squared	0.0001***	0.0004***	0.0003***	0.0001***	0.0003***	0.0003***
	(0.000)	(0.0001)	(0.0001)	(0.000)	(0.0001)	(0.0001)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Canton Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,185	1,472	1,532	1,185	1,472	1,472
R-squared	0.89	0.91	0.92	0.89	0.92	0.93

Robust standard errors in parentheses | \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: We expanded on Funk and Gathmann (2005).