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# Overstrained Citizens?

## The Number of Ballot Propositions and the Quality of the Decision Process in Direct Democracy

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### Abstract

We study how the number of ballot propositions affects the quality of decision making in direct democracy, as reflected in citizens' knowledge, voting behavior, and attitudes toward democracy. Using three comprehensive data sets from Switzerland with over 3,500 propositions, we exploit variation in the number of federal propositions and plausibly exogenous variation in the number of cantonal propositions. Only with a relatively high number of propositions on the ballot do voters have less knowledge about federal propositions. Otherwise, we find no indication that the number of ballot propositions impedes the quality of decision making in direct democracy. For instance, a higher number of propositions does not lead more voters to support proposals endorsed by pole parties. If anything, having more federal propositions on the ballot relates to higher perceived political influence and satisfaction with democracy.

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# 1    Introduction

Direct democracy is a most important process for collective decision making.[1] Like any democratic process it has informational demands and relies on public discourse.[2] A meaningful discourse is helping citizens form a reasoned opinion.[3] However, concerns have been raised about uninformed and overburdened voters, overstrained by the number of issues about which they are asked to decide (for discussions, see, e.g., Bowler, 2015; Lupia, 2016; Seabrook, Dyck and Lascher, 2015). Overburdened voters may be easily swayed and are more likely to follow the endorsements of extremists.

This reasoning suggests a relationship between the quality of the decision process and the number of propositions on the ballot. On the one hand, citizens might be too infrequently engaged with the political process so that neither the politicians nor the media nor citizens' networks are prepared for an open and productive discourse. On the other hand, there might be too many issues being debated, which can turn a potentially meaningful discourse into a superficial exchange of slogans. If citizens feel overstrained, the motivation to cast an informed vote might decline, and support for the very process of direct democracy might be undermined.[4]

In this paper, we explore how the number of propositions on the ballot affects the quality of the decision-making process in direct democracy. Following Matsusaka's (1995) information theory of voting, we assume that voters are at least partly intrinsically motivated to vote whereby the incentive to vote increases with the confidence in their vote choice. Information increases certainty about the consequences of a proposition. With each additional proposition, voters looking for orientation thus have to gauge whether they should acquire more costly information or search for

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[1]There is a rich scientific literature in political science and political economics analyzing how the possibility of direct democratic participation affects the political process by offering additional means to control politicians and to discuss politics (see, e.g., Frey and Stutzer, 2006; Cronin, 1999; Lupia and Matsusaka, 2004). The consequences of direct democracy have been empirically studied, primarily for the United States and Switzerland (see, e.g., Asatryan et al., 2017; Bowler and Donovan, 2004; Frey and Stutzer, 2000; Funk and Gathmann, 2011; Kirchgässner, Feld and Savioz, 1999; Leemann and Wasserfallen, 2016; Matsusaka, 2018).

[2]The fundamental role of public discussions about politics for the functioning of democracy is emphasized in work on deliberative democracy (e.g., Habermas, 1992; Elster, 1998; Dryzek, 2000) and on the pre- and postreferendum stage in direct democracy (e.g., Benz and Stutzer, 2004; Bohnet and Frey, 1994).

[3]The concept of "considered opinion" in direct democracy is developed in Colombo (2018).

[4]In the United States, the rise in the number of citizen initiatives (?) has raised concerns that direct democratic decision making is applied too often (Democracy in America, 2009; Baldassare, 2013; Broder, 2000; Luce, 2016; Schrag, 2004). In Switzerland, the debate focuses inter alia on the threshold for the qualification of initiatives (e.g., Rühli and Adler, 2015). The concern about too many popular decisions may gain further attention with the spread of e-democracy or instant democracy. A complementary debate thus concerns the constitutional requirements, for example, with regard to signature requirements, that have to be met for a proposition to qualify for ballot voting and how this affects the number of popular decisions.

cues allowing them to use heuristics. On the basis of this theory, we derive indicators that are meant to capture traces of overstrained citizens.

To empirically analyze the consequences of a high number of ballot propositions, we exploit the unique setting of Swiss direct democracy. We rely on the variation in the number of federal propositions on the ballot as well as plausibly exogenous variation in concurrent cantonal propositions, that is, propositions from the subfederal state level. For the empirical tests, we use three comprehensive data sets: administrative data (1981–2015), individual postvote survey data (1981–2015), and household panel data (1999–2012) with up to 290,000 observations.

Our results are threefold: First, we consider the relationship between the number of propositions on the ballot and voters' knowledge, turnout, blank voting, and use of decision shortcuts. We find that only with a relatively high number of federal and cantonal propositions on the ballot do voters tend to have less knowledge about propositions and to cast more blank votes. Given the deliberate agenda setting of the Federal Council for the federal propositions, the correlations might reflect consequences of the *number* of propositions as well as of their specific *content*. Focusing on the consequences of a high number of concurrent cantonal propositions, we measure a positive effect on turnout probably due to a mobilization effect, as more issues are likely to affect more citizens to a larger extent. With more propositions on the ballot, citizens are *not* more likely to vote in line with the recommendations of the pole parties. We thus do not find any systematic evidence for polarization. We also do not observe an increase in voting for the status quo.

Second, we assess how the number of proposals within the last 12 months relates to voters' knowledge and behavior and we do not find systematic relationships. The coefficients for past cantonal proposition are close to zero and rather precisely estimated.

Third, we estimate the relationship between the recent or forthcoming number of propositions and citizens' perceived influence, interest in politics, and general support of democracy. We find no evidence that a higher number of propositions negatively affects citizens' attitudes toward democracy. If anything, our results suggest that citizens tend to feel more influential in politics and are more satisfied with democracy when they are more intensely exposed to direct democracy at the federal level. In sum, our rich set of results suggests that the currently occurring number of propositions does not overstrain citizens.

This paper contributes novel evidence on how active involvement in democracy affects citizens. Regarding the potential overburdening of citizens, recent evidence highlights the pure choice fatigue effect of a high number of decisions on candidates

or propositions on voting behavior. For instance, Augenblick and Nicholson (2016) argue that voters get tired as they fill out long ballot forms. They exploit exogenous variation in the number of positions on ballot forms across California precincts. In their setting, voters are confronted with, on average, over 30 items and are found to be more likely to vote for the status quo when they reach the propositions at the bottom of the ballot form.

Our setting allows us to study a situation that is more representative of most mature democracies: There are several vote weekends a year and voters decide on a limited number of propositions on each of them. This is similar to the situation with multiple elections on the same vote weekend. Although choice fatigue may still matter in such a setting (Garmann, 2017), a pure choice fatigue effect due to choice overload seems less likely. Rather, voters in our setting have to process political information for each additional proposition on the ballot and we want to understand their reaction to this. We thus consider the previous literature that focuses on how the number of propositions and proposition complexity relate to voter behavior (see, in particular, Bowler and Donovan 1998; Hessami 2016; Matsusaka 2016; Selb 2008; Stadelmann and Torgler 2013).

We add to this literature by exploiting plausibly exogenous variation in the number of propositions citizens face. With the exception of Augenblick and Nicholson (2016), previous studies do not address potential confounding effects due to the content of propositions. Moreover, we also study consequences for citizens' attitudes toward democracy in general rather than focusing on turnout or voting behavior alone.

The remainder of our paper is organized as follows. Section 2 presents the conceptual framework. In Section 3, we explain the institutional setting and present the data. In Section 4, we describe the empirical strategy. Section 5 presents the results. We offer concluding remarks in Section 6.

# 2 Conceptual Framework

The democratic process is about information exchange and preference formation as much as it is about information or preference aggregation. The debate about overburdened citizens revolves around a prominent concern: Citizens have to deal with multiple issues within a limited period of time, which can overstrain voters' capabilities and undermine the quality of the political discourse as well as of the collective decisions. Here the focus is on the concern that too many propositions may harm the quality of direct democratic decision making.

We argue that there are two counteracting forces at play that lead to an inverse U-shaped relationship between the quality of decision making and the number of propositions (see Figure 1).

**Figure 1: The number of propositions and the quality of decision making**
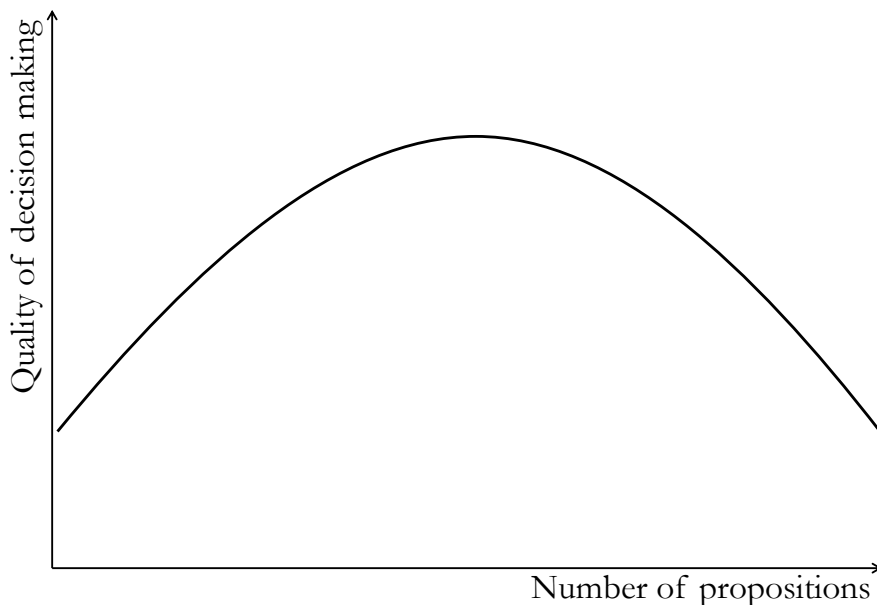


On the one hand, an active direct democracy fosters citizens' capacity to acquire and process political information (see, e.g, Barber 2004; Benz and Stutzer 2004; Bohnet and Frey 1994; Bowler and Donovan 1998; Hibbing and Theiss-Morse 2001; Mendelsohn and Cutler 2000; Olken 2010; Smith and Tolbert 2007). Different mechanisms might be at work. Individual voters learn to inform themselves about politics and they build up political capital.[5] Thereby voters do not have to become political "encylopedias" (Lupia, 1994) but can rely on their experiences and information shortcuts (see Cramer and Toff 2017 for a review of the arguments). Moreover, the media responds to the increased demand for issue-specific political information, leading to lower information costs.[6]

On the other hand, given a certain level of political capital of citizens and of political news coverage in the media, a high number of propositions may lead citizens to

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[5]Two strands of related literature study (i) habit formation in voting, potentially picking up some of the same mechanisms that are also relevant when people are frequently exposed to decisions about propositions (see, e.g., Bechtel, Hangartner and Schmid 2018) and (ii) political socialization (see, e.g., Slotwinski and Stutzer (2018) in the context of female suffrage).

[6]This line of argument has not found unanimous support in the literature. For instance, Seabrook, Dyck and Lascher (2015) argue that there are few educative benefits of direct democracy, as they do not find a correlation between the presence of direct democracy and general political knowledge in U.S. states. Similarly, Schlozman and Yohai (2008) do not find large turnout or knowledge spillovers from direct democratic votes to general elections. One might not be surprised by the latter result, though, as elections become relatively less important in the presence of direct democratic participation rights.

be less informed about each single political issue. This is because citizens have a limited capacity to process political information due to limited time, attention, or interest. Hence, an increase in the number of propositions on the ballot also increases the average uncertainty a citizen has about each proposition.[7] Voters might become susceptible to biased information or be more easily swayed by arguments favoring narrow interests or extremists' positions. Disappointed about the process and potentially unfavorable outcomes, they doubt their influence on politics and become dissatisfied with democracy altogether.[8]

In sum, a low level of citizen involvement in politics may be detrimental to voters' capability to make well-grounded decisions because of low levels of political capital and processing capacity for political information. A very active democracy may, however, overstrain citizens through increasing costs for acquiring and processing political information. To strengthen citizens' sovereignty and simultaneously limit the risk of uncertainty, institutional preconditions should lead to a balanced involvement of citizens.

In this paper, we focus on the right-hand side of Figure 1 and look for traces of overstrained citizens, studying citizens' behavior and self-reports. Regarding behavior, we derive predictions about the potential effects of a high number of propositions following the model of Matsusaka (1995). In his voting model, voters have an intrinsic motivation to vote, but their incentive to cast a vote depends on the perceived benefit of their vote. Uncertainty about the effects of propositions diminish the perceived benefit. Therefore, the more certain voters are about the benefits of their vote choice, the more likely they are to turn out. If more information increases the certainty about the consequences of proposals, then more information is also likely to increase turnout. On the basis of this theory, many stylized facts about turnout have been rationalized.

A first look at our data, presented in Figure 2, supports the argument for this mechanism. On both the individual and the aggregate level, we see a strong correlation between how well voters are informed and turnout. Citizens who knew a lot about a ballot proposition voted with a likelihood of 70%. In contrast, citizens with little knowledge about the proposition participated with a likelihood of only 30%.[9]

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[7]The latter may be less of a problem for information aggregation as long as voters have an informative signal about the attractiveness of a proposal and the law of large numbers comes into play (known as the Condorcet jury theorem).

[8]The latter aspect might be described as a procedural disutility of an overly demanding mechanism of political decision making (see Frey, Benz and Stutzer (2004) for the concept of procedural utility and Stutzer and Frey (2006) for an application to direct democracy).

[9]This also highlights an important trade-off in normative evaluations of a high turnout per se vis-à-vis having informed voters. Hodler, Luechinger and Stutzer (2015) emphasize that turnout in itself may not be the relevant indicator from a welfare perspective if more uninformed voters cast a ballot.

**Figure 2: Knowledge and turnout in voting on federal ballot propositions, 1981–2015**
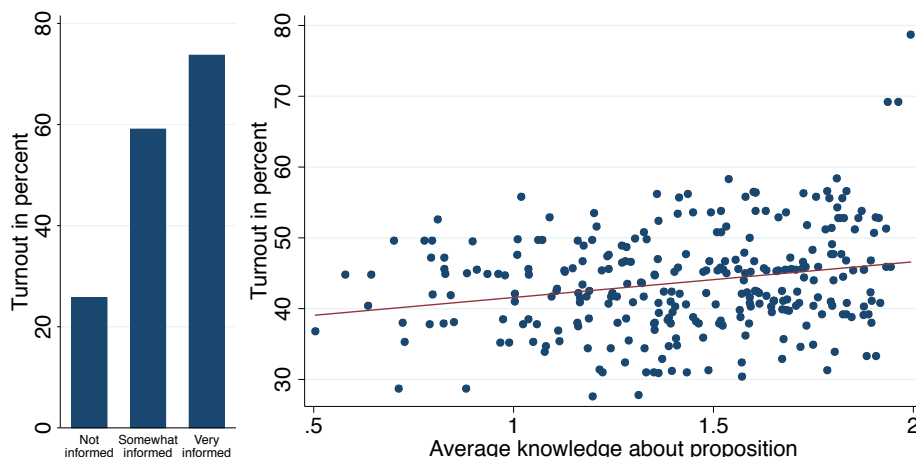


*Note:* The graph on the left shows the average self-reported turnout of all respondents (including respondents who did not vote), grouped by their knowledge about the proposition. Respondents who were "not informed" were neither able to reproduce the title nor the content of a proposition. The respondents who were "somewhat informed" were able to reproduce either the title or the content of the proposition. Respondents who were "very informed" were able to reproduce the title and the content of a proposition. In the graph on the right, each dot represents a proposition. The correlation between national turnout and average knowledge is 0.23. Information on national turnout is based on administrative data. Information on average knowledge of the citizens about a proposition is based on postvote survey data. The three propositions with the highest turnout (in the top right corner of the graph on the right) are the referendum over the accession of Switzerland to the European Economic Area (06.12.1992), the initiative on the abolition of the Swiss army, and the initiative on increasing the maximum speed limit on motorways to 130 km/h (26.11.1989).
*Data sources:* Swiss Federal Statistical Office, VoxIt.

According to the model, voters have to acquire costly information about each additional proposition on the ballot if they want to be certain about their choices. If citizens were overburdened by too many propositions we should observe a decrease in citizens' knowledge about the propositions on the ballot as well as a reduction in turnout. On the basis of the same calculus, we would also expect an increase in blank votes.

Slightly extending the theoretical considerations, we expect that strained citizens are more likely to use decision shortcuts, such as voting for the status quo.[10] Voting for the status quo has been used in several studies to assess the consequences of long ballots. In previous work on Switzerland (Selb, 2008) as well as the United States (e.g., Matsusaka 2016), a positive correlation has been found between ballot length and voting for the status quo. Augenblick and Nicholson (2016) even identified a causal effect of ballot length on choosing the status quo.[11]

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[10]Besides cognitive load, Meier, Schmid and Stutzer (2016) highlight the role of emotions in the use of decision shortcuts and find that individuals are more likely to vote for the status quo if they are in a bad mood.

[11]In related research on the complexity of ballot propositions, Hessami (2016) and Hessami and Resnjanskij (2018) provide evidence that propositions that cause a high cognitive burden are more likely to be rejected so that the status quo is maintained.

Another decision shortcut voters might use is to follow endorsements from political parties and organizations. Comparing support for the recommendation of the federal government in a long time series for Switzerland, Stadelmann and Torgler (2013) observe that when the agenda is set to involve only one proposition (rather than several), voters are less likely to follow the government. While the finding might reflect that controversial issues are put on the agenda alone, the observation is also consistent with the use of cues in complex decisions. We concentrate on endorsements of pole parties. If citizens are more likely to follow them if they are strained, a high number of propositions on the ballot reinforces polarization. We would like to note here already that an empirical test of this hypothesis is difficult as parties sponsor propositions. In the Swiss context, pole parties are particularly active so that with many propositions on the ballot, pole party propositions become more likely. We will therefore concentrate on the effects of concurrent cantonal propositions.

We also examine citizens' self-reports. We concentrate on their reported efficacy, that is, their perceived ability to influence politics. If overstrained, citizens are expected to report a lower interest in politics, a lower perceived personal influence in politics, and overall less satisfaction with democracy. Previous research focuses on empirical tests of a presumed *positive* relationship between direct democracy and political efficacy. For Switzerland, recent work explores the relationship between the extent and use of direct democratic rights and trust in cantonal authorities (Bauer and Fatke, 2014; Kern, 2017). For the United States, a series of studies reports positive effects on political efficacy (many of them reviewed in Smith and Tolbert (2007)). The assessment was challenged by Dyck and Lascher (2008). Recent work based on new data (Wolak, 2017) reports higher internal efficacy in ballot initiative states.

# 3   Institutions and Data

Direct democracy is central to the Swiss political system. Citizens in Switzerland face decisions about several propositions per year on different constitutional levels. The outcomes of all of these propositions are binding and can lead to major changes in public policy. Notable important propositions on the federal level include several votes on the integrated market with the European Union, fundamental changes to the federal tax code, and the future of the social security system. Such votes are intensely covered in the media.

There are two broad categories of direct democratic votes: referendums and popular initiatives. On the federal level, popular initiatives allow citizens, parties, and special

interest groups to propose constitutional amendments. A vote on an amendment takes place if the initiators collect 100,000 valid signatures within 18 months. A mandatory referendum takes place for all amendments to the federal constitution proposed by the federal Parliament. In addition, federal laws approved by both chambers of Parliament are put to a popular vote if a committee submits 50,000 valid signatures within 100 days after the Parliament's resolution.

**Figure 3: Number of federal propositions per polling day, 1970–2017**
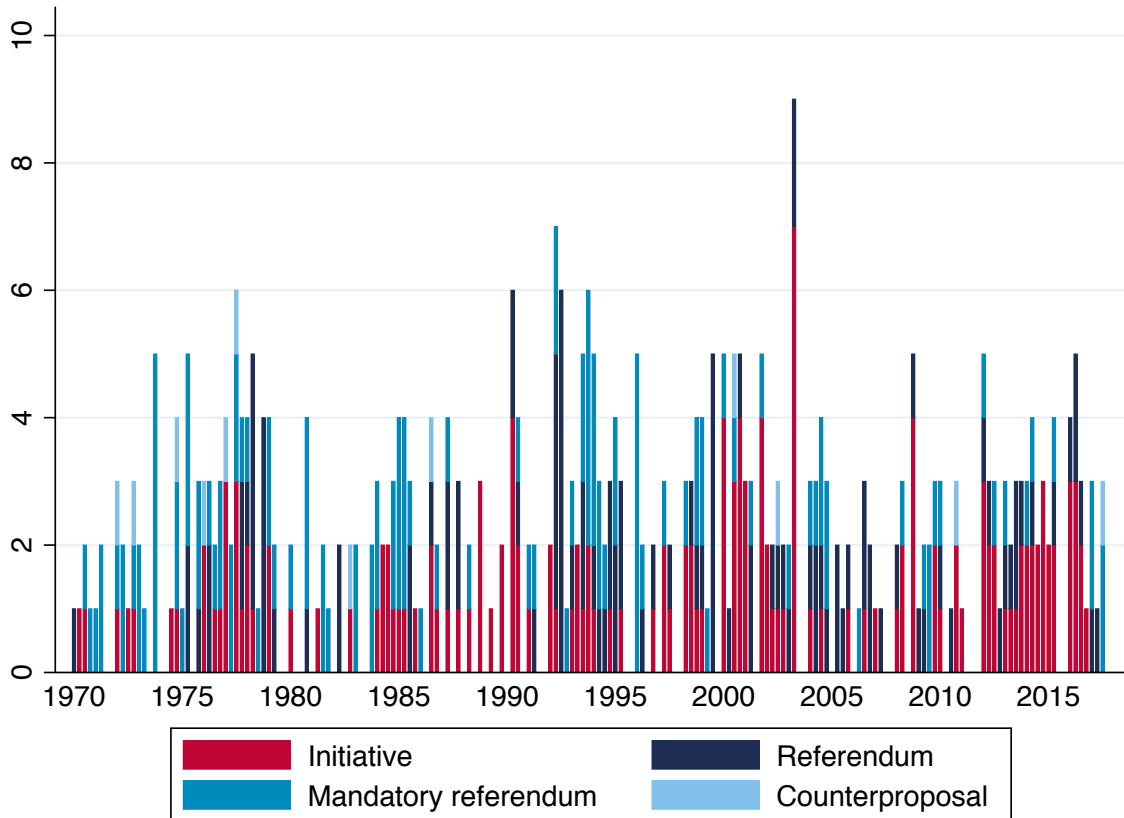


*Data source:* Database of Swiss Federal Referendums.

Throughout the year, voters decide, on average, about nine federal propositions distributed over three polling days.[12] Figure 3 shows that the variance in the number of federal propositions across polling days is sizable, with the minimum number of propositions on the ballot being one, the maximum nine. Figure A.2 in the Appendix presents the number of federal propositions per year. In contrast to discussions about a current flood of propositions, the number of federal propositions on the ballot has not significantly increased in recent years. However, there has been an accumulation of initiatives since the year 2000, as indicated by the red bars in Figure 3.

Initiatives as well as referendums are also frequently and consistently used at the subfederal level of the 26 cantons that enjoy considerable sovereignty. The out-

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[12]The federal Chancellery sets four polling days for every year in advance that can be used depending on the number of pending propositions (see the list until 2037 on `https://www.bk.admin.ch/ch/d/pore/va/vab_1_3_3_1.html#`).

comes of these votes are equally binding and can lead to large policy changes in the respective canton. The propositions cover subjects such as cantonal taxes, infrastructure investments, and land-use planning and feature prominently in the local media. Moreover, the national television media communicate many of the results of the cantonal votes together with the results of the federal votes. The number of propositions per federal polling day and canton has been quite stable over the years with an average of 5.7 propositions per canton and year. Cantons are free to schedule their votes but over time they have increasingly held them parallel to the federal votes. The total number of cantonal propositions has been falling over time (see Figure A.3 in the Appendix).

**Figure 4: Number of cantonal propositions per polling day, 1970–2015**
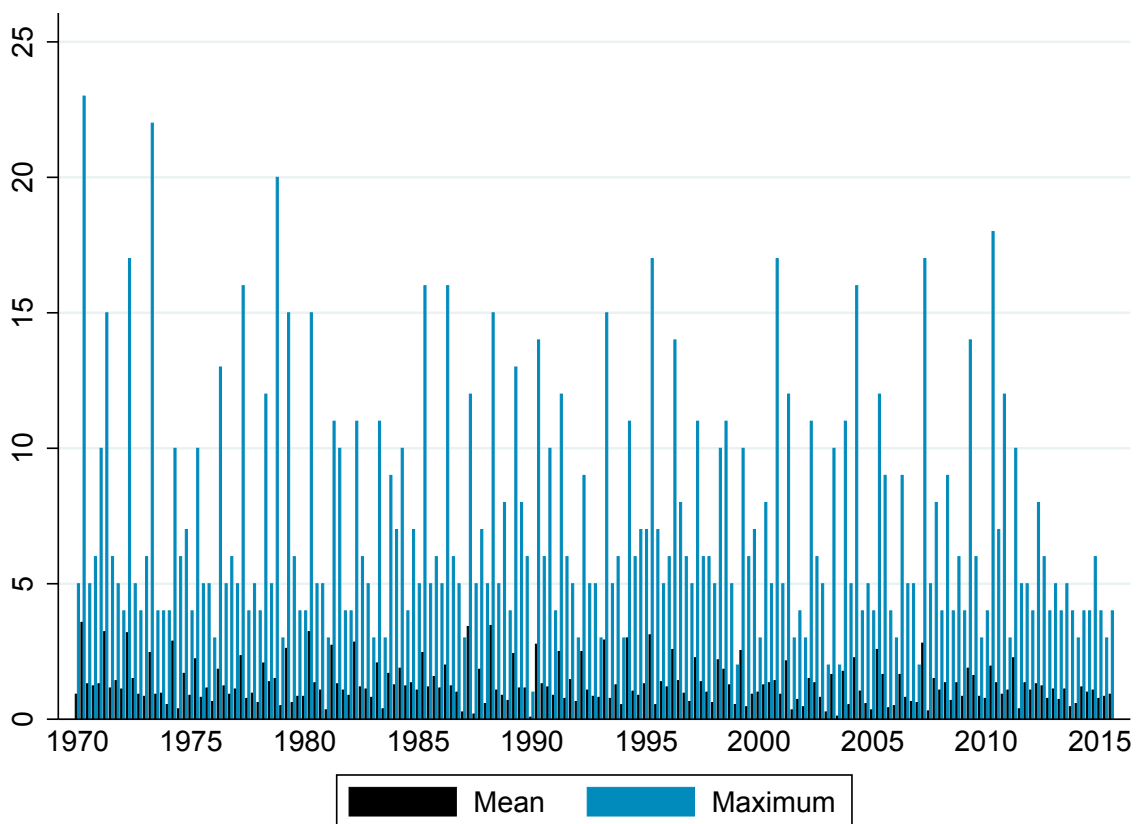


*Note:* The highest numbers of cantonal propositions emerge in cantons with votes taking place on the same day as federal votes.
*Data source:* c2d, Centre for Democracy Studies Aarau.

Citizens fill in federal and cantonal ballot cards at home and bring them to the ballot box on the vote weekend or mail them before the vote weekend.[13] The ballot cards from the federal and cantonal chancelleries arrive in the same envelope and are accompanied by a federal and a cantonal booklet. The short texts summarize the arguments on each proposition and list a recommendation of the government. The

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[13]Postal voting was gradually introduced across cantons from the 1970s through the 1990s. More than 80% use it today (Luechinger, Rosinger and Stutzer, 2007).

ballot cards state the type of vote and the title of each proposition. In a designated field on the right, people can write out "Yes" or "No" by hand.

We use three main data sets for the analysis.[14] The first data set is a record of individual voting decisions from postvote surveys about federal ballots. Several Swiss universities and the private research institute GFS administered these so-called VOX surveys after each federal polling day (Kriesi, Brunner and Lorétan, 2017). A representative sample of roughly 1,000 voters is interviewed by phone within 2 weeks after the polling day. The resulting VoxIt data contains information on whether and how respondents voted, knowledge about the propositions, and perceived complexity and perceived importance of the propositions as well as socioeconomic characteristics of the respondents. The sample of VoxIt that we are using for our analysis contains information of 293,641 respondents from 24 Swiss cantons[15] who were interviewed in the years 1981 to 2015. The observations were collected following 97 polling days during which Swiss citizens voted on 285 federal propositions.[16]

Our second data set contains information on turnout as well as the fraction of yes and no votes for federal propositions on the cantonal level. This is an administrative data set that consists of 7,056 observations that capture the results of 294 propositions in 24 cantons. This data set covers the same period as the VoxIt data and features all 295 propositions that happened in that period on 102 polling days. The data were obtained from the Swiss Federal Statistical Office.

The two data sets are extended with information about the vote recommendations of parties and the Federal Council, as well as about the legal form of the proposition. The latter information is taken from Swissvotes, a database maintained by the University of Bern and Année Politique Suisse (2018).[17] We supplement the VoxIt and administrative data sets with the number of concurrent federal and cantonal propositions as well as the number of propositions within the last year. This in-

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[14]Table A.2 shows the descriptive statistics for the variables that are most frequently used in our analyses.

[15]We exclude observations from the two cantons Appenzell Innerrhoden and Glarus. These two cantons maintain an assembly democracy ("Landsgemeinde"), i.e., a direct democratic process that is rather different from other cantons' institutions. The canton of Appenzell Innerrhoden has the smallest population and Glarus the fourth smallest population of all Swiss cantons. Excluding those two cantons reduces the VoxIt data set by 2,034 observations. We exclude observations from these two cantons in all individual-level analyses. Assembly democracy on the cantonal level was active in cantons Nidwalden (until 1996), Appenzell Ausserrhoden (until 1997), and Obwalden (until 1998). We include observations from these cantons and do not differentiate between cantonal ballot propositions before and after the abolition of the "Landsgemeinde" in these cantons.

[16]During our sample period there were 295 federal propositions on 102 polling days. We exclude seven propositions because there were no VOX surveys conducted for those. Three other propositions are excluded because the variable for the canton of residence of the respondents is missing.

[17]Data access via `http://www.swissvotes.ch`.

formation is taken from the electronic database on direct democracy maintained by Department c2d of the Centre for Democracy Studies Aarau (Serdült, 2017).[18]

The third data set we use is the Swiss Household Panel (SHP).[19] Data are collected throughout the year by phone and provided by FORS for the years 1999 to 2015. The data set contains the following variables with response scales ranging from 1 (lowest) to 10 (highest): interest in politics (1999–2015), satisfaction with democracy (1999–2012) and perceived personal influence in politics (1999–2012). We merge the household panel data with information on a weighted average of the number of propositions over the last 12 months and the upcoming month. The latter measures of a federal and cantonal exposure index capture the cumulative experience or exposure to direct democracy. We use linear weights such that, for example, four propositions that were on the ballot 11 months ago (relative to the interview date) enter the index with a weight of 30/360 and three propositions that were on the ballot 2 months ago enter with a weight of 300/360. If two propositions are to be decided within 2 weeks after the interview date, then these two propositions enter the index with a weight of 15/30. Figure A.18 shows two violin plots for the distributions of the respective index values.

# 4    Empirical Strategy

The Federal Council determines the number of votes to be decided on a single polling day, whereby it presumably aims at reducing the joint complexity and importance of votes. Very important votes are usually put on the ballot alone. For instance, the votes about joining the European Economic Area or the United Nations were held as single votes. Even considering two or more votes, strategic reasons might influence the number of votes on the ballot. This is consistent with the decrease in the perceived importance of the propositions the more of them there are on the ballot (see Figure A.4). The analysis for the number of federal propositions on the ballot and voting behavior thus remains correlational. Given the political debate about overstrained citizens that primarily relies on presumed relations between the number of federal propositions and citizen engagement, the descriptive analysis might still productively contribute to the discussion. However, we also attempt to mitigate potential endogeneity issues with two strategies.

First, we exploit exogenous variation in the number of propositions on the ballot due to concurrent cantonal propositions. Cantonal propositions are perceived as impor-

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[18]Data access is possible via `http://www.c2d.ch`.

[19]A description of the SHP is provided at `http://forscenter.ch/en/our-surveys/swiss-household-panel/`

tant and feature prominently in national and local media. Making these additional decisions adds to the burden of voters. The number of cantonal propositions is not correlated with the number of concurrent federal propositions (see Figure A.5). This indicates that there is no strategic scheduling of the number of cantonal propositions with respect to federal propositions. That there is no strategic scheduling is plausible since initiatives and referendums have to be put on the ballot within a certain time period. The time restriction leaves little scope for cantonal governments to consider federal propositions when setting the cantonal agenda. Given the institutional conditions, it is thus not surprising that the number of cantonal propositions and the number of federal propositions are not correlated. Hence, the number of cantonal propositions provides plausibly exogenous variation in the number of propositions on the ballot and the corresponding burden voters face.

Second, we control for two determinants of the number of federal propositions on the ballot: complexity and perceived importance of the propositions. Our postvote survey data show that perceived importance and the number of propositions are negatively correlated (see Figure A.4). Similarly, the more difficult the decision in a specific proposition is perceived to be, the fewer propositions there are on the ballot (see Figure A.6). To reduce any endogeneity bias, we condition on perceived importance and perceived complexity in the specifications with postvote survey data.

The extensive data sets allow us to explore the relation between the number of propositions and several indicators for the decision making of citizens with the following econometric model:

$$Y_{jpct} = \eta_c + \delta_{year} + \text{fed}_t'\alpha + \text{cant}_{ct}'\gamma + z_p'\pi + x_j'\beta + \rho\,\text{pv}_{ct} + \varepsilon_{jpct}, \qquad (1)$$

where $j$ indexes individuals, $p$ indexes propositions, $c$ indexes cantons, and $t$ indexes polling days. $Y_{jpct}$ is our outcome of interest. Two sets of fixed effects are typically included: canton-specific effects $\eta_c$ and year-specific effects $\delta_{year}$. Particularly relevant are $\alpha$ and $\gamma$. We denote $\alpha$ a vector of coefficients for dummies comprising the number of federal propositions, $\text{fed}_t$. This vector contains dummies for the values 1, 3, and "4 or more" propositions. The dummy for two propositions is used as the reference category. Similarly for the cantonal level, $\gamma$ is a vector of coefficients for dummies comprising the number of concurrent cantonal propositions, and $\text{cant}_{ct}$ is the vector containing dummies for the number of propositions from 1 to "5 or more" propositions, with zero cantonal propositions being the reference category. Proposal-specific covariates are included in $z_p'$. They consist of dummies indicating the legal type of the proposal. Variable $x_j'$ comprises individual-specific covariates, which include perceived complexity and importance as well as sociodemographic

variables. Finally, $pv_{ct}$ is a dummy variable that is 1 if there was postal voting available (from Luechinger, Rosinger and Stutzer, 2007), and $\varepsilon_{jp}$ is an idiosyncratic error term.

We use dummies for the number of propositions since it allows a flexible characterization of the impact of the number of propositions on the dependent variables. The specification we use for the analysis of the administrative data is analogous to the one above for individual-level data with the exception that no individual-specific covariates are included. All estimates are retrieved from linear least squares estimations.[20] We cluster the standard errors on polling days to take into account correlation in voter behavior within a ballot.

# 5    Results

## 5.1    Knowledge and Voting Behavior

### 5.1.1    Knowledge

We assess the relationship between the number of propositions on the ballot and knowledge of citizens by estimating variants of equation (1). Knowledge offers a close approximation of voters' uncertainty in the model of Matsusaka (1995). In Figure 5 we present the size of the coefficients for the partial correlation between the number of propositions and voters' knowledge about the content of current *federal* propositions (see also Table 1). Moreover, we show the results with respect to knowledge about the specific title of federal propositions in the Appendix (see Figure A.7 and Table A.3). In all figures, we depict the estimates of regressing the dependent variable on dummies for the number of federal and cantonal propositions, while controlling for canton-specific effects, year-specific effects, complexity, importance, legal type, and socioeconomic variables, if available (equivalent to the specification in column III of Table 1).

Figure 5 indicates that knowledge is lowest if there is a very high number of federal as well as cantonal propositions on the ballot. The ability to reproduce the actual title of a proposition is affected even more (see Figure A.7 in the Appendix). In what follows, we concentrate on the ability to reproduce the content rather than the title of a proposition, since it seems more relevant with respect to making an informed decision.

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[20]We use a linear model since we take into account granular fixed effects that would be difficult to estimate with nonlinear models.

**Figure 5: The number of propositions and knowledge about the content of federal propositions**

For federal propositions, the maximal differential between one proposition and four or more propositions is roughly 10 percentage points. This is sizable when compared to the 86% baseline probability of recalling the content of a proposal. Note, however, that this difference is mainly driven by the first category including one federal proposition. As argued before, the assignment of propositions to polling days is endogenous, and very important and complex issues are often exclusively put to a vote. Table 1, column II shows that the effect prevails even when controlling for perceived importance and complexity of the proposition, an indicator for postal voting, socioeconomic variables, canton-specific effects, and year-specific effects. Yet, taking into account complexity and importance as control variables may only partly attenuate the bias due to endogenous scheduling.

**Table 1: Number of propositions and knowledge: Taking into account the complexity and importance of the propositions**
**Dependent variable: Reproducing proposition content [0/100]**
**Sample: Including nonparticipants**

|                                  | I           | II          | III         | IV          |
|----------------------------------|-------------|-------------|-------------|-------------|
| Number of federal propositions   |             |             |             |             |
| 1                                | 7.2461***   | 5.8843***   | 5.9169***   |             |
|                                  | (2.2997)    | (2.0830)    | (2.0896)    |             |
| 3                                | −0.1562     | −0.1206     | −0.1644     |             |
|                                  | (1.6253)    | (1.5324)    | (1.5228)    |             |
| 4 or more                        | −2.8493*    | −2.1583     | −2.0326     |             |
|                                  | (1.4947)    | (1.3719)    | (1.3644)    |             |
| Number of cantonal propositions  |             |             |             |             |
| 1                                |             |             | 0.3328      | 0.0317      |
|                                  |             |             | (0.4554)    | (0.3300)    |
| 2                                |             |             | −1.1259**   | −1.3632***  |
|                                  |             |             | (0.5647)    | (0.4353)    |
| 3                                |             |             | −0.4923     | −0.9025*    |
|                                  |             |             | (0.6612)    | (0.5319)    |
| 4                                |             |             | −1.8290**   | −1.1027**   |
|                                  |             |             | (0.7071)    | (0.5415)    |
| 5 or more                        |             |             | −2.2461**   | −1.7128**   |
|                                  |             |             | (0.9335)    | (0.7225)    |
| Low complexity                   |             | 22.2974***  | 22.2748***  | 20.0216***  |
|                                  |             | (1.1748)    | (1.1756)    | (1.0912)    |
| High complexity                  |             | 12.9574***  | 12.9634***  | 12.1454***  |
|                                  |             | (0.8882)    | (0.8872)    | (0.8332)    |
| High impact                      |             | 5.0486***   | 5.0600***   | 4.0724***   |
|                                  |             | (0.4714)    | (0.4700)    | (0.3802)    |
| Referendum                       | −2.7475**   | −1.8640**   | −1.8095**   |             |
|                                  | (1.0666)    | (0.8609)    | (0.8598)    |             |
| Mandatory referendum             | −10.3577*** | −8.0176***  | −8.0107***  |             |
|                                  | (2.0447)    | (1.6865)    | (1.6805)    |             |
| Counter proposal                 | −9.9267***  | −8.4477***  | −8.4532***  |             |
|                                  | (2.8779)    | (2.3863)    | (2.3717)    |             |
| Postal voting                    | −3.0636***  | −2.9100***  | −2.8255***  | −2.6920***  |
|                                  | (0.7188)    | (0.6208)    | (0.6029)    | (0.6176)    |
| Socioeconomic variables          | yes         | yes         | yes         | yes         |
| Canton-specific effects          | yes         | yes         | yes         | yes         |
| Year-specific effects            | yes         | yes         | yes         | no          |
| Proposition-specific effect      | no          | no          | no          | yes         |
| $R^2$                            | 0.059       | 0.091       | 0.092       | 0.140       |
| Observations                     | 169,186     | 163,012     | 163,012     | 163,012     |

*Note:* Ordinary least squares estimations. Average knowledge of proposition content by all respondents amounts to 76.3. Reference category for the number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

For the plausibly independently scheduled cantonal votes, the estimates are smaller: For more than five cantonal votes, the precisely measured negative effect is -2.2 percentage points ($se = 0.93$) on the propensity to reproduce the content of a federal proposition correctly. The pattern of slightly declining knowledge for more than two propositions is remarkably stable to the inclusion of differing sets of control variables and also when excluding individuals who did not turn out (for the corresponding results excluding nonparticipants, see Figure A.8, and Tables A.4 and A.5).[21] Note also that the effect size of the federal propositions is not affected by taking into account the number of cantonal propositions, which underscores that this number is plausibly exogenous. The effects of the number of cantonal propositions are more precisely estimated. In column IV of Table 1 we also control for proposition-specific effects of the federal votes, leading to no change in the estimates.

If we split the sample according to income higher or lower than 7,000 Swiss francs, older and younger than 50 years, and graduates from a tertiary institution, we find that older people have slightly fewer problems reproducing proposition content if there are many concurrent cantonal propositions, while the correlations for the other groups do not differ substantially (for details, see Appendix A).

### 5.1.2 Turnout

Turnout is often taken as the main indicator for civic engagement. The results here rely mostly on administrative data (rather than on self-reported turnout). The dependent variable is cantonal-level turnout in percentage points for each federal proposition. We regress the turnout on indicator variables for the number of federal and concurrent cantonal propositions and control for canton-specific fixed effects, year-specific fixed effects, and the type of proposition. Table A.6 in the Appendix contains detailed regression outputs showing the results from the postvote survey data set and the administrative data set. In addition, Figure A.9 in the Appendix depicts the results from the postvote survey data.

Figure 6 shows the main estimation results for the administrative data. If anything, turnout does not decrease but slightly increases as the number of concurrent cantonal propositions rises. If there are five or more cantonal propositions, turnout is higher by a precisely estimated 1.9 ($se = 0.65$) percentage points, while the average turnout is 43.7 percentage points.[22] This finding might be due to a mobilization effect when

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[21]The similarity of effect sizes across samples suggests that it is not selection to the ballot box that drives our results.

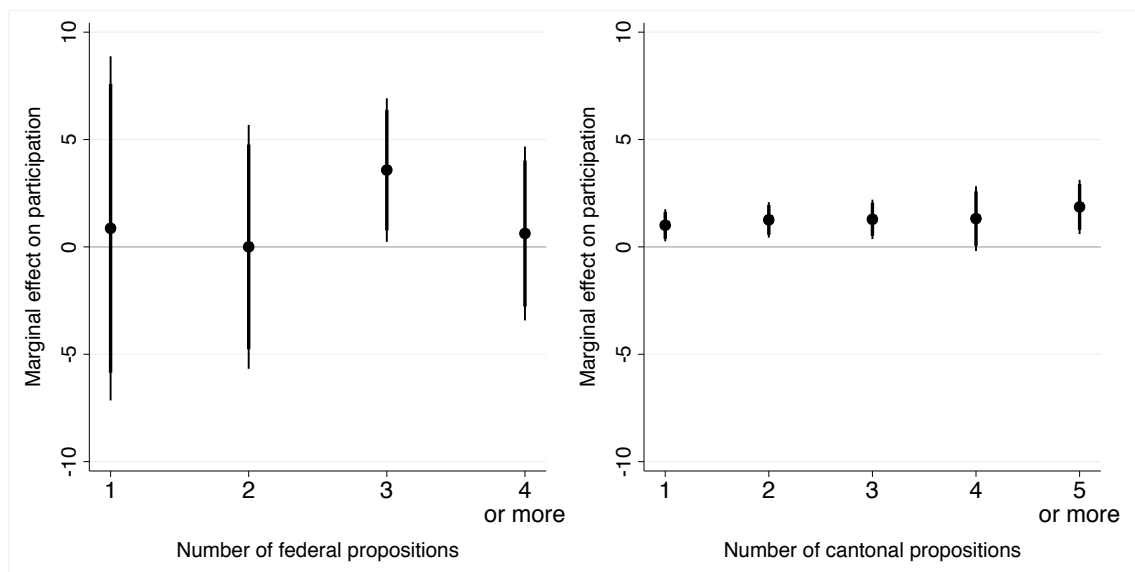[22]When using the postvote survey data, we do not find statistically significant effects other than for 5 or more cantonal propositions. However, except for 3 or 4 concurrent cantonal propositions, all point estimates for the cantonal propositions are positive. The number of federal propositions shows a pattern that is similar to that for observations based on the administrative data.

more citizens are affected with a higher number of propositions on the ballot.[23] Independent of the exact interpretation, the finding for turnout does not indicate that citizens are overstrained.

### 5.1.3 Blank Voting

Instead of not turning out as the number of propositions on the ballot increases, voters could just leave all or some of the ballot cards empty if they feel uninformed or uncertain. For any observed blank voting, there are two potential interpretations, though. On the one hand, it might reflect the expression of discontent due to overburdening. On the other hand, the likelihood of having propositions on the ballot about which some voters care while others do not increases with the number of propositions on the ballot.
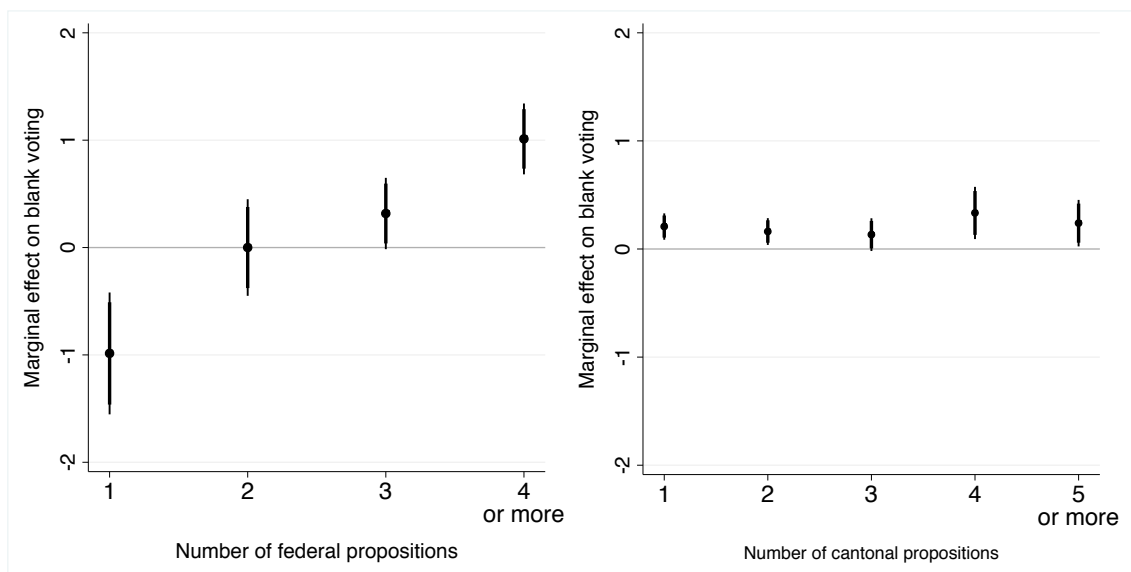
**Figure 6: The number of propositions and turnout in federal propositions (in percentage points), administrative data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on turnout in percentage points. Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of turnout on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and type of proposition based on 7,080 observations (see also column III of Table A.6).

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[23]Alternatively, the pattern might also be due to a comparative reduction in voting costs for a specific proposition. Schmid (2016) carefully examines the latter argument. In detail, he investigates how changes in the calculus of voting affects turnout in national votes, by exploiting exogenous variation in concurrent cantonal elections. He finds that concurrent cantonal elections lead to higher turnout in votes on federal propositions.

**Figure 7: The number of propositions and blank voting in federal propositions, administrative data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the propensity in percentage points to cast a blank vote. Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the share of blank votes on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and type of proposition based on 7,080 observations (see also column III of Table A.7).

To assess the impact of the number of propositions on the ballot on the propensity to cast a blank vote we analyze administrative as well as postvote survey data.[24] Figure 7 depicts the results for the administrative data (for a complete regression output, see Table A.7). We find that with four or more federal propositions on the ballot, the propensity to cast a blank vote is 1 percentage point ($se = 0.17$) higher than with two federal proposition on the ballot. The average propensity to cast a blank vote is roughly 2.6%. The situation of concurrent cantonal propositions on the ballot minimally increases the propensity to cast a blank vote. The voters cast a decision for the propositions they care and know about while they leave the ballot sheet for other proposals blank.[25] This suggests that a higher number of federal propositions mobilizes voters who would otherwise not have participated. The number of cantonal propositions plays much less of a role.

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[24]In the administrative data set, blank votes are calculated as the difference between received votes and the sum of "yes" and "no" votes. Therefore, the number of blank votes in the administrative data set includes void votes. Votes are void if the intention of the voter is not discernible or if the voters include offending comments on the ballot cards.

[25]The behavioral regularity that voters with low knowledge selectively abstain is likely to be beneficial for information aggregation. The correlation between knowledge about the content of a proposition and casting a blank vote is -0.22 ($p < 0.01$). If we deduct the blank votes from turnout, increasing turnout as the number of cantonal proposition increases prevails and the correlation for the number of federal propositions does not change by much (see Table A.8 in the Appendix).

### 5.1.4 Decision Shortcuts

The act of voting can be broken down into two decisions: First, voters decide whether to participate. Second, they decide how to cast their vote. In this section, we concentrate on this second aspect and assess how the number of propositions on the ballot relates to what voters decide.[26]

**Voting for Change** — We assess the impact of the number of propositions on the willingness to support reform (rather than to stick with the status quo), which is equivalent to voting yes for any proposition. The results are presented in Figures A.10 and A.11 as well as in Table A.9 in the Appendix. We do not find consistent effects of citizens opposing change when exposed to many propositions. This is in contrast to the findings in the recent work of Augenblick and Nicholson (2016). We only precisely estimate a negative effect of four cantonal propositions on the propensity to vote yes in federal propositions of -2.3 percentage points.

**Reliance on Party and Government Recommendations** — Citizens might apply information shortcuts other than just saying no if they are overstrained. For instance, they might rely on endorsements, whereby recommendations of pole parties are especially relevant. Pole parties might have an easier time convincing voters if there are many propositions on the ballot as they may rely on simpler and more vigorous arguments than center parties. Another recommendation that citizens might be more likely to follow is one put out by the government. It is a simple cue capturing the majority position among the elected politicians.

Figures A.12 and A.13 in the Appendix indicate whether voters rely on arguments from the right-pole party when there are many propositions (for the full output see Table A.10). Whether there is just one or many propositions on the federal level, the endorsements of the largest party on the right, the Swiss People's Party (SVP), receive similar support. The difference between one vote and four or more votes is small with a 0.49-percentage-point difference between them in the administrative data and not statistically different from 0 at $p < 0.1$. Moreover, it has to be noted that the SVP sponsors many initiatives and referendums (Leemann, 2015). These sponsored propositions are likely to be on the ballot if more than one proposition is voted on. Thus more informative as a test of the hypothesis that overstrained voters resort to recommendations of the strongest party on the right is the estimated effect

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[26]Throughout this section, we rely on the result that turnout is not heavily affected by the number of propositions on the ballot. Note, however, that we estimate reduced form effects and it might well be that they are partly driven by changes in the composition of the electorate.

of a large number of concurrent cantonal propositions. They are independent of the content and the sponsorship of the federal propositions. For them, there also seems to be no effect on following the pole party on the right.

We also study the relationship for the strongest pole party on the left, that is, the Social Democratic Party of Switzerland (SP). Figures A.14 and A.15 in the Appendix show the differences in support of propositions that were endorsed by the Social Democrats for different numbers of propositions on the ballot (for a detailed output see Table A.11). As in the case of the pole party on the right, the strongest party on the left is not better off with many propositions on the ballot. If anything, their recommendations are followed less when there are many federal propositions on the ballot. There is thus no evidence that citizens' voting behavior is consistently more polarized with a higher number of propositions on the ballot.

Regarding the reliance on the recommendations of the government, Figures A.16 and A.17 in the Appendix summarize the results (for the full output, see Table A.12). The point estimates for the number of federal as well as concurrent cantonal propositions do not indicate a systematic relationship. If the content of the federal propositions is controlled for in column IV in Table A.12 for the administrative data, the coefficients for the number of cantonal propositions are always below 1 percentage point (and are rather precisely estimated). These findings are in contrast to earlier results by Stadelmann and Torgler (2013) and suggest that their findings are driven by observations toward the beginning of their historical time series.

## 5.2 Effects of Previous Ballots

So far, we have concentrated on the contemporaneous effect of many propositions on the ballot. However, there may well be longer term effects. As mentioned above, citizens may, for instance, get politically more active if there was a higher number of recent votes due to the formation of specific political capital (or due to habit formation). Alternatively, citizens might become disenchanted with democracy if they feel overstrained by a high number of recent votes. To assess the relationship between the number of recent votes and voters' decision making, we regress the outcomes of interest on the total number of federal and cantonal propositions within the last 12 months.

**Figure 8: The relationships between the number of recent propositions and knowledge of proposition content, blank voting, and voting for the status quo**
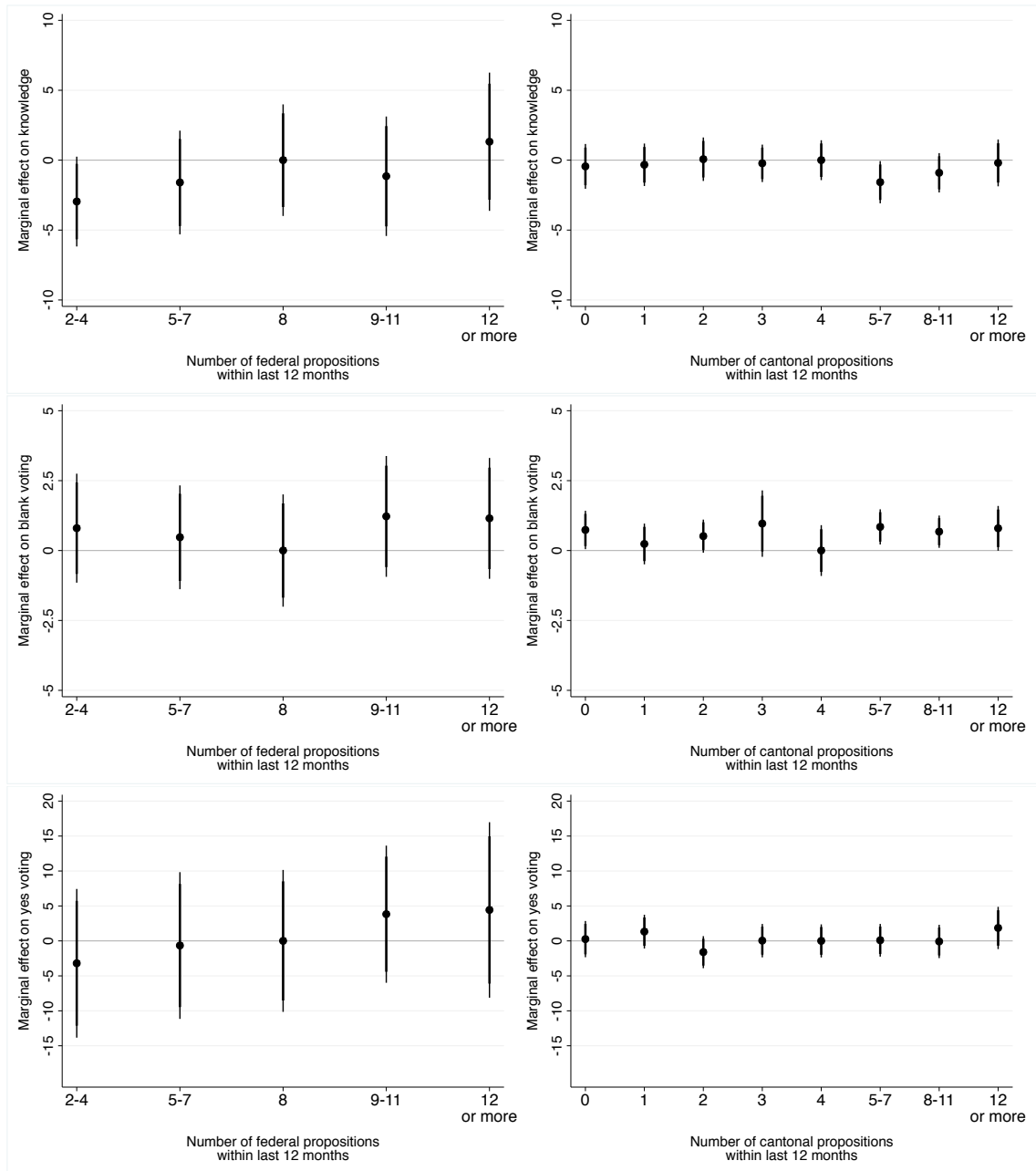


*Note:* The figures show coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of recent propositions on the respective outcome variables. The reference categories are eight federal propositions and four cantonal propositions. The confidence interval shown for the reference level of propositions is the mean of the confidence interval width for the estimated effects of the adjacent categories. The dots are retrieved from a regression of individual knowledge of proposition content or individual voting behavior (blank or yes voting) on dummy variables for the number of current and recent federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, type of proposition, and socioeconomic variables (see also Table A.13). The sample contains all votes on the cantonal and federal level, not just concurrent votes.

We explore the effect of an active direct democracy in the recent past on voter knowledge and voter behavior in terms of yes voting and blank voting. Figure 8 depicts the main results (see also Table A.13 in the Appendix). Our estimates suggest that citizens, if anything, become slightly more knowledgeable if there were many direct

democratic votes within the last 12 months. With 12 or more propositions within the last 12 months they are an imprecisely estimated 4 percentage points more likely to know the exact proposition title than if there were two to four propositions on ballots in the recent past.

Moreover, it seems that the more propositions there were on recent ballots, the higher the propensity of people to vote for change rather than resorting to the status quo. However, the point estimates are again imprecisely estimated. The pattern for blank votes suggest a slight increase with higher recent activity on the cantonal level. Overall, we do not find strong evidence for citizens being overstrained by a high number of recent ballot propositions.

## 5.3 Attitudes Toward Politics

We study the relationship between an active direct democracy and attitudes toward politics using reported interest in politics, perceived influence in politics, and satisfaction with democracy. We relate the exposure to the weighted sum of all federal and cantonal propositions in the last 12 months and the upcoming 30 days (as of the interview date) to the reported measures of citizens' efficacy in simple ordinary least squares estimations. Table 2 presents the results with the indexes included either in linear terms or as a second-order polynomial. In the Swiss Household Panel, the same people are interviewed repeatedly, allowing the inclusion of individual-specific fixed effects in our specifications. We thus identify the effect of the variation in exposure to direct democracy over time within individuals.

Political interest seems positively correlated up to an intermediate level with exposure to an active direct democracy. Perceived influence in politics tends to be higher during times in which citizens experience a high number of federal propositions. If the federal exposure index takes a maximum value of 10.6 rather than the minimum value of 0.1, the difference in perceived influence amounts to 0.18. The specification including the exposure index squared does not indicate an internal optimum but rather an increasing effect. In contrast to the federal exposure index, the exposure to cantonal propositions does not relate to corresponding changes in perceived influence.

**Table 2: Exposure to Direct Democracy and Attitudes Toward Politics**

| | Interest in politics | | Perceived influence on politics | | Satisfaction with democracy | |
|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI |
| Federal exposure index | 0.0061 | 0.0329* | 0.0168*** | 0.0336 | 0.0207*** | 0.0167 |
| | (0.0043) | (0.0185) | (0.0062) | (0.0255) | (0.0042) | (0.0174) |
| Federal exposure index squared | | −0.0025 | | −0.0016 | | 0.0004 |
| | | (0.0017) | | (0.0023) | | (0.0016) |
| Cantonal exposure index | −0.0010 | −0.0010 | −0.0063 | −0.0027 | 0.0023 | 0.0014 |
| | (0.0029) | (0.0066) | (0.0040) | (0.0090) | (0.0029) | (0.0066) |
| Cantonal exposure index squared | | 0.0000 | | −0.0003 | | 0.0001 |
| | | (0.0006) | | (0.0008) | | (0.0006) |
| $R^2$ | 0.018 | 0.018 | 0.012 | 0.012 | 0.008 | 0.008 |
| Observations | 64,389 | 64,389 | 64,389 | 64,389 | 64,389 | 64,389 |

*Note:* Ordinary least squares estimations. The exposure index is the weighted sum of propositions in the last 12 month and upcoming 30 days from the date of the Swiss Household Panel interview based on all cantonal and federal votes (not just concurrent votes). Weights are linearly declining with the distance to the interview date. Figure A.18 shows the distribution of the index values. Dependent variables range from 0 (low) to 10 (high). Individual fixed effects estimation with socioeconomic control variables. Average stated interest in politics amounts to 5.77 out of 10. Average perceived influence on politics amounts to 3.89 out of 10. Average satisfaction with democracy amounts to 6.06 out of 10. Standard errors in parentheses are clustered at the individual level. Significance levels: $*.05 < p < .1$, $**.01 < p < .05$, $***p < .01$.

Similarly, the results suggest that satisfaction with democracy tends to be higher during periods of particularly active direct democratic decision making at the federal level (with no sign of a decreasing marginal effect) but not at the cantonal level. The change in an individual's reported satisfaction with democracy amounts to 0.22 for the maximal change in the federal exposure index from 0.1 to 10.5. Relative to the mean level of 6.06, this is a change of 4%. In sum, for the variation in exposure to an active direct democracy experienced during the first decade of the 21st century, there is no evidence for a detrimental effect on attitudes toward politics. To the contrary, an intensive process at the federal level seems positively related to citizens' perceived influence in politics and satisfaction with democracy.

# 6    Concluding Remarks

Recent referendums in Europe and elsewhere have led to discussions about the future of democratic institutions in general and the role of direct democracy in particular. Some commentators worry about overstrained citizens while others emphasize that the direct democratic process is as demanding as it is rewarding. Citizens are invited to engage in politics by deciding about specific issues over and above electing representatives. From a politicoeconomic perspective, this requires that voters learn about the issues at stake and form reasoned opinions or at least find information shortcuts and recommendations they trust. Institutional conditions can help ensure the quality of the process. If the outcomes of referendums and initiatives are binding for Parliament, the decisions are taken seriously by the citizens as well. If there are no participation quorums, there is less of an incentive to sabotage the debate by calling for citizens not to participate in the direct democratic process. Free and diverse media allow citizens to learn about the propositions, and the media might themselves be strengthened by a democratic process that generates a higher demand for political information. Similarly, a civil society of people organized in formal and informal networks who discuss societal and political issues supports the functioning of the process but is itself strengthened by the means of direct democratic participation possibilities.

In this paper, we concentrate on the condition of there being not too many propositions citizens are confronted with to decide. This complements arguments of too few or too irregular referendums, that is, that direct democracy works differently as a regular process from below than as a rare ad hoc process initiated from above. While the experience of direct democracy offers educative effects, there might be limits to how many issues citizens would want to handle, resulting in a decline of procedural as well as outcome utility. Our empirical assessment offers a framework

that could be of general interest for the study of overstrained citizens. However, it is clearly shaped by the institutional context of Swiss direct democracy. In contrast, for example, to California, in Switzerland there are several polling days a year at both the federal and cantonal and sometimes also at the municipal level. The same number of propositions is thus dealt with rather differently, being spread over the year in Switzerland while concentrated on single election days in many other jurisdictions. This institutional feature might as such be an important safeguard against overstraining citizens.

For the observed variation in the number of federal and cantonal propositions on a single polling day and the exposure to an active direct democracy, we do not find systematic evidence for overstrained citizens. Using comprehensive data on vote outcomes and attitudes, we show that only with a relatively high number of propositions on the ballot do voters have less knowledge about federal propositions. Otherwise, the set of results suggests that a high number of propositions does not impede the quality of decision making in direct democracy, and in particular it does not increase voting for the status quo or the emulation of pole-party endorsements. To the contrary, a higher number of recent federal propositions is related to higher perceived political influence and satisfaction with democracy.

In the end, citizens decide about the extent of their own legislative competence (at least in the Swiss constitutional context) — they have Kompetenz–Kompetenz regarding the regulation of the direct democratic process. They decide about the scope of their direct democratic participation rights as well as the requirements for a proposition to qualify for a place on the ballot. This affects what issues get decided and how often citizens are asked to go to the polls. So far, the self-regulation of the system seems to have worked well. We submit to the citizens that currently there is little reason to worry about an overly intensive direct democratic process. However, we might reconsider this analysis if there are many more propositions in the future, for example, because committees are allowed to submit signatures electronically.

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# Appendix

# A. Knowledge About Content: Heterogeneity

It may well be that certain groups, for instance, older people, face a comparatively higher cost of acquiring information about additional propositions. Consequently, an active direct democracy could be harmful to the ability of specific groups to take part in the political process productively. We therefore look at whether the small aggregate effects of the number of propositions on the ballot mask heterogeneous reactions of groups differentiated by their income, age, and education. Figure A.1 depicts the effects of the number of federal propositions on knowledge. Results for the subpopulations high income, high age, and high education are presented in blue, whereas the effects for the comparison group (low income, low age, and low education) are depicted in black (for the complete regression output see Table A.1).

Panel a shows the the differential effects for high- and low-income groups. High income corresponds to a monthly household income of more than 7,000 Swiss francs (approximately U.S. $7,200). Median household income in Switzerland was 8,506 Swiss francs in the year 2004 (Bundesamt für Statistik , BFS). Although high-income voters know the content of a specific proposition more often on average, they are not less or more affected by more propositions being on the ballot. The differential reaction to the number of propositions on the ballot is small and imprecisely measured.

In the same vein, panel b depicts age differences in knowledge. People above the age of 50 years know about as much as those below that age, independent of the number of federal propositions on the ballot. However, if we examine effect of the number of cantonal propositions, a more nuanced picture emerges. On the cantonal level, older people seem to gather information comparatively more easily.

Panel c shows the estimates for high versus low education. High education corresponds to graduates from tertiary institutions, who make up a quarter of the voters in our data set. Highly educated voters have a 3.5-percentage-point higher propensity to know the content of a proposition on average. However, they do not seem to have an advantage in terms of gathering specific knowledge on propositions more easily as the number of propositions on the ballot grows.

In summary, knowledge slightly decreases as the number of propositions grows. The measured effect sizes are very small compared with the average propensity to reproduce the propositions' content and also when compared to the positive effect on knowledge of just one proposition on the ballot. The overall finding seems not to indicate heterogeneity across major groups of the citizenry.

**Figure A.1: The number of propositions and knowledge for different socioeconomic groups**

**(a) Respondents above (blue bars) and below (black bars) average income**
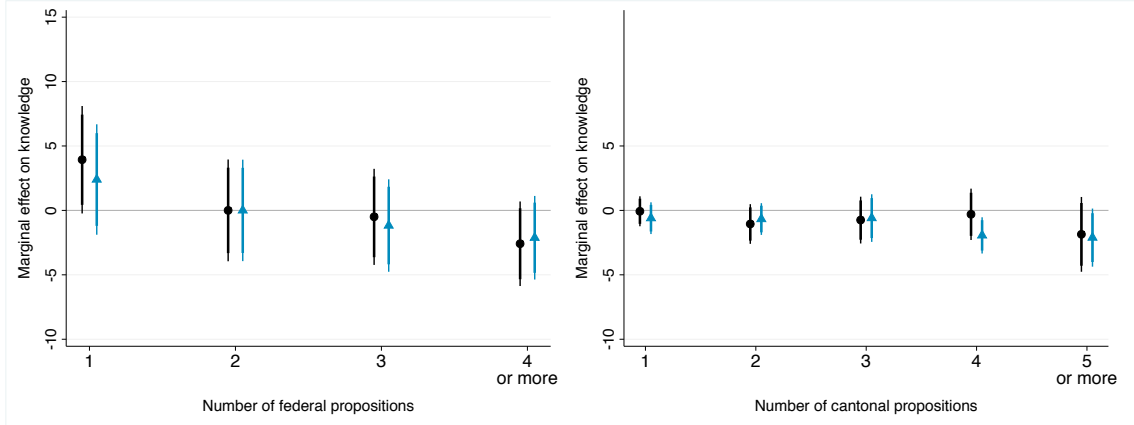


**(b) Respondents above (blue bars) and below (black bars) average age**
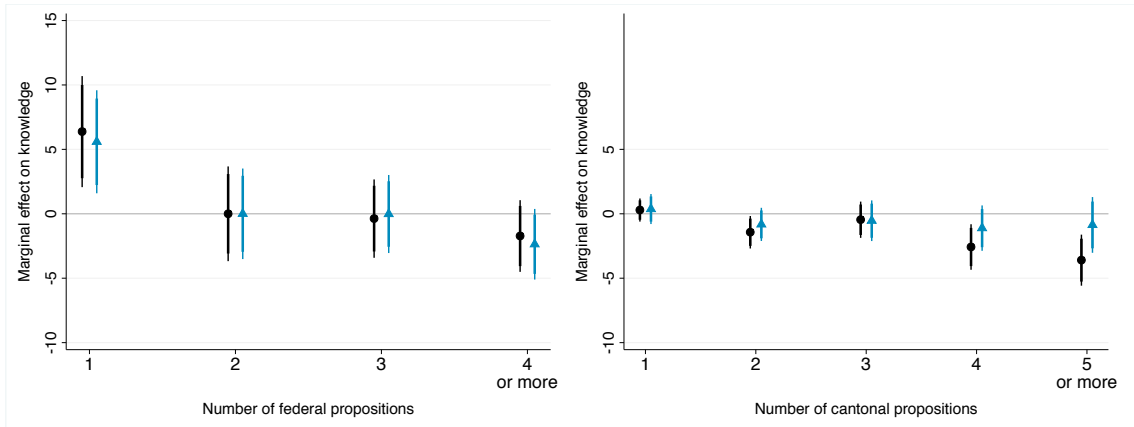


**(c) Respondents above (blue bars) and below (black bars) average education**
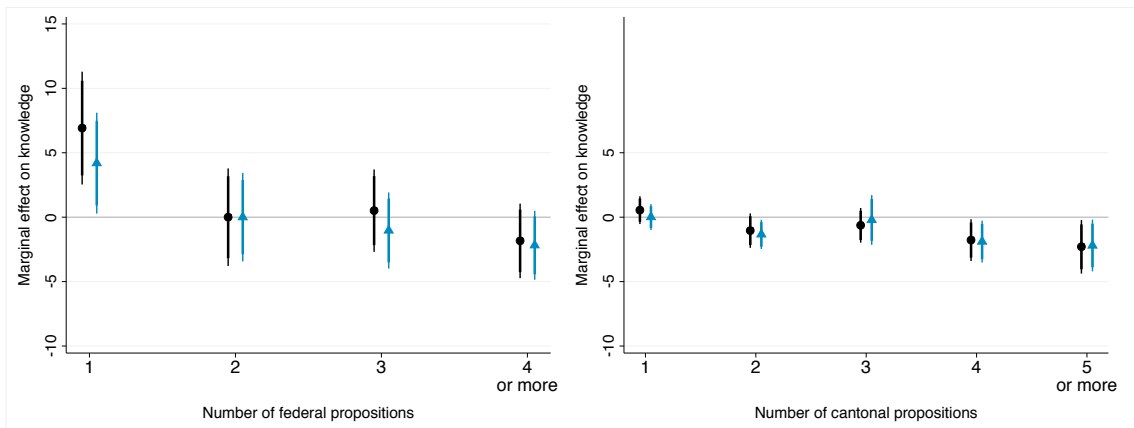


*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on knowledge. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of individual knowledge on dummy variables for the number of federal and cantonal propositions on the ballot, interacted with a dummy that indicates above-average income, age, or education. We control for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables (see also Table A.1).

**Table A.1: Number of propositions and knowledge: Differential effects for income, age, and level of education**
**Dependent variable: Reproducing proposition content [0/100]**
**Sample: Participants, postvote survey data**

| | High income | High age | High education |
|---|---|---|---|
| Number of federal propositions | | | |
| 1 | 3.9325* | 6.3783*** | 6.9139*** |
| | (2.1277) | (2.1990) | (2.2337) |
| 3 | −0.5021 | −0.3750 | 0.5085 |
| | (1.9025) | (1.5508) | (1.6295) |
| 4 or more | −2.5880 | −1.7249 | −1.8389 |
| | (1.6739) | (1.4193) | (1.4757) |
| High income | 2.5277*** | | |
| | (0.7060) | | |
| High age | | 0.2713 | |
| | | (0.4906) | |
| High education | | | 3.6410*** |
| | | | (0.8141) |
| Characteristic-specific interactions with number of federal propositions | | | |
| 1 | −1.5353 | −0.7886 | −2.7177** |
| | (1.0010) | (0.6549) | (1.2273) |
| 3 | −0.6731 | 0.3590 | −1.5399 |
| | (0.8219) | (0.5541) | (0.9386) |
| 4 or more | 0.4668 | −0.6389 | −0.3413 |
| | (0.9435) | (0.6975) | (0.9236) |
| Number of cantonal propositions | | | |
| 1 | −0.0678 | 0.2910 | 0.5446 |
| | (0.5929) | (0.4581) | (0.5505) |
| 2 | −1.0555 | −1.4319** | −1.0445 |
| | (0.7855) | (0.6433) | (0.6812) |
| 3 | −0.7523 | −0.4610 | −0.6339 |
| | (0.9265) | (0.7179) | (0.6878) |
| 4 | −0.3042 | −2.5778*** | −1.7807** |
| | (1.0168) | (0.9008) | (0.8262) |
| 5 or more | −1.8602 | −3.5977*** | −2.2988** |
| | (1.4803) | (1.0105) | (1.0602) |
| Characteristic-specific interactions with number of cantonal propositions | | | |
| 1 | −0.5355 | 0.0765 | −0.5352 |
| | (0.7654) | (0.5551) | (0.6068) |
| 2 | 0.3851 | 0.6098 | −0.2908 |
| | (0.8942) | (0.6461) | (0.6422) |
| 3 | 0.1565 | −0.0769 | 0.4179 |
| | (0.8624) | (0.7739) | (0.9763) |
| 4 | −1.6348 | 1.4653 | −0.1109 |
| | (1.0991) | (1.1216) | (0.9368) |
| 5 or more | −0.2511 | 2.7326*** | 0.1013 |
| | (1.2311) | (0.9947) | (1.0878) |
| Institutional variables | yes | yes | yes |
| Socioeconomic variables | yes | yes | yes |
| Canton-specific effects | yes | yes | yes |
| Year-specific effects | yes | yes | yes |
| $R^2$ | 0.091 | 0.092 | 0.090 |
| Observations | 101,738 | 163,271 | 161,840 |
| Mean of characteristic | 0.35 | 0.45 | 0.30 |

*Note:* Ordinary least squares estimations. Average knowledge on propositions of participants amounts to 79.5. Reference category for number of federal propositions is 2. High income (age or education) indicates that the respondent's income (age or education) is above the sample mean. Income (age or education) is not included as a socioeconomic control variable if high income (high age or high education) is interacted with the number of federal propositions. The sample for the specification with the income interaction starts in the year 1995. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

# B. Figures

**Figure A.2: Number of national propositions per year, 1970–2017**
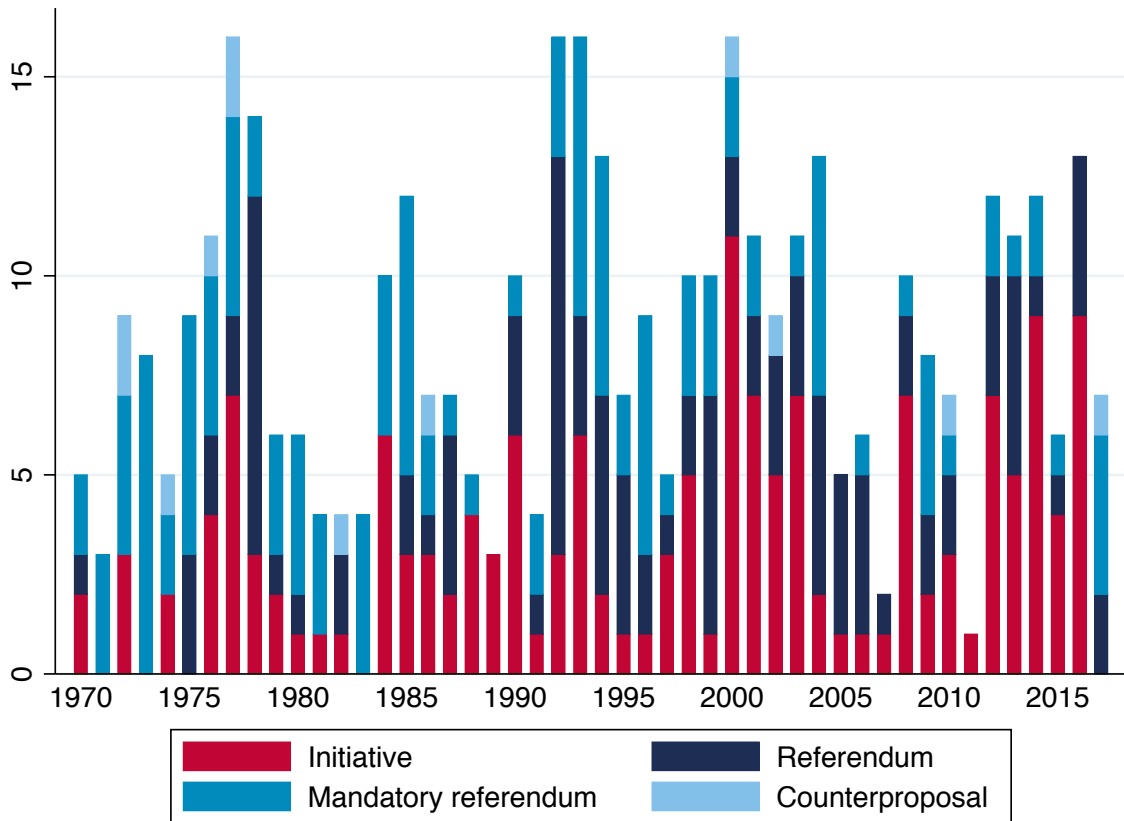


*Data source:* Database of Swiss Federal Referendums, Swiss Federal Statistical Office .

**Figure A.3: Number of cantonal propositions per year, 1970–2015**

**Figure A.4: Perceived importance of federal propositions by the number of propositions on the ballot**
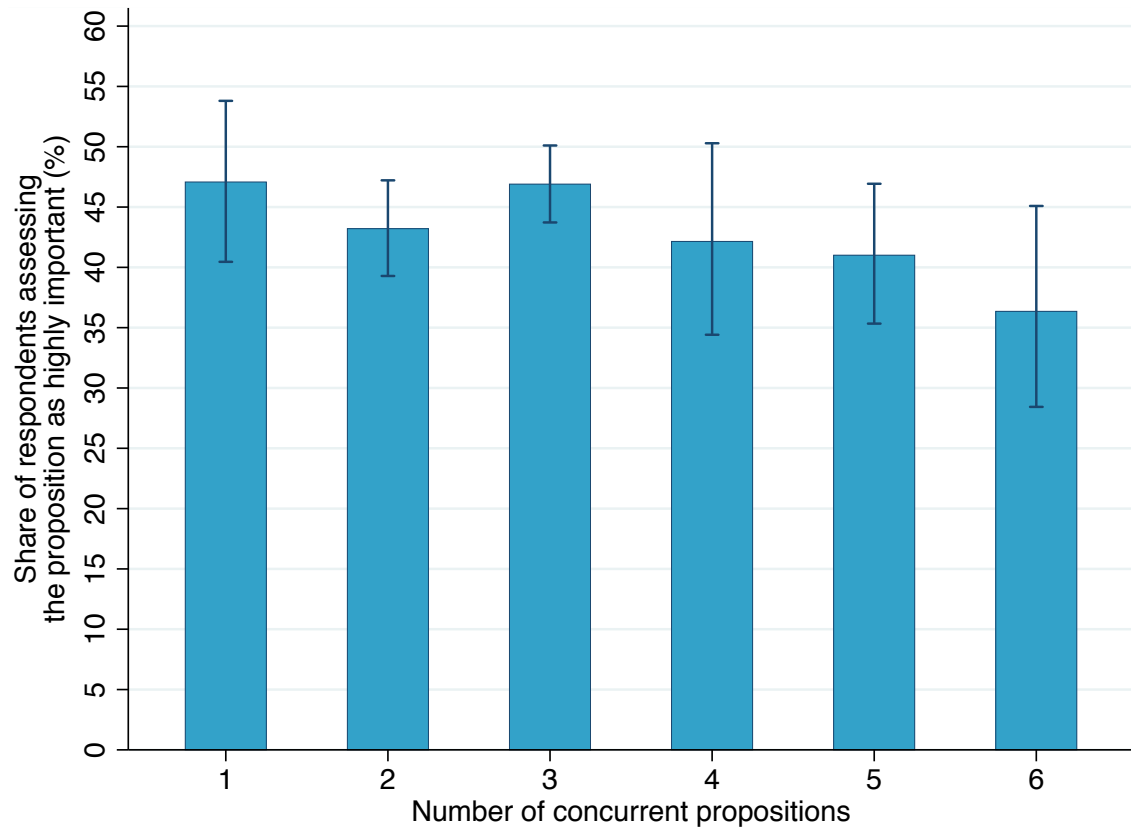


*Note:* The figure shows estimates of the mean perceived importance of federal propositions grouped by the number of concurrent propositions. The 95% confidence intervals are based on standard errors clustered on the level of polling days. There was one vote weekend with nine federal propositions on the ballot, which was subsumed under six federal propositions on the ballot.
*Data source:* VoxIt.

**Figure A.5: Number of concurrent federal and cantonal propositions, 1970–2015**
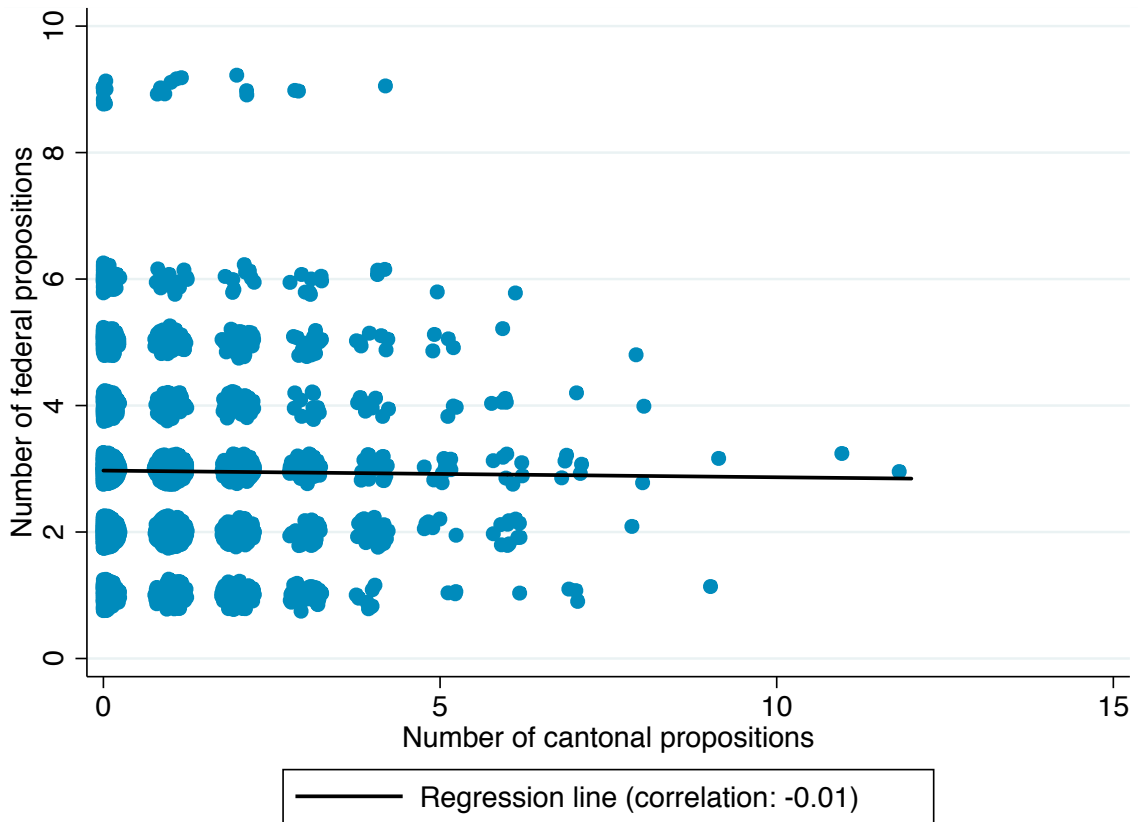


*Note:* The figure shows the number of federal and cantonal propositions per vote weekend. Each dot represents a vote weekend in a specific canton. Gaussian noise was added to increase visibility.
*Data sources:* Swiss Federal Statistical Office and c2d, Center for Democracy Studies Aarau.

**Figure A.6: Reported difficulties in assessing the consequences of propositions by the number of propositions on the ballot**
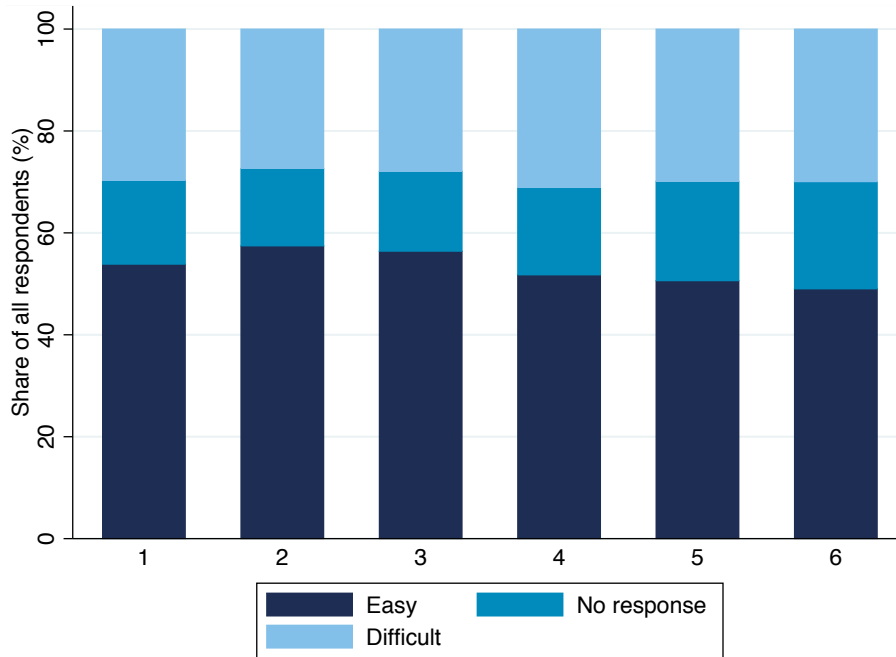


*Note:* The figure shows the distribution of responses concerning the difficulties in assessing the consequences of a proposition, grouped by the number of concurrent propositions. There was one vote weekend with nine federal propositions on the ballot, which was subsumed under six federal propositions on the ballot.
*Data source:* VoxIt.

**Figure A.7: The number of propositions and knowledge about the title of propositions**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the propensity in percentage points to know the content of a specific proposition. Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of knowledge on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, perceived complexity, perceived importance, institutional variables, and socioeconomic variables based on 168,524 observations (see also column III of Table A.3).

37

**Figure A.8: The number of propositions and knowledge about the title of propositions, including nonparticipants**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the propensity in percentage points to know the content of a specific proposition. Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of knowledge on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, perceived complexity, perceived importance, institutional variables, and socioeconomic variables based on 251,317 observations (see also column III of Table A.4).

**Figure A.9: The number of propositions and turnout in percentage points, postvote survey data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on turnout in percentage points. Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of turnout on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables based on 264,450 observations (see also column I of Table A.6).

**Figure A.10: The number of propositions and the share of yes votes, administrative data**
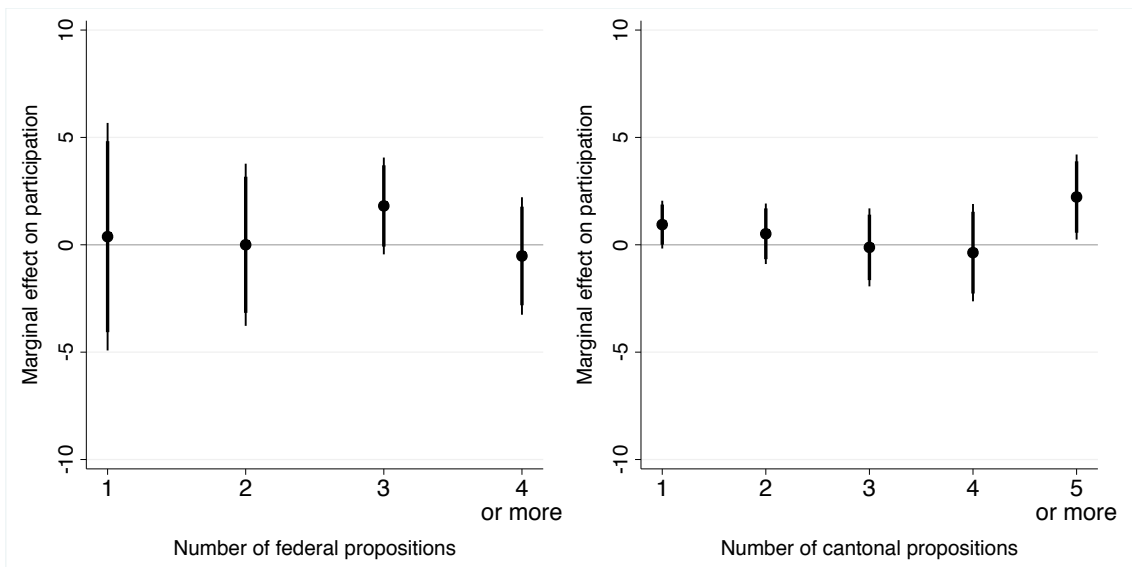


*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of yes votes in percentage points. Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the yes vote share on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and institutional variables based on 7,080 observations (see also column III of Table A.9).

**Figure A.11: The number of propositions and the share of yes votes, postvote survey data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of yes votes in percentage points. Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the yes vote share on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables based on 158,872 observations (see also column I of Table A.9).

**Figure A.12: The number of propositions and support of right-wing recommendations, administrative data**
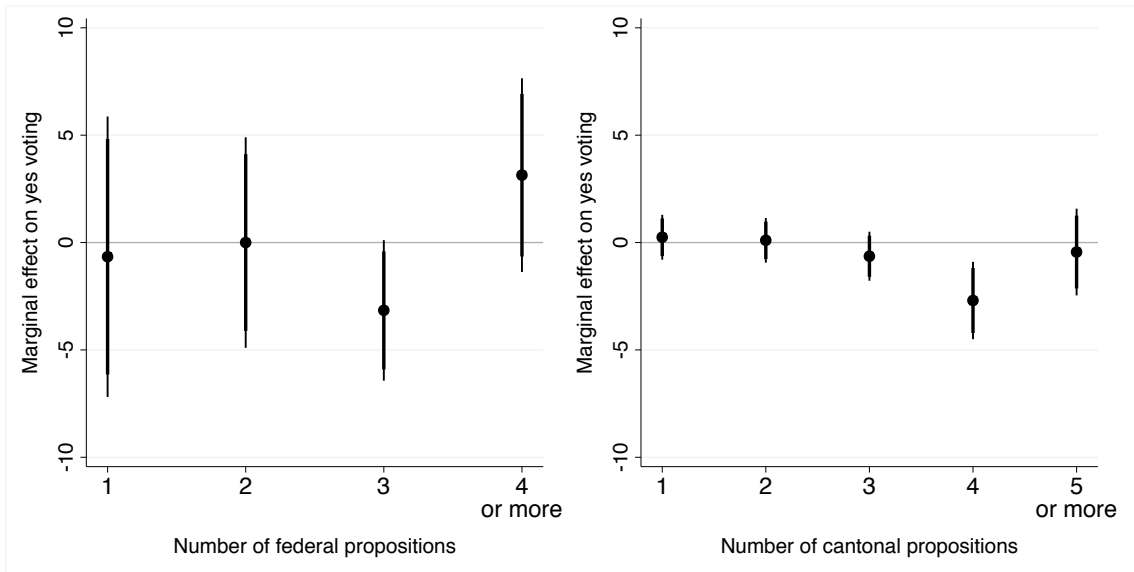


*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the right-wing Swiss People's Party (SVP). Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the share of people voting in line with the voting recommendation of the SVP on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and institutional variables based on 7,056 observations (see also column III of Table A.10).

**Figure A.13: The number of propositions and support of right-wing recommendations, postvote survey data**
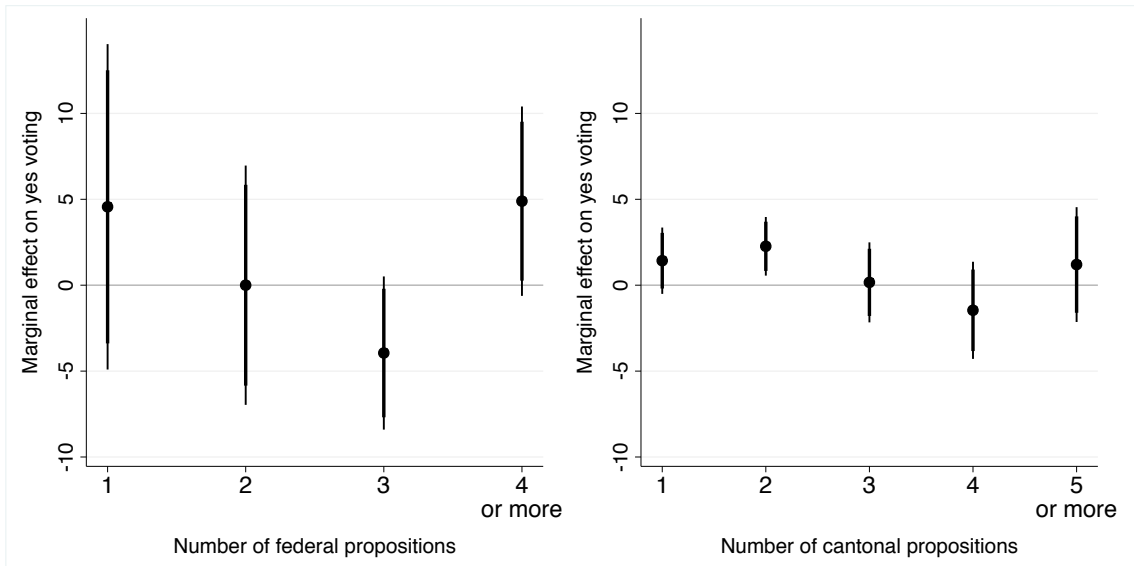


*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the right-wing Swiss People's Party (SVP). Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of a dummy for an individual vote in line with the SVP's recommendation on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables based on 158,872 observations (see also column I of Table A.10).

41

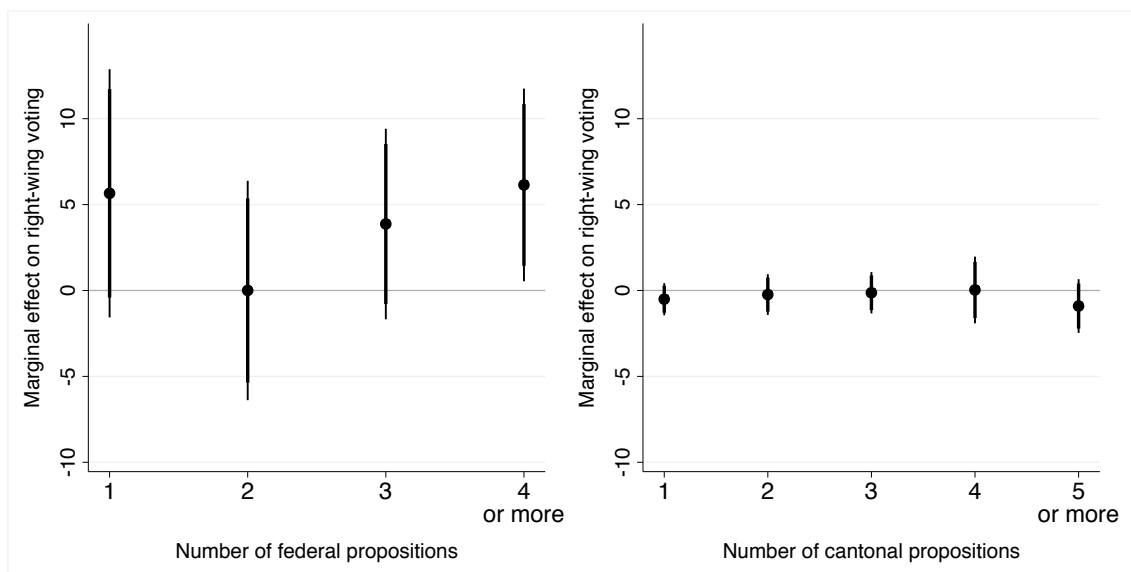**Figure A.14: The number of propositions and left-wing support, administrative data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the left-wing Social Democratic Party of Switzerland (SP). Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the share of people voting in line with the voting recommendation of the SP on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and institutional variables based on 6,648 observations (see also column III of Table A.11).

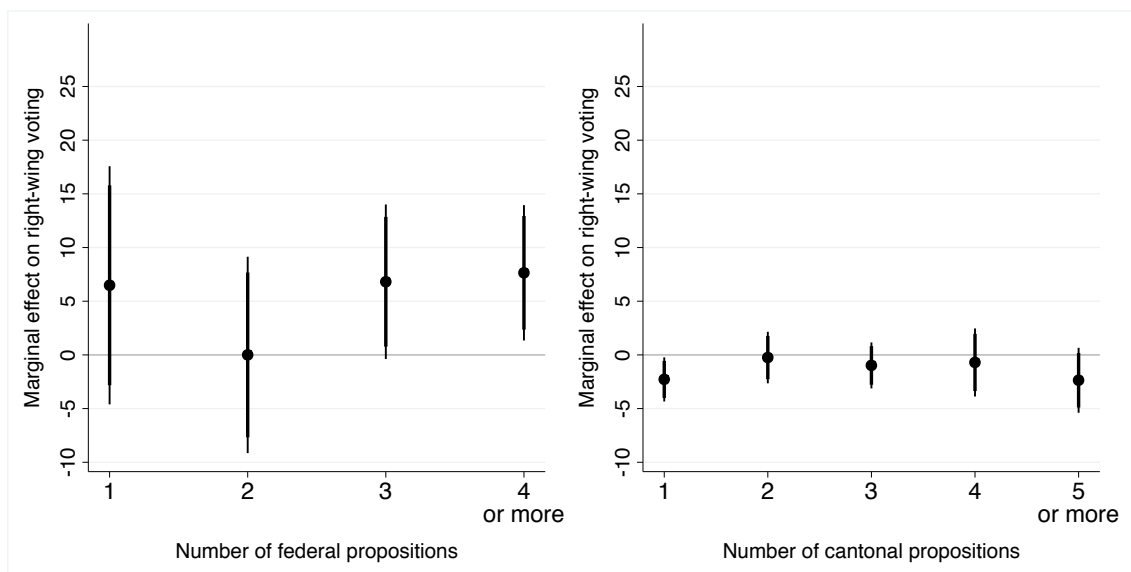**Figure A.15: The number of propositions and left-wing support, postvote survey data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the left-wing Social Democratic Party of Switzerland (SP). Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of a dummy for an individual vote in line with the SP recommendation on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables based on 158,872 observations (see also column I of Table A.11).

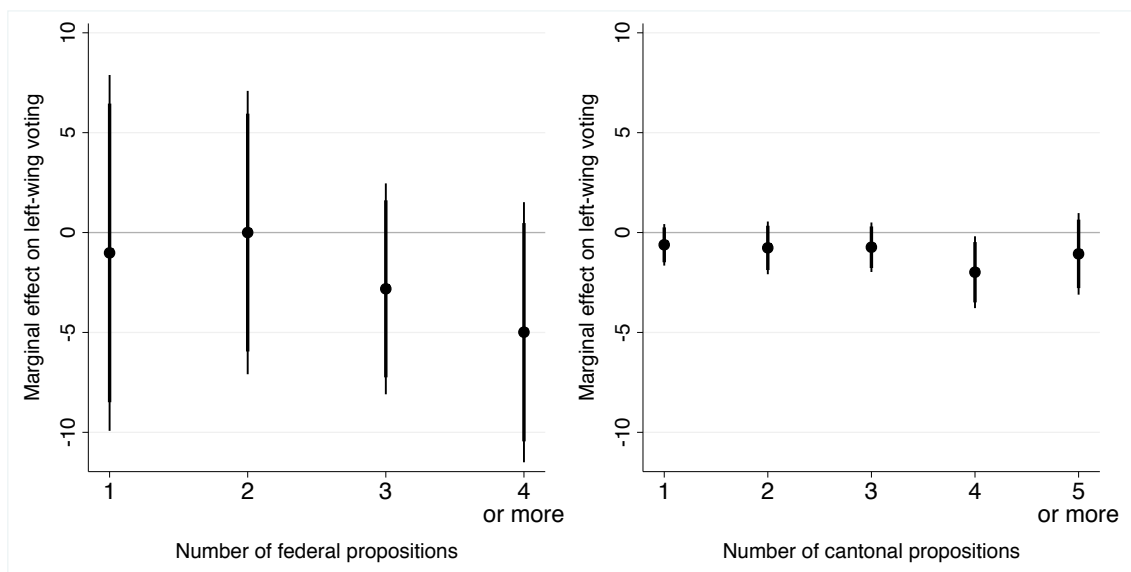**Figure A.16: The number of propositions and support of government recommendations, administrative data**



*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the federal government. Estimates are based on administrative data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of the share of voters following the governments voting recommendation on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, and institutional variables based on 7,008 observations (see also column III of Table A.12).

**Figure A.17: The number of propositions and support of government recommendations, postvote survey data**
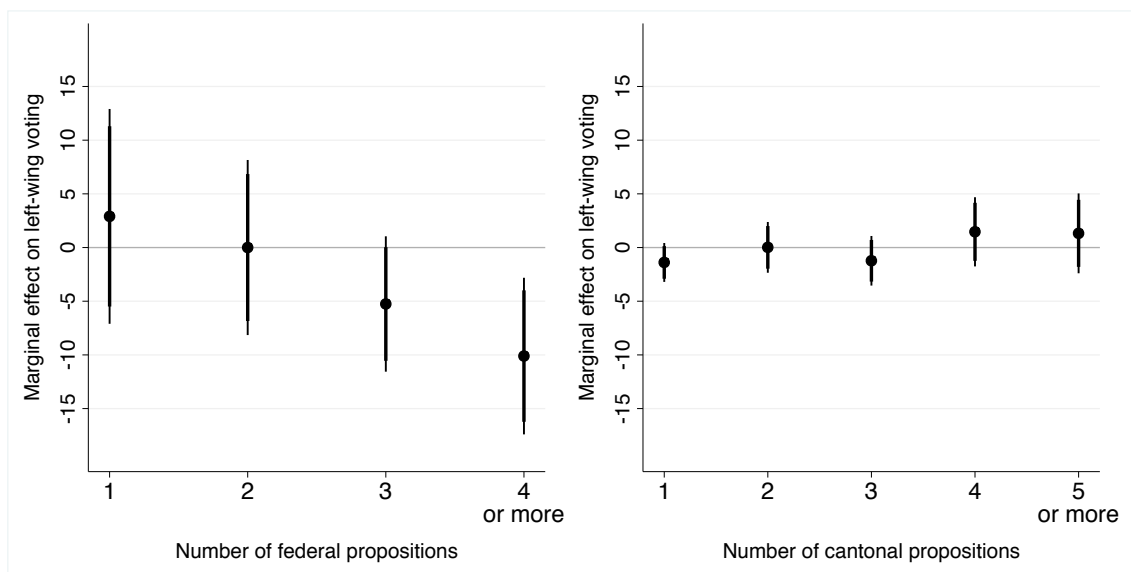


*Note:* The figure shows coefficient estimates, 95% confidence intervals (thin lines), and 90% confidence intervals (thick lines) for the effect of the number of propositions on the share of votes in percentage points that are in line with the vote recommendation of the federal government. Estimates are based on postvote survey data. The reference categories are two federal propositions and zero cantonal propositions. The confidence interval shown for the reference level of federal propositions is the mean of the confidence interval width for the estimated effects of three federal propositions and one federal proposition. The dots are retrieved from a regression of a dummy for an individual vote in line with government recommendation on dummy variables for the number of federal and cantonal propositions on the ballot while controlling for canton-specific effects, year-specific effects, institutional variables, and socioeconomic variables based on 158,872 observations (see also column I of Table A.12).

**Figure A.18: Distribution of exposure indices**
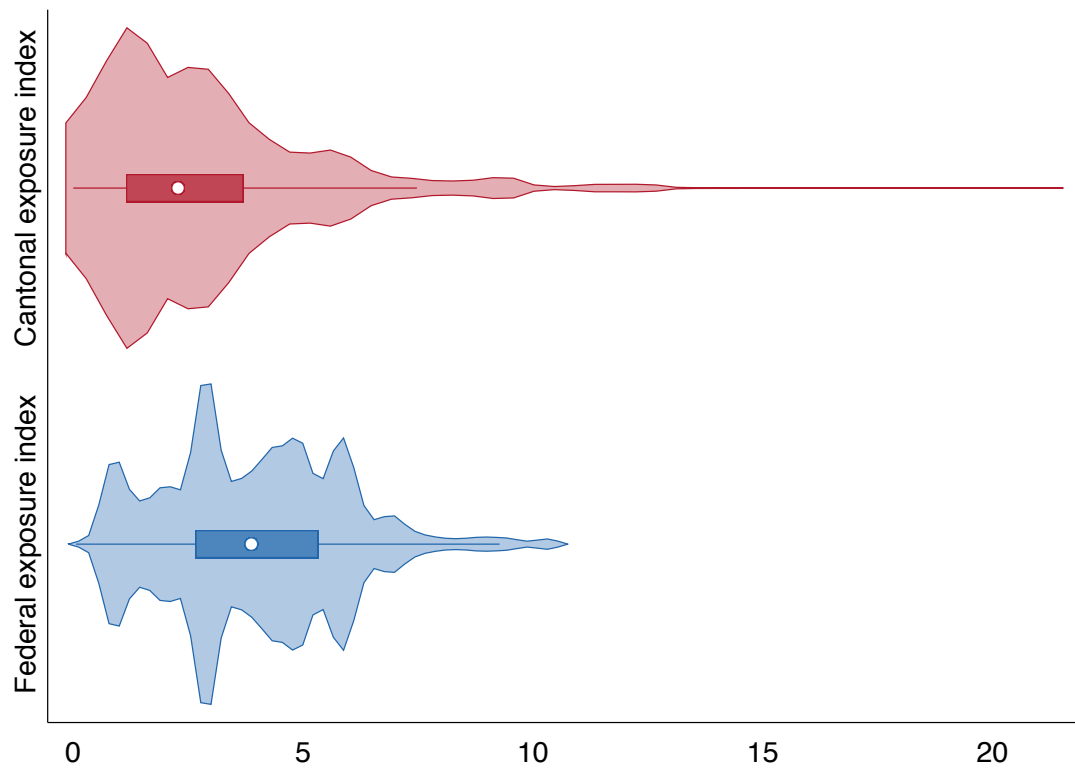


*Note:* The figure shows the distributions of exposure values assigned to Swiss Household Panel respondents, used in Table 2.

# C. Tables

**Table A.2: Descriptive statistics for the variables from postvote survey and administrative data sets**

| | Individual data June 14, 1981 - June 14, 2015 285 federal propositions on 97 voting days | | | | Aggregated data June 14, 1981 - June 14, 2015 295 federal propositions on 102 voting days | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Standard deviation | Range | Number of observations | Mean | Standard deviation | Range | Number of observations |
| *Dependent Variables* | | | | | | | | |
| Reproduce proposition title | 66.10 | 47.34 | 0 / 100 | 264,437 | | | | |
| Reproduce proposition content | 79.49 | 40.37 | 0 / 100 | 251,317 | | | | |
| Participation | 64.01 | 47.99 | 0 / 100 | 264,450 | 44.60 | 10.41 | 13.8 - 87.2 | 7,056 |
| Participation excluding blank voting | 61.49 | 48.66 | 0 / 100 | 264,466 | 43.35 | 10.10 | 13.5 - 86.5 | 7,056 |
| Blank | 4.20 | 20.06 | 0 / 100 | 158,872 | 2.60 | 2.03 | 0.08 - 26.02 | 7,056 |
| Yes | 47.29 | 49.93 | 0 / 100 | 158,872 | 48.10 | 19.35 | 3.9 - 95.3 | 7,056 |
| *Explanatory variables* | | | | | | | | |
| Number of federal propositions | 2.94 | 1.46 | 1 – 9 | 97 federal polling days | 2.89 | 1.47 | 1 - 9 | 102 federal polling days |
| Number of cantonal propositions | 1.10 | 1.53 | 0 – 17 | 2,050 cantonal polling days | 1.07 | 1.51 | 0 - 17 | 2,448 cantonal polling days |
| Number of federal propositions within last 12 months | 8.11 | 3.54 | 0 – 19 | 97 federal polling days | 7.93 | 3.66 | 0 - 19 | 102 federal polling days |
| Number of cantonal propositions within last 12 months | 4.38 | 3.88 | 0 – 27 | 2,050 cantonal polling days | 4.40 | 3.82 | 0 - 27 | 2,448 cantonal polling days |
| *Institutional control variables* | | | | | | | | |
| Initiative | 0.428 | 0.496 | 0 / 1 | 285 propositions | 0.418 | 0.494 | 0 / 1 | 295 propositions |
| Referendum | 0.288 | 0.453 | 0 / 1 | 285 propositions | 0.289 | 0.454 | 0 / 1 | 295 propositions |
| Mandatory referendum | 0.214 | 0.411 | 0 / 1 | 285 propositions | 0.221 | 0.416 | 0 / 1 | 295 propositions |
| Counterproposal | 0.070 | 0.256 | 0 / 1 | 285 propositions | 0.071 | 0.258 | 0 / 1 | 295 propositions |
| Postal voting | 0.712 | 0.453 | 0 / 1 | 285 propositions | 0.632 | 0.482 | 0 / 1 | 295 propositions |
| *Individual controls for importance and complexity of propositions* | | | | | | | | |
| High impact | 0.435 | 0.496 | 0 / 1 | 264,998 | | | | |
| Low complexity | 0.540 | 0.498 | 0 / 1 | 291,613 | | | | |
| High complexity | 0.290 | 0.454 | 0 / 1 | 291,613 | | | | |
| *Socioeconomic variables* | | | | | | | | |
| Age | 48.0 | 17.6 | 18 – 98 | 292,933 | | | | |
| Male | 0.491 | 0.500 | 0 / 1 | 293,608 | | | | |
| Advanced education | 0.300 | 0.458 | 0 / 1 | 291,039 | | | | |
| High income | 0.347 | 0.476 | 0 / 1 | 185,587 | | | | |

*Note:* Advanced education is for graduates from a tertiary institution. High income is for people with a household income of more than 7,000 Swiss francs per month.

*Data sources:* The dependent variables in the individual data set, the controls for complexity and importance, and the socioeconomic variables are from VoxIt (Kriesi, Brunner and Lorétan, 2017); the number of federal propositions and the dependent variables in the aggregated data set are from the Swiss Federal Statistical Office (SFS); information about the legal form of the propositions and government recommendations are from Swissvotes; the numbers of cantonal propositions are from c2d, Centre for Democracy Studies Aarau; information about the availability of postal voting is from Luechinger, Rosinger and Stutzer (2007).

**Table A.3: Number of propositions and knowledge: Taking into account the complexity and importance of the propositions**
**Dependent variable: Reproducing proposition title [0/100]**
**Sample: Participants**

|  | I | II | III | IV |
|---|---|---|---|---|
| Number of federal propositions | | | | |
| 1 | 14.9165*** | 13.7215*** | 13.7840*** | |
|  | (3.3550) | (3.2591) | (3.1215) | |
| 3 | −4.0059** | −4.0777** | −4.0012** | |
|  | (1.9981) | (1.8823) | (1.8027) | |
| 4 or more | −11.4993*** | −11.1097*** | −10.8181*** | |
|  | (2.0338) | (1.9971) | (1.9074) | |
| Number of cantonal propositions | | | | |
| 1 | | | −1.5183** | −1.6051** |
|  | | | (0.7154) | (0.6387) |
| 2 | | | −4.4524*** | −3.8067*** |
|  | | | (0.7722) | (0.7456) |
| 3 | | | −3.1868** | −3.0209** |
|  | | | (1.3139) | (1.2119) |
| 4 | | | −4.2791** | −3.8143*** |
|  | | | (1.6525) | (1.4310) |
| 5 or more | | | −6.6379*** | −6.7312*** |
|  | | | (1.4117) | (1.1314) |
| Low complexity | | 13.4298*** | 13.3506*** | 11.3035*** |
|  | | (0.9867) | (0.9880) | (0.8993) |
| High complexity | | 8.5789*** | 8.5699*** | 6.7691*** |
|  | | (0.8289) | (0.8280) | (0.7847) |
| High impact | | 5.5874*** | 5.6121*** | 3.1343*** |
|  | | (0.6682) | (0.6640) | (0.4861) |
| Referendum | −1.0184 | −0.3603 | −0.0999 | |
|  | (2.0259) | (1.9081) | (1.9173) | |
| Mandatory referendum | −7.4064*** | −5.6475*** | −5.5398*** | |
|  | (2.2573) | (2.1167) | (2.0963) | |
| Counterproposal | −7.6017** | −6.7452** | −6.6515** | |
|  | (3.2789) | (3.1624) | (3.1101) | |
| Postal voting | −0.6165 | −0.3359 | −0.1942 | −0.0893 |
|  | (1.1200) | (1.1515) | (1.1089) | (1.1159) |
| Socioeconomic variables | yes | yes | yes | yes |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | yes | yes | no |
| Proposition-specific effects | no | no | no | yes |
| $R^2$ | 0.123 | 0.131 | 0.133 | 0.193 |
| Observations | 175,487 | 168,524 | 168,524 | 168,524 |

*Note:* Ordinary least squares estimations. Average knowledge of proposition title by participants amounts to 74.02. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p <$ .1, **$.01 < p < .05$, ***$p < .01$.

**Table A.4: Number of propositions and knowledge: Taking into account the complexity and importance of the propositions**
**Dependent variable: Reproducing proposition content [0/100]**
**Sample: Including nonparticipants**

| | I | II | III | IV |
|---|---|---|---|---|
| Number of federal propositions | | | | |
| 1 | 7.2244* | 5.8161** | 5.8661** | |
| | (3.8654) | (2.8144) | (2.8375) | |
| 3 | 0.7794 | 0.2118 | 0.1836 | |
| | (2.3539) | (1.9164) | (1.9047) | |
| 4 or more | −1.6798 | −1.3862 | −1.2178 | |
| | (2.3289) | (1.8017) | (1.7908) | |
| Number of cantonal propositions | | | | |
| 1 | | | 0.2361 | −0.1338 |
| | | | (0.5798) | (0.3712) |
| 2 | | | −1.4868** | −1.7543*** |
| | | | (0.6454) | (0.5184) |
| 3 | | | −0.4584 | −0.8601 |
| | | | (0.7627) | (0.6052) |
| 4 | | | −2.5764** | −1.3866 |
| | | | (1.1675) | (0.9320) |
| 5 or more | | | −2.2258** | −1.9781** |
| | | | (1.0811) | (0.7796) |
| Low complexity | | 34.2721*** | 34.2521*** | 32.1268*** |
| | | (0.9882) | (0.9866) | (0.9732) |
| High complexity | | 20.7821*** | 20.7946*** | 20.5709*** |
| | | (0.7606) | (0.7624) | (0.7428) |
| High impact | | 8.4074*** | 8.4181*** | 7.3185*** |
| | | (0.5055) | (0.5050) | (0.4345) |
| Referendum | −3.1008* | −1.6575 | −1.6016 | |
| | (1.5690) | (1.1259) | (1.1293) | |
| Mandatory referendum | −14.1229*** | −10.1844*** | −10.1604*** | |
| | (2.5545) | (1.8989) | (1.8885) | |
| Counterproposal | −12.4742*** | −9.8295*** | −9.8422*** | |
| | (2.9960) | (2.4143) | (2.3984) | |
| Postal voting | −3.4000*** | −3.6244*** | −3.5415*** | −3.2665*** |
| | (1.0008) | (0.8205) | (0.7971) | (0.8075) |
| Socioeconomic variables | yes | yes | yes | yes |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | yes | yes | no |
| Proposition-specific effects | no | no | no | yes |
| $R^2$ | 0.102 | 0.186 | 0.186 | 0.231 |
| Observations | 273,868 | 251,317 | 251,317 | 251,317 |

*Note:* Ordinary least squares estimations. Average knowledge of proposition content by all respondents amounts to 79.49. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.5: Number of propositions and knowledge: Taking into account the complexity and importance of the propositions**
**Dependent variable: Reproducing proposition title [0/100]**
**Sample: Including nonparticipants**

|  | I | II | III | IV |
|---|---|---|---|---|
| Number of federal propositions |  |  |  |  |
| 1 | 17.0564*** | 15.4546*** | 15.5440*** |  |
|  | (3.9087) | (3.4570) | (3.3612) |  |
| 3 | −2.0743 | −2.7983 | −2.5891 |  |
|  | (2.4551) | (2.1060) | (2.0872) |  |
| 4 or more | −9.4770*** | −9.2958*** | −8.9761*** |  |
|  | (2.5753) | (2.3219) | (2.2979) |  |
| Number of cantonal propositions |  |  |  |  |
| 1 |  |  | −0.9770 | −1.3488** |
|  |  |  | (0.6820) | (0.6284) |
| 2 |  |  | −3.5936*** | −3.4202*** |
|  |  |  | (0.7594) | (0.6927) |
| 3 |  |  | −2.9903*** | −3.0901*** |
|  |  |  | (1.1358) | (1.0859) |
| 4 |  |  | −2.2713 | −2.5538** |
|  |  |  | (1.6840) | (1.2342) |
| 5 or more |  |  | −5.8456*** | −5.9361*** |
|  |  |  | (1.2930) | (1.0305) |
| Low complexity |  | 28.7930*** | 28.7658*** | 27.4133*** |
|  |  | (1.5446) | (1.5493) | (1.4883) |
| High complexity |  | 19.9080*** | 19.9374*** | 19.0245*** |
|  |  | (1.2091) | (1.2163) | (1.2027) |
| High impact |  | 8.7787*** | 8.7992*** | 6.7049*** |
|  |  | (0.6123) | (0.6077) | (0.4711) |
| Referendum | −2.6042 | −1.0691 | −0.8716 |  |
|  | (2.0637) | (1.8218) | (1.8337) |  |
| Mandatory referendum | −9.4036*** | −5.8570*** | −5.7635*** |  |
|  | (2.3897) | (2.0722) | (2.0539) |  |
| Counterproposal | −10.1837*** | −8.0012*** | −7.8708*** |  |
|  | (2.8983) | (2.8199) | (2.7843) |  |
| Postal voting | −0.2116 | 0.1395 | 0.2959 | 0.3557 |
|  | (0.9817) | (1.0369) | (1.0038) | (1.0180) |
| Socioeconomic variables | yes | yes | yes | yes |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | yes | yes | no |
| Proposition-specific effects | no | no | no | yes |
| $R^2$ | 0.133 | 0.181 | 0.182 | 0.234 |
| Observations | 290,894 | 264,437 | 264,437 | 264,437 |

*Note:* Ordinary least squares estimations. Average knowledge of proposition title by all respondents amounts to 66.10. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.6: Number of propositions and voting participation**
**Dependent variable: Voting participation [0/100] / [0-100]**
**Sample: Participants / full voting population, aggregated on cantonal level**

| | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
| | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 0.3772 | | 0.8631 | |
| | (2.7030) | | (4.0888) | |
| 3 | 1.8078 | | 3.5760** | |
| | (1.1504) | | (1.7061) | |
| 4 or more | −0.5218 | | 0.6242 | |
| | (1.3953) | | (2.0651) | |
| Number of cantonal propositions | | | | |
| 1 | 0.9394 | 0.8670* | 1.0059*** | 0.9237*** |
| | (0.5677) | (0.5043) | (0.3816) | (0.3448) |
| 2 | 0.5115 | 0.0256 | 1.2579*** | 0.9171*** |
| | (0.7189) | (0.7085) | (0.4219) | (0.3233) |
| 3 | −0.1212 | 0.4922 | 1.2820*** | 1.2425*** |
| | (0.9265) | (0.8687) | (0.4677) | (0.3766) |
| 4 | −0.3670 | −0.9122 | 1.3170* | 1.3175** |
| | (1.1567) | (1.0760) | (0.7690) | (0.6536) |
| 5 or more | 2.2233** | 2.0240** | 1.8600*** | 1.7075*** |
| | (1.0108) | (0.9881) | (0.6451) | (0.5431) |
| Low complexity | 45.5090*** | 45.6698*** | | |
| | (0.8196) | (0.7727) | | |
| High complexity | 33.6388*** | 33.1813*** | | |
| | (0.7868) | (0.7631) | | |
| High impact | 12.0703*** | 12.5664*** | | |
| | (0.5778) | (0.5674) | | |
| Referendum | 0.5675 | | −1.4048* | |
| | (0.7972) | | (0.7928) | |
| Mandatory referendum | 1.3355 | | −2.2992* | |
| | (0.8541) | | (1.1895) | |
| Counterproposal | 2.1870** | | −2.3567** | |
| | (1.0416) | | (0.9230) | |
| Postal voting | 4.7761*** | 4.7136*** | 5.7535*** | 5.7843*** |
| | (0.9597) | (0.9469) | (0.4982) | (0.4915) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.238 | 0.246 | 0.541 | 0.790 |
| Observations | 264,450 | 264,450 | 7,080 | 7,080 |

*Note:* Ordinary least squares estimations. Average turnout amounts to 64.01 in the individual data set and 44.60 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *.05 < p < .1, **.01 < p < .05, ***p < .01.

**Table A.7: Number of propositions and blank voting**
**Dependent variable: Ratio of blank votes [0/100] / [0-100]**
**Sample: Participants / full voting population, aggregated on cantonal level**

| | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
| | I | II | III | IV |
| Number of federal propositions | | | | |
| | | | | |
| 1 | −2.3371*** | | −0.9862*** | |
| | (0.5368) | | (0.2895) | |
| 3 | 0.3455 | | 0.3168* | |
| | (0.3701) | | (0.1694) | |
| 4 or more | 1.8599*** | | 1.0116*** | |
| | (0.4351) | | (0.1684) | |
| Number of cantonal propositions | | | | |
| | | | | |
| 1 | 0.0191 | 0.0524 | 0.2076*** | 0.2103*** |
| | (0.2149) | (0.1866) | (0.0622) | (0.0497) |
| 2 | −0.2876 | −0.2940 | 0.1616** | 0.2522*** |
| | (0.3182) | (0.3095) | (0.0632) | (0.0490) |
| 3 | 0.1673 | 0.2411 | 0.1328* | 0.2005*** |
| | (0.3945) | (0.3449) | (0.0773) | (0.0715) |
| 4 | −0.0755 | −0.1726 | 0.3334*** | 0.3594*** |
| | (0.4135) | (0.3453) | (0.1232) | (0.1085) |
| 5 or more | 0.0530 | 0.1000 | 0.2391** | 0.3311*** |
| | (0.4124) | (0.3619) | (0.1098) | (0.0840) |
| Low complexity | −17.5288*** | −16.8010*** | | |
| | (1.1148) | (1.0610) | | |
| High complexity | −12.5274*** | −12.0622*** | | |
| | (0.9925) | (0.9476) | | |
| High impact | −4.9934*** | −4.5354*** | | |
| | (0.4219) | (0.3859) | | |
| Referendum | 1.3866*** | | 1.0203*** | |
| | (0.4155) | | (0.1926) | |
| Mandatory referendum | 1.6429*** | | 1.5214*** | |
| | (0.5088) | | (0.2526) | |
| Counterproposal | 1.2013 | | 0.3753* | |
| | (0.7853) | | (0.1985) | |
| Postal voting | −0.1819 | −0.1818 | 0.0204 | 0.0039 |
| | (0.3558) | (0.3545) | (0.0589) | (0.0590) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.074 | 0.090 | 0.485 | 0.813 |
| Observations | 158,872 | 158,872 | 7,080 | 7,080 |

*Note:* Ordinary least squares estimations. Average ratio of blank votes amounts to 4.20 in the individual data set and 2.60 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *.05 $< p <$ .1, **.01 $< p <$ .05, ***$p <$ .01.

**Table A.8: Number of propositions and turnout without blank voting**
**Dependent variable: Turnout excluding blank votes [0/100] / [0-100]**
**Sample: Participants / full voting population, aggregated on cantonal level**

| | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
| | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 1.9403 | | 1.1998 | |
| | (2.6902) | | (4.1430) | |
| 3 | 1.5990 | | 3.2121* | |
| | (1.0456) | | (1.7147) | |
| 4 or more | −1.5123 | | −0.0430 | |
| | (1.3018) | | (2.0676) | |
| Number of cantonal propositions | | | | |
| 1 | 0.8892 | 0.7922 | 0.8486** | 0.7900** |
| | (0.5523) | (0.4990) | (0.3640) | (0.3250) |
| 2 | 0.6607 | 0.1963 | 1.1409*** | 0.7787** |
| | (0.7158) | (0.7095) | (0.4138) | (0.3050) |
| 3 | −0.2282 | 0.3235 | 1.2169*** | 1.1418*** |
| | (0.8022) | (0.7985) | (0.4582) | (0.3631) |
| 4 | −0.2042 | −0.7399 | 1.0341 | 1.0646* |
| | (1.0095) | (0.9521) | (0.7537) | (0.6128) |
| 5 or more | 2.0704** | 1.8466* | 1.6996*** | 1.5202*** |
| | (0.9543) | (0.9458) | (0.6279) | (0.5172) |
| Low complexity | 46.8180*** | 46.7262*** | | |
| | (0.7385) | (0.7051) | | |
| High complexity | 32.4891*** | 31.9565*** | | |
| | (0.7524) | (0.7347) | | |
| High impact | 14.3149*** | 14.5294*** | | |
| | (0.6127) | (0.6037) | | |
| Referendum | −0.3267 | | −1.7580** | |
| | (0.6911) | | (0.8004) | |
| Mandatory referendum | 0.2869 | | −2.8435** | |
| | (0.7673) | | (1.2092) | |
| Counterproposal | 1.2883 | | −2.9834*** | |
| | (0.8768) | | (0.8977) | |
| Postal voting | 4.6146*** | 4.5674*** | 5.5704*** | 5.6115*** |
| | (0.9424) | (0.9328) | (0.4792) | (0.4709) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.252 | 0.258 | 0.526 | 0.799 |
| Observations | 264,466 | 264,466 | 7,080 | 7,080 |

*Note:* Ordinary least squares estimations. Average turnout excluding blank votes amounts to 61.49 in the individual data set and 43.35 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *.05 < $p$ < .1, **.01 < $p$ < .05, ***$p$ < .01.

**Table A.9: Number of propositions and yes voting**
**Dependent variable: Ratio of yes votes [0/100] / [0-100]**
**Sample: Participants / full voting population, aggregated on cantonal level**

| | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
| | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 4.5621 | | −0.6610 | |
| | (4.8322) | | (3.3319) | |
| 3 | −3.9480* | | −3.1596* | |
| | (2.2742) | | (1.6694) | |
| 4 or more | 4.8902* | | 3.1374 | |
| | (2.8118) | | (2.3012) | |
| Number of cantonal propositions | | | | |
| 1 | 1.4262 | 0.8968 | 0.2454 | 0.4682 |
| | (0.9848) | (0.5805) | (0.5328) | (0.3008) |
| 2 | 2.2636** | 0.5493 | 0.1029 | 0.1252 |
| | (0.8708) | (0.4856) | (0.5299) | (0.3694) |
| 3 | 0.1644 | 0.2963 | −0.6391 | 0.0704 |
| | (1.1882) | (0.6033) | (0.5824) | (0.3888) |
| 4 | −1.4621 | 0.2205 | −2.7005*** | −1.0372 |
| | (1.4418) | (1.0181) | (0.9184) | (0.6733) |
| 5 or more | 1.2006 | 1.1157 | −0.4426 | 0.6725 |
| | (1.7051) | (0.9761) | (1.0301) | (0.6776) |
| Low complexity | 9.0238*** | 9.5261*** | | |
| | (1.1783) | (1.0774) | | |
| High complexity | 2.5982** | 3.9327*** | | |
| | (1.0309) | (0.9378) | | |
| High impact | 11.0144*** | 10.5169*** | | |
| | (1.0909) | (1.0699) | | |
| Referendum | 16.0728*** | | 17.5628*** | |
| | (2.5192) | | (2.1857) | |
| Mandatory referendum | 30.0693*** | | 27.7127*** | |
| | (2.8596) | | (2.5497) | |
| Counterproposal | 24.6225*** | | 24.6444*** | |
| | (5.2384) | | (4.5027) | |
| Postal voting | −0.6518 | −0.5320 | 0.4119 | 0.2735 |
| | (0.8102) | (0.7880) | (0.4760) | (0.5072) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.099 | 0.172 | 0.451 | 0.847 |
| Observations | 158,872 | 158,872 | 7,080 | 7,080 |

*Note:* Ordinary least squares estimations. Average ratio of yes votes amounts to 47.29 in the individual data set and 48.10 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.10: Number of propositions and support of right-wing party recommendations**

Dependent variable: Percentage of votes that followed recommendations of Swiss People's Party [0/100] / [0-100]

Sample: Participants / full voting population, aggregated on cantonal level

| | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
| | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 6.4824 | | 5.6550 | |
| | (5.6581) | | (3.6859) | |
| 3 | 6.8138* | | 3.8684 | |
| | (3.6724) | | (2.8297) | |
| 4 or more | 7.6463** | | 6.1440** | |
| | (3.2162) | | (2.8606) | |
| Number of cantonal propositions | | | | |
| 1 | −2.2833** | 0.3507 | −0.5092 | 0.4041 |
| | (1.0490) | (0.5824) | (0.4781) | (0.3264) |
| 2 | −0.2491 | 1.0472** | −0.2380 | 0.2434 |
| | (1.2246) | (0.5092) | (0.6038) | (0.3521) |
| 3 | −0.9809 | 0.7772 | −0.1335 | 0.5655 |
| | (1.0921) | (0.6620) | (0.6139) | (0.4686) |
| 4 | −0.7045 | 1.0953 | 0.0297 | 0.4238 |
| | (1.6165) | (0.9423) | (0.9909) | (0.6453) |
| 5 or more | −2.3631 | 1.3066 | −0.9070 | 0.2708 |
| | (1.5426) | (0.8791) | (0.7974) | (0.5440) |
| Low complexity | 11.6787*** | 11.1985*** | | |
| | (1.0817) | (1.2025) | | |
| High complexity | 6.5667*** | 7.0637*** | | |
| | (0.8308) | (0.9602) | | |
| High impact | −2.7829** | −1.9599* | | |
| | (1.3373) | (1.0153) | | |
| Referendum | −6.1428** | | −7.6596*** | |
| | (3.0905) | | (2.3970) | |
| Mandatory referendum | −1.8210 | | −2.7464 | |
| | (3.8213) | | (2.7789) | |
| Counterproposal | −13.0585** | | −11.9086*** | |
| | (6.0220) | | (4.0377) | |
| Postal voting | −0.4561 | −0.3136 | −0.3078 | −0.5014 |
| | (0.8629) | (0.8210) | (0.5508) | (0.5041) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.054 | 0.160 | 0.233 | 0.807 |
| Observations | 158,872 | 158,872 | 7,056 | 7,056 |

*Note:* Ordinary least squares estimations. Average ratio of votes according to recommendation of the Swiss People's Party amounts to 52.52 in the individual data set and 58.57 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.11: Number of propositions and support of left-wing party recommendations**

**Dependent variable: Percentage of votes that followed recommendations of Social Democratic Party of Switzerland [0/100] / [0-100]**

**Sample: Participants / full voting population, aggregated on cantonal level**

|  | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
|  | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 2.9002 |  | −1.0188 |  |
|  | (5.1032) |  | (4.5439) |  |
| 3 | −5.2591 |  | −2.8174 |  |
|  | (3.2163) |  | (2.6932) |  |
| 4 or more | −10.1095*** |  | −4.9894 |  |
|  | (3.7200) |  | (3.3214) |  |
| Number of cantonal propositions | | | | |
| 1 | −1.3879 | −0.5392 | −0.6142 | −0.4532* |
|  | (0.9238) | (0.5570) | (0.5301) | (0.2573) |
| 2 | 0.0152 | 0.1920 | −0.7669 | −0.4196 |
|  | (1.2063) | (0.5058) | (0.6733) | (0.3664) |
| 3 | −1.2331 | −0.6466 | −0.7349 | −0.8855** |
|  | (1.1779) | (0.6100) | (0.6325) | (0.3572) |
| 4 | 1.4637 | 0.5410 | −1.9859** | −0.3077 |
|  | (1.6431) | (0.8747) | (0.9170) | (0.5507) |
| 5 or more | 1.3206 | −0.0364 | −1.0674 | 0.0076 |
|  | (1.8974) | (0.9818) | (1.0414) | (0.4986) |
| Low complexity | 10.8328*** | 10.7167*** |  |  |
|  | (1.1850) | (0.9901) |  |  |
| High complexity | 5.4374*** | 6.1343*** |  |  |
|  | (0.9365) | (0.8911) |  |  |
| High impact | 7.4728*** | 6.9447*** |  |  |
|  | (1.3617) | (1.0949) |  |  |
| Referendum | 4.1177 |  | 7.7688*** |  |
|  | (3.0153) |  | (2.5432) |  |
| Mandatory referendum | 13.4217*** |  | 17.8619*** |  |
|  | (4.4751) |  | (2.7813) |  |
| Counterproposal | 16.5588*** |  | 19.7673*** |  |
|  | (4.5896) |  | (4.2033) |  |
| Postal voting | 0.9001 | 1.1763 | 0.7873 | 1.0024* |
|  | (1.0011) | (0.8908) | (0.6164) | (0.5656) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.064 | 0.208 | 0.290 | 0.868 |
| Observations | 158,872 | 158,872 | 6,648 | 6,648 |

*Note:* Ordinary least squares estimations. Average ratio of votes according to recommendation of the Social Democratic Party of Switzerland amounts to 50.87 in the individual data set and 50.80 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.12: Number of propositions and support of government recommendations**

**Dependent variable: Percentage of votes that followed government recommendations [0/100] / [0-100]**

**Sample: Participants / full voting population, aggregated on cantonal level**

|  | Postvote survey data | | Administrative data | |
|---|---|---|---|---|
|  | I | II | III | IV |
| Number of federal propositions | | | | |
| 1 | 2.4711 | | 1.1432 | |
|  | (4.6787) | | (3.8166) | |
| 3 | −2.4145 | | −1.7578 | |
|  | (3.1999) | | (2.4405) | |
| 4 or more | −2.5801 | | 2.9498 | |
|  | (3.3586) | | (2.5091) | |
| Number of cantonal propositions | | | | |
| 1 | −1.1811 | 1.1196** | −0.3860 | 0.2780 |
|  | (0.9336) | (0.5389) | (0.6098) | (0.3560) |
| 2 | −0.2425 | 0.8203 | −1.0183* | −0.3624 |
|  | (1.0252) | (0.5234) | (0.5870) | (0.4227) |
| 3 | −2.2125* | 0.0602 | −1.0563 | −0.5107 |
|  | (1.1780) | (0.6794) | (0.6493) | (0.4785) |
| 4 | −2.5401* | 0.6624 | −1.2601 | 0.2362 |
|  | (1.5202) | (0.8751) | (1.0966) | (0.7115) |
| 5 or more | −2.5883* | 0.8331 | −1.5508 | 0.1673 |
|  | (1.5463) | (0.9528) | (0.9924) | (0.7987) |
| Low complexity | 14.0840*** | 14.0059*** | | |
|  | (1.1097) | (1.0226) | | |
| High complexity | 5.6864*** | 7.1304*** | | |
|  | (0.9947) | (0.9097) | | |
| High impact | 0.5544 | 1.4394 | | |
|  | (1.2098) | (1.1189) | | |
| Referendum | −6.4586** | | −10.3418*** | |
|  | (2.6752) | | (2.0184) | |
| Mandatory referendum | 6.4052*** | | −1.7323 | |
|  | (2.3079) | | (2.3343) | |
| Counterproposal | 2.9510 | | −4.3696 | |
|  | (5.1238) | | (4.2544) | |
| Postal voting | −0.0814 | −0.3739 | 0.5871 | 0.3017 |
|  | (0.8335) | (0.7782) | (0.5286) | (0.5216) |
| Socioeconomic variables | yes | yes | no | no |
| Canton-specific effects | yes | yes | yes | yes |
| Year-specific effects | yes | no | yes | no |
| Proposition-specific effects | no | yes | no | yes |
| $R^2$ | 0.041 | 0.112 | 0.243 | 0.754 |
| Observations | 158,872 | 158,872 | 7,008 | 7,008 |

*Note:* Ordinary least squares estimations. Average ratio of votes according to government recommendation amounts to 59.77 in the individual data set and 60.96 in the aggregated data set. Reference category for number of federal propositions is 2. Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *$.05 < p < .1$, **$.01 < p < .05$, ***$p < .01$.

**Table A.13: Number of propositions and habit formation**
**Dependent variables: Knowledge of proposition content, blank voting, and yes voting [0/100]**
**Sample: Participants. Individual postvote survey data**

| | Knowledge | Blank | Yes |
|---|---|---|---|
| **Number of federal propositions** | | | |
| 1 | 5.2300** | −2.6437*** | 2.0439 |
| | (2.1922) | (0.6073) | (5.0791) |
| 3 | −0.2519 | 0.1999 | −4.4508* |
| | (1.5110) | (0.3679) | (2.4209) |
| 4 or more | −1.5301 | 1.9058*** | 5.8761** |
| | (1.2605) | (0.4502) | (2.9467) |
| **Number of cantonal propositions** | | | |
| 1 | 0.1167 | 0.0507 | 1.5160 |
| | (0.4058) | (0.2161) | (0.9313) |
| 2 | −1.3748** | −0.1914 | 2.1645*** |
| | (0.5625) | (0.2999) | (0.8198) |
| 3 | −0.5862 | 0.2233 | −0.0169 |
| | (0.6338) | (0.3609) | (1.1166) |
| 4 | −2.1108*** | −0.0292 | −1.8872 |
| | (0.6611) | (0.3755) | (1.3995) |
| 5 or more | −2.7758*** | 0.1419 | 0.8089 |
| | (0.8605) | (0.3844) | (1.3316) |
| **Number of federal propositions within last 12 months** | | | |
| 2–4 | −2.9612* | 0.7998 | −3.2022 |
| | (1.6388) | (0.9941) | (5.4272) |
| 5–7 | −1.5968 | 0.4729 | −0.6591 |
| | (1.8924) | (0.9468) | (5.3538) |
| 9–11 | −1.1493 | 1.2211 | 3.8227 |
| | (2.1791) | (1.1021) | (5.0040) |
| 12 or more | 1.3194 | 1.1507 | 4.4287 |
| | (2.5220) | (1.1025) | (6.4031) |
| **Number of cantonal propositions within last 12 months** | | | |
| 0 | −0.4448 | 0.7353** | 0.2580 |
| | (0.8181) | (0.3503) | (1.3223) |
| 1 | −0.3302 | 0.2350 | 1.3261 |
| | (0.7747) | (0.3717) | (1.2336) |
| 2 | 0.0690 | 0.5139* | −1.6096 |
| | (0.7937) | (0.3022) | (1.1685) |
| 3 | −0.2247 | 0.9632 | 0.0379 |
| | (0.6831) | (0.6058) | (1.2184) |
| 5–7 | −1.5762** | 0.8455*** | 0.0904 |
| | (0.7707) | (0.3207) | (1.1939) |
| 8–11 | −0.9028 | 0.6746** | −0.0807 |
| | (0.7179) | (0.2945) | (1.2136) |
| 12 or more | −0.1963 | 0.7946* | 1.8516 |
| | (0.8541) | (0.4081) | (1.5396) |
| Low complexity | 22.2177*** | −17.5160*** | 9.0260*** |
| | (1.1797) | (1.1140) | (1.1761) |
| High complexity | 12.9165*** | −12.5147*** | 2.6071** |
| | (0.8895) | (0.9905) | (1.0221) |
| High impact | 5.0407*** | −4.9902*** | 11.0355*** |
| | (0.4683) | (0.4246) | (1.0795) |
| Referendum | −2.1409** | 1.4145*** | 15.8364*** |
| | (0.8410) | (0.4343) | (2.6735) |
| Mandatory referendum | −8.3735*** | 1.7326*** | 30.1502*** |
| | (1.7823) | (0.5219) | (3.1130) |
| Counterproposal | −8.6211*** | 1.2438 | 24.6456*** |
| | (2.3862) | (0.7565) | (5.0632) |
| Postal voting | −2.6957*** | −0.1681 | −0.7730 |
| | (0.6309) | (0.3458) | (0.8142) |
| Socioeconomic variables | yes | yes | yes |
| Canton-specific effects | yes | yes | yes |
| Year-specific effects | yes | yes | yes |
| $R^2$ | 0.093 | 0.074 | 0.100 |
| Observations | 163,012 | 158,872 | 158,872 |

*Note:* Ordinary least squares estimations. Average knowledge of proposition content by participants amounts to 86.92, average ratio of blank votes amounts to 4.20, and average ratio of yes votes amounts to 47.29. Reference category for number of federal propositions is 2. Reference category for number of federal propositions within last 12 months is 8 (median of distribution). Standard errors in parentheses are adjusted for clustering at the level of polling days. Significance levels: *.05 < $p$ < .1, **.01 < $p$ < .05, ***$p$ < .01.