

Stadelmann, David; Portmann, Marco; Eichenberger, Reiner

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The Influence of Party Affiliations on Representation of Voter Preferences in Majoritarian vs. Proportional Systems

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The Influence of Party Affiliations on Representation of Voter Preferences in Majoritarian vs. Proportional Systems

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Abstract

Electoral systems determine the role party affiliations play in political representation. According to conventional expectations, politicians' party affiliations should influence political representation when they are elected under a proportional system. In contrast, majoritarian systems force politicians to converge to the median position of their constituency, thus, muting the role of party affiliations to some extent. Using unique data, we test these predictions within a common party system by matching referenda decisions of constituents with voting behavior of their representatives, who are elected either by a majoritarian or proportional system.

Key words: Constituents' Preferences, Party Influence, Electoral Systems, Political Economy.

Political Science Classification: Representation, Electoral Systems, Party Influence, Political Behavior, Comparative Politics

JEL Classification: D7, H7.

1 Introduction

The electoral system determines the way individual politicians represent constituent preferences and who gets political credit for success or is blamed for failures (see Lijphart 1994, Cox 2000, Persson and Tabellini 2000, Mueller 2003). Inherent differences between majoritarian and proportional systems have received much attention in the literature. Political science theory suggests that centripetal forces toward the median voter preferences tend to dominate under majoritarian systems while centrifugal forces are more relevant under proportional systems (see, the seminal works by Duverger 1954, Downs 1957 and the broader discussions in Cox 1990 or Grofman 2004, among others). The strength of centrifugal vs. centripetal forces affects the level of congruence between the median voter and politicians and the role that party affiliations play in the respective electoral system.

In this paper, we empirically identify differential effects of a politician's individual party affiliation under the two electoral systems with a direct measure congruence. Centrifugal forces, which include how voters select politicians, party loyalty or personal ideology of politicians are expected to play a larger role under proportional representation (see also the recent exchange between Dow 2011 and Ezrow 2011). Politicians elected under a proportional system may also be more dependent on their party. Party affiliations tend to go together with different positions relative to the median voter and congruence between politicians and the majority of their constituency should be strongly influenced by individual party affiliation under a proportional system, i.e. they take positions variance with the center of the distribution of their geographic constituency. In contrast, under a majoritarian system centripetal forces are expected to dominate more strongly. At the same time, majority-elected politicians may also be more autonomous from their party. Congruence of individual politicians with the median voter should depend to a lower degree on party affiliation.¹ Thus, the different electoral systems induce *differential* effects of personal party affiliation on congruence between voters and politicians (for detailed theoretical arguments and discussions see, among others, Duverger 1954; Downs 1957; Cox 1990, 1997; Myerson 1999; Lizzeri and Persico 2001; Golder and Stramski 2010, Budge et al. 2012).

¹ In fact, according to pure spatial models, congruence with the geographic constituent majority (the median voter) should not depend at all on party affiliations of politicians when they are elected under a majoritarian system (Downsian convergence), i.e. if politicians are located at the median voter, they have no unilateral incentive to move away this equilibrium.

Identifying effects of individual party affiliations under different electoral system on congruence is relevant for political science and public policy: Political Representatives tend to diverge from the preferences of their geographical constituency in proportional and even in majoritarian systems (see, e.g., Gerber and Lewis 2004 or Stadelmann et al. 2012).² Divergence from their constituency also raises the question to what extent politicians from identical parties but elected under different electoral systems have similar levels of congruence and if party affiliations differentially affect congruence in majoritarian vs. proportional systems at all.

Rigorous empirical evidence is for the above effects on differential party effects in majoritarian versus proportional systems is scarce.³ Our contribution provides a stringent empirical test to identify the influence of party affiliations on preference representation in majoritarian vs. proportional systems. Such an empirical test has to fulfill at least four requirements: (1) It must rely on a direct measure for congruence between the voting behavior of politicians in parliament and the revealed preferences of their constituent majority in their electoral constituencies. (2) It needs to include politicians elected under a proportional system and politicians elected under a majoritarian system but both should be elected in the identical districts such that district preferences and prerogatives to be elected are equal. (3) Both groups of politicians must decide on identical political issues which should entail real policy consequences for their constituencies. (4) As parties may mediate the positions of their politicians in majoritarian as well as proportional systems relative to the median voter⁴, the two groups of politicians have to affiliate with the identical political parties *despite* being elected under different electoral rules. Obviously, these requirements are almost impossible to fulfill, and we do not know of any empirical study that does so (see Dow 2001 and Grofman 2004 for excellent reviews of the literature on party competition). In Switzerland, though the constitutional setting has basically been modeled according to the United States, these requirements are largely met within a single country and a common party system.

² Reasons for failing congruence include, among others, multidimensionality of the policy space, strategic behavior of parties, interest groups, multiple parties, competition for more than one seat, lack of electoral competition, etc. (see, e.g., Denzau and Munger 1986, Stratzmann 1992, Cox 1997, Powell and Vanberg 2000, Ansolabehere et al. 2001, Lee et al. 2004, Carey 2007, Carey and Hix 2011).

³ Recent empirical results (see Blais and Bodet 2006, Golder and Stramski 2010) report only small differences in the *level* of congruence between a proportional and majoritarian, which contrasts with other literature (see, for example, Lijphart 1994 or Powell 2009). In any case, individual party affiliations are supposed to exert a *differential* impact on congruence under the two electoral systems.

⁴ Several contributions for the United States, for example, show that majority-elected members of both parties may take positions different to their district median (see, among others, Ansolabehere et al. 2001 or Bafumi and Herron 2010).

Swiss parliamentarians vote on laws, changes to laws, and constitutional amendments as all parliamentarians around the world. The virtues of the Swiss institution of direct democracy allow us to *directly measure congruence* with between politicians and voters as proposals accepted by the parliament do not turn directly into law. Voters may challenge parliamentary decisions by a referendum, constitutional changes are mandatorily subject to a referendum, and voters can even demand constitutional amendments by an initiative. Referenda permit voters in electoral districts to judge different policies with real-life consequences and rank them against the status quo (e.g. Schneider et al. 1981, Bohnet and Frey 1994, Frey 1994). Congruence between parliamentarians and the majority of their constituents⁵ naturally occurs in our setting if the former decided in parliament as the latter did in the corresponding referendum. As voters and politicians are compared on the identical legislative questions, we avoid difficulties which arise when the two are measured on different scales, when voter preferences are approximated (see Achen 1977, Matsusaka 2001, Powell 2009). While the members of the lower house are elected under a proportional system, the members of the upper house are elected under a two round majority-plurality rule. Parliamentarians from the *identical parties* are present in *both houses*. The electoral districts for both chambers coincide such that politicians in both houses represent *identical geographical constituencies*. All these conditions allow for a quasi-experimental test of the influence of party affiliations on congruence under different electoral systems. As our research focuses on differences within a single country, we also avoid problems common to cross-country research. Our results are politically relevant as different electoral systems coexist in numerous countries (e.g. Sieberer 2010; Batto 2012; Bernauer and Munzert 2014) and because reforms of electoral system are frequently discussed.

Empirical results for all referenda from 2008 to 2013 confirm the literature's theoretical arguments and allow additional insight into actual representation of constituents' preferences: (1) Under a proportional system, parliamentarians of left and right parties deviate significantly more from the preferences of majority of constituents than parliamentarians from the center. (2) Under a majoritarian system, congruence levels are influenced to a significantly lower degree by individual party affiliations. Finally, (3) within all parties politicians elected under the majoritarian system are more closely aligned to the preferences the majority of their constituents than their counterparts from precisely the same parties in the proportionally elected lower house. Thus, majority elected politicians left (center, right) politicians have higher constituency congruence levels than politicians from left (center, right) parties elected under a

⁵ The majority of constituents includes the district median by construction.

proportional system. This is true even when analyzing congruence with national preferences, and, importantly, it is independent of the fact that more center party politicians are elected under a majoritarian system. Our results are also consistent with the view that proportional system induce legislators to adopt positions at variance with the center of the distribution of their geographic constituency and potentially more in line with their partisans supporters, while in majoritarian systems the effects are the opposite. Numerous robustness tests and refinements confirm the findings. Our evidence directly contributes to the literature's discussion on the representation of the majority in the respective electoral systems and allows potential insights regarding the achieved aims of proportional versus majoritarian systems (see Grofman 2004, Powell 2000, 2009 or Golder and Stramski 2010, Dow 2011, Ezrow 2011).

The remainder of this paper is structured as follows: Section 2 presents the data, explains the measure of congruence between legislators' behavior in parliament and constituents' preferences in referenda, and details the identification strategy. Empirical results for the influence of party affiliations for all members of parliament from both chambers are presented in Section 3. Section 4 provides concluding remarks.

2 Measuring constituents' preferences and identification

2.1 Matching decisions of representatives with constituent preferences

Two electoral systems but the same parties, constituencies and political decisions

Switzerland's federal constitution from 1848 established a bicameral parliament. The Swiss cantons (sub-national jurisdictions) form the national parliament's electoral districts. The parliament is made up of two houses, the National Council ("Nationalrat") and the Council of States ("Ständerat"). The National Council has 200 members who are elected under a proportional system in districts from one to of up to 34 seats depending on population size. The Council of States has 46 senators elected in a two round majority-plurality system in the same districts as the National Council.⁶

For historical reasons, there are 20 full cantons and six half cantons, making a total of 23 so-called "Stände". The full cantons delegate two representatives to the Council of States while each of the six half cantons is represented by one member. In two member-districts, voters can cast two votes which cannot be cumulated. In the first round, successful election requires an

⁶ Exceptions are the Canton of Jura and since the end of 2011 the Canton of Neuchâtel that apply a proportional system for their two members. Omitting them does not change the results.

absolute majority (for both candidates in two member-districts) whereas a relative majority is sufficient in the second round (see also Dardanelli 2005).⁷ The system is thereby broadly comparable to the United State Senate elections. Swiss party structures and decisions are also decentralized. Party sections at the district level traditionally select candidates largely independently from the national party (see Hertig 1978).

Members of the upper and the lower house serve four-year terms and are simultaneously elected. The formal requirements and prerogatives to be elected in the two houses are identical, apart from the electoral system. As in other countries, mixed systems have the potential that voters split their votes (see e.g., Bawn 1999, Burden and Helmke 2009). Theoretically, voters may split their ticket and vote for parties in order to pull the overall policy outcome in their desired direction (see Kedar 2005). On the other side, vote splitting may also strengthen centripetal forces in the Swiss Council of States and centrifugal ones in the National Council as voters may elect a more ideologically minded candidates from the party list. Thus, a multitude of other vote-splitting strategies of voters and parties is conceivable. Lachat (2005) analyzes split-ticket voting in Switzerland and finds inconclusive evidence in support of different theories when comparing votes for the two houses, apart from the result that voters tend to defect from their preferred party if it is unlikely to win a seat.

Altogether, we expect the relevant centripetal of a majoritarian system and centrifugal forces of a proportional system to hold in Switzerland: The Council of States is reasonably close the particular set of assumptions required such that theoretically centripetal forces can come into play. Members of the Council of States have an incentive to move to the electoral center, voters have an incentive to select candidates who represent the center and parties may levy less power on candidates or promote candidates who appeal to the district median voter. The proportional system in the National Council tends to induce representatives to adopt positions at variance with the center of the distribution of their geographic constituency such that party affiliations can affect congruence levels to a larger extent.

Both the National Council and the Council of States decide on the identical laws and constitutional amendments. The major parties are the Social Democrats SP (left), Christian Democrats CVP (center)⁸, Liberals FDP (center), Swiss Peoples Party SVP (right) as well as smaller parties such as the Greens (left), Green Liberals (center), Conservative Democratic

⁷ Runoff elections may moderate political extremism and lead to elected politicians closer to the median voter (see Bordignon and Tabellini 2010)

⁸ While Christian democratic parties are sometimes classified as right-wing parties, the Swiss Christian Democrats are classified as a center party (even left of the Liberals; see Hug and Schulz 2007).

Party (center-right). Importantly, all of these major parties are present and in both houses and can be grouped into common left, center and right party categories. We follow the classification into left, center and right parties that is usually performed in the Swiss context but also assess the robustness of this classification (see also Online Appendix A1 to this paper).

The two houses have equal rights and the same weight and power within the legislative process. Each parliamentary proposal has to be approved by majorities of members in both houses in order to be adopted as a new law or as a constitutional amendment. Parliament holds four sessions a year. There is a constant exchange of opinions between individual members of both houses, over different parties and more commonly within the same parties from both houses. Similar to other countries, if the two houses do not agree on a proposal, it passes between them for up to three times with modifications until a joint consensus conference (“Einigungskonferenz”) with delegates from both houses is organized to work out a compromise. If this compromise is not accepted in both of the two houses, the proposal is not adopted. Parliamentarians of the same party groups regularly hold meetings and gatherings together with their party members who are active in both houses and they constantly exchange information on their current affairs.

Final roll call votes take place at the end of a parliamentary session. The National Council and the Council of States then decide on the same laws and constitutional amendments usually also on the same day which lends analytical leverage to our setting. There is no systematic order in the sequence of final roll calls of the two houses, i.e. the National Council does not systematically vote before the Council of States and vice versa. Whether the final debate and the final roll call in one house precede the final debate and final roll call in the other house depends on the additional workload of each council. Final roll call votes are held in the same rooms as all other discussions and other votes.⁹

Final roll calls are most proximate to the adoption of governmental policies (see Krehbiel 1993). While votes of the members of the National Council are recorded by an electronic voting system there is no electronic voting system in the Council of States. Since winter 2006, however, a camera records the Council’s sessions such that voting behavior is observable. We have collected and analyzed the video streams and identified the individual voting behavior of members of the Council of States. In a small number of cases, the video stream’s quality does

⁹ We acknowledge that physical factors (rooms, council size) might affect the *level* of congruence. For our identification strategy to be valid, other factors may influence the level of congruence as long as they do not induce a *differential* influence of personal party affiliations of politicians on congruence for the two houses.

not allow identification of all individual votes. We scrutinize these cases in robustness analyses (see also the Online Appendix A2 to this paper).¹⁰ Our collected data based on video streams yield aggregate voting results, which are consistent with the officially published aggregate results of the Council of States.

Members of both chambers of parliament may be absent or abstain from voting due to sickness, voyage, political duties, professional bias, or other responsibilities, and early resignation or death, which reduces the number of observation from theoretically 11808 by approximately 11.4 percent to 10460. The president of the Upper House does usually not cast a vote and the scrutineers can usually not be seen on the video footage but in some cases their decisions can be derived from the aggregate result. Other than that, we could not find any specific patterns of absenteeism in data regarding personal characteristics and/or party affiliations with respect to congruence levels. Nevertheless, we control for abstentions and politicians whose voting behavior is not always discernable from the video streams.

To summarize, our setting allows us to hold party affiliation as well as constituency preferences constant across two different electoral systems. Thereby, we identify differential effects of individual party affiliation under a proportional and majoritarian system for politicians of identical parties with respect to congruence.

Measure of congruence between representatives and the majority of their constituents

Switzerland features a system of direct democracy involving referenda through which citizens may challenge parliamentary decisions. Proposals adopted by parliament do not directly turn into law. After parliament's adoption of a new law, citizens are granted the right to collect at least 50,000 signatures out of approximately 4.9 million registered voters within 100 days to demand for a *facultative referendum*. Thereby, facultative referenda are a steady threat for legislators, which assures that a potential selection bias of issues can be expected to be low. Any new law or law change proposed by parliament is rejected if 50% of the voters decide against it. Any constitutional amendment by parliament is always subject to a *mandatory referendum*, which permits us to avoid any potential selection problems for a full category of high-profile legislative issues. Acceptance requires a majority of all voters nationwide as well as the majority of voters in eleven and a half cantons. Finally, by collecting

¹⁰ Our analysis includes all roll call votes on final votes since footage from the cameras in the meeting room is available. This way of identifying formerly uncertain voting behavior of individual members of the Council of States has aroused attention in the Swiss media before the last elections (e.g. "NZZ am Sonntag, No. 35, 28.08.2011, p.15" or "Die Weltwoche, No. 42.11, 2011, p. 44").

100,000 signatures citizen action groups may initiate a referendum on a constitutional amendment drafted by themselves. Although members of parliament cannot change the wording of an initiative, they are required to vote on the proposal once the necessary signatures are collected and before the voters hold the referendum. Their vote serves as a parliamentary recommendation to voters (see Portmann 2014). Parliament can formulate additional legislation and put it as a “counter-proposal” to a referendum at the same time as an initiative. This institutional setting assures that none of the referenda being voted upon depends on differences in the bicameral structure or the electoral system.

We analyze the full available sample of 48 referenda from 2008 to 2013 covering social, economic, demographic, regional and defense issues among others. Referendum results determine policy outcomes and are at the same time revealed preferences of citizens for these outcomes. More precisely, referenda permit the majority of constituents to rank policy outcomes induced by the proposed laws against the status quo, as argued by Schneider et al. (1981) and Matsusaka (2010).

The law or constitutional texts presented to the voters in the referendum are word-for-word identical to the proposals on which members of parliament decided in their roll call votes. Thus, we obtain a natural measure of representation of a constituency’s preferences by matching members of parliament’s roll call votes with referendum results from their electoral districts; either a member of parliament matches the majority decision of her constituents or she does not (see Portmann et al. 2012; Stadelmann et al. 2013; Carey and Hix 2013). The use of a direct measure of congruence relying on referenda and roll call votes has been advocated by Hermann and Leuthold (2007) for Switzerland and suggested by Matsusaka (2010) for the United States.¹¹ Potrafke (2013) contrast referendum results with voting behavior of city councils in Germany. In thematically different contributions and without focusing on parties Stadelmann et al. (2012, 2013), and Portmann et al. (2012) discuss how this congruence measure generalizes as well as potential selection effects.¹² Giger and Klüver (2015) use our measure

¹¹ Measures of policy responsiveness have been criticized by Matsusaka (2010) which is why we focus on congruence. Since we measure preferences and roll call votes are on the same scale (with even the identical wording), we might also analyze policy responsiveness (see Lax and Phillips 2009) which would, however, change the focus of the analysis.

¹² Stadelmann et al. (2012) focus on divergence within in the Council of States without analyzing the influence of political parties. For the National Council only, Portmann et al. (2012) focus on the effect of district magnitude and Stadelmann et al. (2013) analyze the quality of representation and without analyzing differential influences of political parties. Thus, none of these contributions uses the full dataset with two chambers and compares the influence of parties on representation between different electoral systems as performed here.

and data to analyze congruence and interest group influence for politicians elected under a proportional system. Brunner et al. (2013) apply the same concept of a congruence measure to Californian data and advocate that results generalize to other states.

A controversy surrounding electoral systems and voter congruence has attracted much attention over the last few years (see, e.g., Golder and Lloyd 2014). The debate focusses on potential merits of each system regarding ideological congruence (see, among others, Lijphart 1999, Blais and Bodet 2006; Powell 2000, 2009, Powell and Vanberg 2000). There is generally a consensus of stronger dispersion of parties across the electoral space under proportional representation compared to majoritarian systems. However, the debate focuses less on the effects of party affiliation but on overall legislative or government congruence. Our measure of congruence corresponds to a many-to-one relationship (see Golder and Stramski 2010) as each individual legislator from both houses is compared with her/his geographical constituency. With this measure we empirically contribute two additional aspects to the ideological congruence controversy: First, we can analyze the congruence for the individual politicians of left, center and right parties under a majoritarian and a proportional system. Moreover, we analyze how individual party affiliations differently affect congruence under the two electoral systems.¹³ This also allows us to analyze

Our measure of congruence obtains external validity as representatives do not know in advance what their constituency wants but they have to revert to standard means to predict constituents' preferences when voting in parliament (see Garrett 1999; Brunner et al. 2013). This makes the setting comparable to the situation in representative democracy. However, we recognize that direct evidence on the generalizability of results with this congruence measure for other countries or issues that are not subject to a referendum cannot be provided. Nevertheless, similar to the above literature, we expect inferences based on this measure to be reliable and to provide further insights into the workings of democracies and the factors influencing the political representation within a quasi-experimental setting.

2.2 Identification strategy

We test for differential effects of personal party affiliations on congruence under a proportional and a majoritarian system. The empirical identification strategy naturally follows

¹³ With our measure we focus on individual congruence levels of legislators instead of congruence for government as a whole or at the parliament level (see also Golder and Lloyd 2014 and Stadelmann et al. 2014).

from the institutional setting. Our observed congruence measure directly identifies whether members of parliament from both chambers match the preferences of their geographical constituency. Thus, as a dependent variable we employ an indicator variable, $MP=Constituents$. The indicator takes the value of one if a member of parliament votes in line with the majority of her/his constituency in the respective referendum, and zero otherwise. The electoral system itself is exogenous to congruence levels of individual politicians and their personal party affiliations.

The fact that the identical parties are present in the National Council and in the Council of States allows us to identify the *differential* effects of personal party affiliations. Left, center and right party affiliations make up respectively 30.3%, 42.2% and 27.6% of the total number of observations (see Online Appendix A3 to this paper). immediate consequence of the electoral systems is, that center party affiliation is on average 1.524 times more common in the Council of States than in the National Council while left and right party affiliation is more prevalent in the proportionally elected National Council. Such an observation tend to be in line with classical theory (see Duverger 1954) even though we do not only observe two parties competition in the upper house. It is, however, of no consequence for our empirical identification strategy as we observe individual politicians from left, center and right parties in *both* chambers. Therefore, our setting does not only allow us to compare the overall extent of centripetal, respectively, centrifugal forces in proportional versus majoritarian systems. We can empirically investigate whether individual members of parliament from the *identical parties* represent their geographical constituency differently when elected under different electoral systems and whether proportionally elected politicians are more at variance with the median voter. To put it simply: We can discern differential effects of party affiliation under different electoral systems for politicians of identical parties. Additionally our setting allows us to distinguish whether different congruence with the majority of constituents emerges because more politicians from center parties are present in the majoritarian chamber or because majority-elected politicians *in general*, independently of their party affiliation are stronger oriented toward the median voter than politicians from left, center and right parties elected under a proportional system.

We use the following logistic specification to estimate the above-discussed effects of party affiliation on representation under the two electoral systems within a single framework:

$$\begin{aligned}
P(MP = \text{Constituents}) = & \Lambda(\alpha(\text{Member Council of States}) \\
& + \beta_1(\text{Left Party}) + \beta_2(\text{Right Party}) \\
& + \gamma_1(\text{Member Council of States} \cdot \text{Left Party}) \\
& + \gamma_2(\text{Member Council of States} \cdot \text{Right Party}) \\
& + \sum_j \delta_j x_j)
\end{aligned}$$

Λ denotes the logistic function $\Lambda(X) = e^X / (1 + e^X)$ (with X a design matrix).

α captures the difference in congruence for members (from center parties) of the National Council and the Council of States, i.e. *Member Council of States* is a binary variable indicating whether a representative belongs to the Council of States instead of the National Council. We expect $\alpha > 0$ if members of parliament (from center parties) elected under a majoritarian system are more congruent with their constituents' preferences than when elected under a proportional system. β_1 and β_2 give the influence of left and right party affiliation within the proportionally elected National Council, i.e. when the variable *Member Council of States* is zero. Center party affiliation forms the omitted category. We expect $\beta_1, \beta_2 \neq 0$, more specifically, $\beta_1 < 0, \beta_2 < 0$, if party affiliation matters for congruence under a proportional electoral system and if left or right party affiliations induce lower congruence levels, i.e. if proportionality induces politicians to take positions at variance with the median. The coefficients for the bare interaction terms γ_1 and γ_2 measure the *differential* effect of left and right party affiliations under a proportional compared to a majoritarian system, i.e. when *Member Council of States* is set equal to one. Party affiliations are expected to play a lower role for politicians elected under a majoritarian system compared to a proportional system. Thus, we expect $\gamma_1 > 0, \gamma_2 > 0$, i.e. they have the opposite sign than β_1, β_2 . The total effects of party affiliation under a majoritarian system are given by $\beta_1 + \gamma_1$ for left party affiliation and $\beta_2 + \gamma_2$ for right party affiliation with respect to center party affiliation. If $\beta_1 < 0, \beta_2 < 0$ and $\gamma_1 > 0, \gamma_2 > 0$ then the total effects of party affiliations are lower under a majoritarian than a proportional system. If parties play no role under a majoritarian system we would have that $\beta_1 + \gamma_1 = 0$ and $\beta_2 + \gamma_2 = 0$ which would indicate that majority elected politicians from left or right parties do not represent the majority of constituents differently than politicians from center parties, i.e. an indication of Downsian convergence with respect to positions. In reality, there may still be some influence of party affiliations under a majoritarian system as the politicians have some leeway and may not need to converge fully to the median of their district. We expect that party affiliations will at least matter to a lower extent under a

majoritarian system. Indeed, we will show that all theoretical predictions hold true such that individual party affiliations strongly matter under a proportional system ($\beta_1, \beta_2 \neq 0$) but to a lower extent under a majoritarian system ($\gamma_1 > 0, \gamma_2 > 0$) and majority elected politicians more closely represent their constituents' preferences ($\alpha > 0$). Thus, party affiliations will still exert some, though a diminished effect, for politicians elected under a majoritarian system and majority elected politicians are more congruent with their geographical constituency.

The x_j stand for control variables and fixed effects. While we do not expect that other factors influence congruence through individual party affiliations, we introduce characteristics of politicians, referenda and districts as further controls in robustness tests. Table A3 in the online appendix offers descriptive statistics on all variables.

3 Empirical analysis

3.1 Baseline results

Table 1 groups individual members of parliament according to their party affiliation from left to right for the National Council (proportional system), the Council of States (majoritarian system), and shows average congruence levels for the respective electoral systems. It provides the central motivation and main results of our paper in a descriptive way.

< Table 1 here >

We make three observations that are all consistent with the literature and the above stated theoretical considerations. (1) Congruence levels for the proportionally elected National Councilors from left (59.0%) and right (57.0%) parties are significantly lower than congruence levels for proportionally elected politicians from center parties (69.3%). Politicians from the left and right deviate by 10.3%-points and 12.2%-points, respectively, significantly more from their constituency's preferences than politicians from the center.¹⁴ (2) For the majority elected Council of States we also observe differences in congruence between members of different parties (67.2%, 72.5% and 66.1% for left, center and right parties respectively). The differences from left to center and right to center are, however, only 5.2%-points and 6.4%-points. More importantly, the differences-in-differences presented in the third row are statistically significant, i.e. the difference from left (right) to center in the upper house compared to the difference from left (right) to center in the lower house 5.0%-points (5.9%-points) is

¹⁴ There is no statistically significant difference in congruence between proportionally elected politicians from left and right parties.

statistically significant. The influence of party affiliations for majority elected politicians is approximately half as high as for proportionally elected politicians. Thus, party affiliations strongly matter for representation under a proportional system while they play a relatively lower role under a majoritarian system with respect to the representation of the geographical constituency's preferences. (3) Average individual congruence with the constituency's preferences is lower for all members of the National Council (62.3%) than for members of the Council of States (70.3%). On average, majority elected legislators match the preferences of the majority of their constituents more closely. Consistent with the literature on congruence (see, e.g., Gerber and Lewis 2004, Stadelmann et al. 2012 or Potrafke and Kauder 2016) legislators diverge from constituents' preferences and full convergence not observed. However, the level of congruence is relatively higher for politicians elected under a majoritarian than politicians elected under a proportional system independent of their party affiliation. Thus, it is not only due to a higher number of center party politicians in the upper house that we observe higher congruence. Representatives of left, center and right parties in the proportionally elected chamber have lower congruence levels than their respective counterparts from the identical parties from the majoritarian chamber.

< **Table 2 here** >

< **Figure 1 here** >

In Table 2 addresses the differential influence of individual party affiliations under different electoral systems on representation of the majority's preferences econometrically. First, we estimate the influence of party affiliation in separate samples for the National Council and the Council of States in specifications (1) and (2). We then estimate the interaction model outlined above in specification (3) which also allows to evaluate whether majority or proportionally elected representatives from the same parties have higher congruence levels. Our specifications always include fixed effects for referendum types and an intercept.¹⁵ Specifications (4) presents a linear probability model to present the size of the quantitative effects in an accessible way, and to show that our logit regressions do not suffer from the incidental parameter problem. Figure 1 represents quantitative effects as discrete changes in probabilities for the logit coefficients of specification (3).

Specification (1) focuses on members of the National Council only. National Councilors from left and right parties represent their constituents' preferences significantly differently than

¹⁵ We report robust clustered standard errors at the individual level in recognition of the likelihood that observations from the same politicians are not independent.

members from center parties. Party affiliation plays a significant role in explaining whether the decisions of individual representatives match with the majority of their constituents under a proportional system. Members from left and right parties deviate more from the preferences of the majority of their constituents than members from center parties. There is no significant difference between left and right party affiliation on congruence. Under a majoritarian system, on the other hand, party affiliations tend to exert a lower effect on representation of the majority's preferences. This is confirmed in specification (2). Members of the Council of States with left or right party affiliations still deviate more from constituents than majority elected politicians with center party affiliations. However, the coefficients are smaller in comparison to specification (1) and we will next test, if the coefficients are statistically significantly smaller too.

Specification (3) reports the results of an interaction model combining data from both houses. We introduce an identifier of whether a representative is a member of the Council of States. The majority elected members of the Council of States from center parties tend to correspond more to the majority's preferences than proportionally elected politicians, $\alpha > 0$. We interact party affiliation with the identifier for the *Member Council of States*.¹⁶ The non-interacted party affiliation variables β_1, β_2 reflect the base effect of different party affiliations for members of the National Council, i.e. for a proportional system. Corresponding to theoretical predictions, we observe that members of the National Council from left and right parties represent their geographical constituency differently than members from center parties as both coefficients are significantly different from zero, $\beta_1, \beta_2 \neq 0$ and $\beta_1 < 0, \beta_2 < 0$. Thus, under a proportional system, we observe a differential influence of party affiliations on representation by individual members of the National Council. Statistically significant and positive interaction terms $\gamma_1 > 0, \gamma_2 > 0$ indicate, that the influence of party affiliations is lower for majority elected politicians, i.e. party affiliations play a less important role under a majoritarian system than under a proportional one.

Figure 2 presents a summary of all discrete effects expressed as percentage point changes calculated from Table 2. Panel (a) depicts the influence of party affiliation on congruence under the two electoral systems. Panel (b) reports the effect on congruence of changing from a proportional system to a majoritarian system holding individual party affiliation constant, that is, comparing congruence levels between majority and proportionally elected representatives

¹⁶ Note that this interaction model is different from specifications (1) and (2) because *Member Council of States* is not interacted with all controls, but only with party affiliations.

from the same parties. All evidence is supportive of traditional theory: (1) Parties matter under proportional representation as changing from center to respectively left or right party affiliation has a negative and significant effect on congruence. Within the proportional chamber representatives with left party affiliation have 10.5%-points lower congruence levels than those from center parties, right politicians have 12.7%-points lower congruence levels than center politicians, and left and right politicians are not statistically different. (2) Party affiliation has systematically smaller effects under a majoritarian system. Changing from center to left decreases congruence only by 5.3%-points or roughly half the effect as for proportionally elected politicians. Similarly, changing from center to right party affiliation decreases congruence by 6.4%-points which is also roughly half the effect under proportional representation. (3) within party blocks, majority elected politicians have systematically higher levels of congruence than their counterparts elected under proportional electoral system as shown in Panel (b). Majority elected representatives from left parties have 8.4%-points higher congruence levels than proportionally elected representatives from right parties, majority elected representatives from center parties have 3.1%-points higher congruence levels than proportionally elected representatives from center parties, and majority elected representatives from right parties have 9.3%-point higher congruence levels than proportionally elected representatives from right parties. All these effects are statistically significant.¹⁷

Although we focus on congruence of individual politicians, our baseline results also contribute to the ideological congruence controversy. According to Powell (2000), the proportional vision of democracy is to represent many different groups while the majoritarian vision is that politicians respond to the majority of the voters. For our direct measure of congruence, we observe that the majority of constituents is more closely represented by individual politicians elected under a majoritarian system irrespective of their party affiliations. Party affiliations more strongly affect congruence for proportionally elected politicians. This is consistent with the view, that they represent different groups across the electoral spectrum including potentially their partisan voters.¹⁸

¹⁷ These results do not simply represent different compositions between the two chambers with respect to the number of party members. The share of politicians from center parties is higher in the Council of States than in the National Council but our estimation model includes identifier variables for houses (capturing the electoral system), personal party affiliations and the interaction between the two. Consequently, we control for potential differences in congruence between the houses due to party composition and isolate the differences in congruence between parties but within each electoral system.

¹⁸ Note that we only identify variance from the median voter. For a more thorough test of whether proportionally elected politicians truly represent different groups, we would need data on how partisans of different parties voted on the referenda. We would expect to find that congruence of proportionally

3.2 Robustness and refinements

Robustness: Politician, party, district and referendum characteristics

Table 3 reports a number of robustness tests. To directly and intuitively evaluate the quantitative effects in percentage points, the table presents discrete effects. Discrete effects for β_1 and β_2 indicate the effect of a change in party affiliation of individual National Councilors, from center to either left or right party affiliation, on the probability of matching the majority's preferences. The discrete effect for γ_1 and γ_2 represent the differential effect on the probability of congruence of a left and right party politician in the Council of States in comparison to a left party politician in the National Council. Finally, we also present the total effect of left and right party affiliation in a majoritarian system $\beta_1 + \gamma_1$ and $\beta_2 + \gamma_2$ at the bottom of the table. Discrete effects are calculated with the delta method and take account of robust clustered standard errors (see also Ai and Norton 2003).

< Table 3 here >

In specification (1) we include two control variables which account for the frequency of Council of States members' non observability due to the video streams as well as for the average frequency of abstention due to sickness or other reasons. The first variable is to insure that our results are not biased due to the small number of politicians that are in some instances not observable on the video stream while the second variable takes account of potentially systematic abstentions. Our result remains robust: The probability that proportionally elected National Councilors from center parties correspond to the majority of their constituents' preferences is 10.6 and 12.9%-points higher than for members of left and right parties respectively. Left and right party affiliations play with 5.6%-points and 7.1%-points a significantly lower role for politicians elected under a majoritarian system compared to a proportional system. There is some remaining influence of party affiliations for a majoritarian system and left party politicians in the Council of States have a 5.6%-points lower probability to correspond to the preferences of the median of their district than center party politicians. Right party politicians in the Council of States have a 5.5%-points lower probability than center party politicians. Specification (2) excludes members of the Council of States that are not

elected politicians should be relatively higher with their respective partisans than with the majority of their constituents while the opposite should hold for majority elected politicians.

frequently observable which slightly reduces the size of the dataset but does not affect the results.

The above employed classification of parties into groups of left, center and right is in line with expert opinions as well as parties' self-declarations. However, for robustness checks we also present a reclassification of parties solely based on NOMINATE scores for the National Council which are produced by the Swiss "sotomo institute" and are published media-effectively on an annual base.¹⁹ Results in column (3) show that this reclassification does not change the qualitative effects nor the quantitative effects to a relevant degree. Specification (4) goes a step further and represents a subsample where we only include observations of politicians whose parties are in both houses. There is number of small parties that are only present the National Council. Excluding these politicians does not affect our results which remain entirely robust.

A growing literature shows the importance of politician's personality for political outcomes and behavior (see, e.g., Hayo and Neumeier 2012 or Ruske 2015). We control for a politician's gender, age, family situation, education, identification with constituency and the time in office in specification (5). These additional controls do not influence the existing and significant effect of party affiliation under a proportional system, $\beta_1 \neq 0$ and $\beta_2 \neq 0$. Similarly, we observe that party affiliations play a lower role in a majoritarian system as $\gamma_1 > 0, \gamma_2 > 0$. Majority elected politicians of all parties have higher congruence levels than their proportionally elected counterparts from the identical parties, $\alpha > 0$. Results are also robust with respect to the magnitudes of the discrete effects.

Specification (6) takes account of constituency fixed effects to capture social, cultural, economic and other potential differences between constituencies which might influence congruence either directly or indirectly through selection of politicians and support for parties. This test ensures that the identified differences between the electoral systems are not driven by districts which are ideologically skewed or have different numbers of competing candidates or districts with different magnitudes, etc. Again, all results remain robust for each electoral system, with respect to statistical significance and the magnitude of the effect. Thus, independent of differences between electoral districts and selection strategies by constituents,

¹⁹ The classification based on NOMINATE scores almost coincides with our main classification and differs from our classification only for two parties: While we classified the "Mouvement citoyens romands" as a right party, NOMINATE scores suggest a more centrist position. Moreover, we classified the "Christian Social Party" as a center party due to its close collaboration with its larger sister party "Christian Democrats" CVP. However, NOMINATE scores reveal a left-wing tendency.

party affiliations matter to a lower extent for congruence when politicians are elected under a majoritarian system compared to a proportional system. Moreover, majority elected politicians have higher congruence levels independent of their party affiliation.

Polarization, salience of legislative topics and popularity varies across Swiss referenda and they may be advanced by certain party groups. By employing referendum-specific fixed effects in specification (7), we ensure that the effects identified for differences in congruence are only due to differences in the electoral system. The central differential effects of individual party affiliation on congruence induced by the electoral systems remain entirely robust.

In the same vein, table A5 in the online appendix provides further robustness analyses for a relevant choice of different subsamples and when employing different weighting strategies to take account of competing interests and polarization in parliament or in referenda. Again, all results remain robust.

Refinements: National voters, district size, loyalty and parties

In Tables 4 and 5, we provide refinements and differential tests for the literature's hypotheses regarding electoral systems and congruence.

< Table 4 here >

Our measure of congruence takes the revealed will of the district majority and confronts it to actual decisions of individual politicians. This type of congruence measure tends to correspond majoritarian concepts of representation (see, e.g. Powell 2000 or Golder and Stramski 2010). Our evidence so far shows that party affiliations affect this measure of congruence which lends support to the interpretation that in a proportional system, parties levy more power but also that these politicians represent groups of citizens outside the electoral center. Moreover, the districts majority is represented more closely by majority elected politicians. We can take the analysis one step further and change the congruence measure to focus on the national electorate. Although, all members of the Swiss parliament are elected in subnational districts, the national electorate might be considered as the more important principal in a collective view of representation. Since we know the revealed preferences of the national electorate as a whole, i.e. how the national majority voted, we can analyze whether individual politicians elected under a proportional system match those preferences more closely than individual politicians elected under a majoritarian system match their district median. By construction and by data availability, this type of congruence measure is still majoritarian but with a broader spectrum of voters. Specifications (1) and (2) in Table 5 show that all our

previous results still hold and that parties become even more relevant for representation under a proportional system. Proportionally elected politicians of left and right parties have 17.8%-points and 16.8%-points lower congruence levels than politicians from the center. Parties play a significantly smaller role for majority elected politicians. Thus, there are clear and substantial differences in representation between proportional and majoritarian systems. As government in Switzerland is made up of representatives from left, center and right parties, our results tend to be line with Golder and Lloyd (2014) who suggest that it is not necessarily the case that proportional representation produces more consistent representation at the governmental level. In any case, when looking at congruence with the national majority and our empirical results, politicians elected under a proportional system tend to be at even larger variance with the national median than with their district median voter.

Specifications (3) to (5) refine the analysis in another direction. The 26 Swiss electoral districts differ in population size and proportionality differs from one to 34 seats. Thus, district magnitudes are different and these differences can be exploited (see also Portmann et al. 2012). For small districts with two seats or less, the main centripetal forces of a majoritarian system should be at play, i.e. we should not observe significant differences regarding levels of congruence for politicians of different parties even when politicians are elected under a proportional system compared to majority elected politicians as long as district magnitude is sufficiently low. This is what we tend to find in specification (3) for a small sample of observations. All coefficients are insignificant such that from a pure statistical point of view, there are no differences between left, center and right party affiliations in proportional and majoritarian systems.²⁰ When, analyzing larger districts in specification (4), we directly revert to our main results, i.e. party affiliations matter to a larger extent under a proportional system than under a majoritarian system. In specification (5) we analyze congruence around the “sweet spot” (see Carey and Hix 2011 and Carey and Hix 2013) which are district sizes between four and nine seats. For this subsample we still observe that parties play a significant role under a proportional system. The interaction terms are relatively large such that parties play a smaller role under a majoritarian system and that we cannot even reject the hypothesis that parties play not role at all for majority elected politicians. Thus, specifications (3) to (5) support the view that as soon as districts are large enough (essentially larger than two), parties systematically start to matter for the way individual politician represent the majority of their constituents.

²⁰ As the sample is relatively small and standard errors are high, the finding has to be taken with a grain of salt but we can certainly not draw the conclusions that parties matter.

In a final refinement, we look at party discipline. For essentially all referenda, parties offer voting recommendations. We take these recommendations and analyze, whether politicians correspond in their voting behavior to party recommendations. This allows us to evaluate whether proportionally or majority elected politicians tend to follow the party line which is, in turn, an indicator for the power that parties and potentially also partisan voters levy. We would expect that politicians elected under a majoritarian system have a lower probability to follow their party line as they need to appease their district median and as the party levies less power on them. The negative and significant discrete effect in specification (6) shows that this is the case on average for the whole sample. Specification (7) analyzes a full interaction model with this new dependent variable. We observe that proportionally elected left politicians are more congruent with their party than proportionally elected center politicians who are, in turn, more congruent with their party than proportionally elected politicians are from the right. Importantly, the interaction terms are always negative such that majority elected politicians from left and right parties are less congruent with their party than their proportionally elected counterparts are. We do not find significant differences for majority elected politicians from the center compared to proportionally elected politicians from the center. This evidence is broadly consistent with the view that party discipline is lower under a majoritarian system than a proportional one.²¹

In a final refinement in Table 5, we present results for individual parties instead of three aggregated party blocks.

< Table 5 here >

Specification (1) indicate that party affiliation of individual National Councilors plays a significant role for congruence while specification (2) shows that they play no significant role for majority elected members of the Council of States. We only include large parties and the right-wing party SVP (Swiss People's Party) as well as smaller parties form the omitted category. Proportionally elected members from the CVP (Christian Democrats) also match their constituency better than members of other parties including the FDP (Liberals) and the left SP (Social Democrats). Members from the left SP do not show statistically significant levels of congruence compared members from the right SVP and other smaller parties. In specifications (3) and (4) we employ a separate indicator for smaller parties (approximately 16.7% of the total sample). Our main results do not change. We observe significant effects of

²¹ It also corresponds to results on transparency differences prior to 2008 recently analyzed by Benesch et al. (2016).

party affiliations under a proportional system but no significant effects and coefficients generally relatively close to zero under a majoritarian system. Finally, we split up all smaller parties and control for them separately, keeping in mind that the so remaining smaller parties have only one member in the National Council and are not present in the Council of States. Again, our main message remains robust as evidenced in specification (5) and (6). Thus, the effects are not only due to a single party and there is heterogeneity between parties. In other words, personal party affiliation systematically influences representation of a constituency's preferences under a proportional electoral system, but there is no discernible differential effect under a majoritarian system on how politicians represent their constituency's preferences.

4 Conclusions

4.1 Summary

Theory predicts two differential effects of party affiliation on congruence between constituents and their representatives when comparing proportional representation to a majoritarian system: While party affiliation should affect congruence level under proportional representation, it should do so to a smaller extent under a majoritarian system. This is because, independently of their party affiliation, majority elected politicians need to appease the majority of their constituents to increase their election prospects, they tend to be selected from the center and parties levy less power over them. Thus, centripetal forces are expected to be stronger for majority elected politicians. Under a proportional electoral system, politicians may represent a fraction of the electoral spectrum, become elected even if they hold less moderate positions and they are more dependent on their respective parties (see, among others, Lijphart 1994; Persson and Tabellini 2000; Mueller 2003). Thus, they may take positions variance with the center of the distribution of their geographic constituency.

We provide empirical evidence which confirms these theoretical predictions. The data employed fulfill central requirements for a thorough test of the influence of party affiliation on representation of constituents' preferences under the two different electoral systems. First, we draw on the fact that constituents in Switzerland regularly reveal their preferences for legislative proposals in popular referenda. Members of parliament vote on exactly the same legislative proposals with the identical wording that constituents vote on in referenda. Thus, by matching roll call votes of members of parliament and district referendum results, we pursue a direct way of identifying how politicians represent their geographical constituency. Second,

the Swiss Parliament has two houses, one elected under a system of proportional representation and the other by majority rule. The electoral districts are the same for members of both houses and the prerogatives to be elected are equal too. Consequently, we can observe politicians from two different electoral systems who represent the same constituencies. Third, members of both houses as well as voters always decide on identical legislative proposals. Finally and most importantly, parliamentarians from the *identical* political parties are present in both houses such that we can compare politicians from the same parties but elected under different electoral systems.

The setting allows us to provide direct evidence that individual party affiliations of members of parliament exert a statistically significant and politically relevant influence on congruence if politicians are elected under a proportional system. The influence of party affiliations is, however, significantly smaller for majority elected politicians which supports the view that centripetal forces are far stronger under that system. Thus, results indicate that a change from a majoritarian system to a proportional system, holding party positions and constituents' preferences constant, induces party affiliations of politicians to exert a differential impact on congruence with their constituency's preferences.²² We also show that independent of individual party affiliations, members of parliament elected under a majoritarian system have higher levels of congruence with the majority of their constituents than members of parliament elected under a proportional system, again pointing to relevant differences in terms of representation between electoral systems. Numerous robustness tests confirm the findings and further refinements also confirm and substantiate them.

4.2 Policy consequences

Our results show that even politicians elected under majority rule may diverge from the majority of their constituents but their party affiliations play a systematically lower role for representation as opposed to politicians elected under a proportional system. Politicians from left, center and right parties elected under a majoritarian system have higher levels of congruence with the majorities of their geographic districts than proportionally elected politicians who also behave differently towards their constituents depending on their party

²² We are not aware of any other empirical study which shows that members of parliament from the very same parties and the same districts behave differently towards their constituency's preferences due to differences in electoral systems. In fact, one might have even speculated that party power always prevails to some extent independently of the electoral system.

affiliation. Our results also support the view that party discipline is less binding for majority elected politicians in comparison to proportionally elected representatives, i.e. changing from a majoritarian system to a more proportional one for a given level of party leadership strength may make party discipline more binding (see Batto 2012). Moreover, our evidence contributes to interpreting other empirical studies on congruence: While a large literature (see Powell 2009 for an overview) suggests that proportional representation may facilitate better representation, recent empirical studies (see Blais and Bodet 2006; Golder and Stramski 2010) argue that there is no consistent difference between proportional and majoritarian systems. The majoritarian vision of democracy would be about getting congruence with the majority of constituents (see Powell 2000) while the consensus vision of democracy is rather about getting congruence with the distribution of citizen preferences.²³ Using a natural measure of congruence from a majoritarian view, we highlight that an important difference between the two electoral systems concerns the way individual party affiliations of representatives affect congruence. If the aim of political representation is to foster congruence with the geographical district majority of voters, then a majoritarian system is associated to systematically higher levels of congruence of individual politicians than a proportional system.

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²³ While proportional representation produces less individual congruence with the majority of constituents this does not necessarily mean that it is failing in terms of representation relative to the performance of a majoritarian system (see also Stadelmann et al. 2014 for results in a proportional system with a different measure of congruence).

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Table 1: Congruence between politicians and constituents according to party affiliation and electoral system

| | Left party affiliation | Center party affiliation | Right party affiliation | Left different to center | Right different to center | Average congruence |
|----------------------------------|---------------------------|-----------------------------|----------------------------|-----------------------------|---------------------------------|-----------------------|
| (1) Members National Council | 0.590 | 0.693 | 0.570 | 0.103*** (8.329) | 0.122*** (9.783) | 0.623 |
| (2) Members Council of States | 0.672 | 0.725 | 0.661 | 0.052** (1.965) | 0.064* (1.897) | 0.703 |
| (2) - (1) Differences | 0.082*** (3.309) | 0.032** (2.027) | 0.091*** (2.822) | 0.050* (1.951) | 0.059** (2.154) | 0.080*** (6.595) |

Notes: The table presents congruence between politicians and constituents, i.e. the probability that a politician's decision in parliament matches the constituents' decisions in the corresponding referendum. Congruence by party affiliation and council is given for 352 distinct members of the proportionally elected National Council and 84 distinct members of the majority elected Council of States. t-values in parenthesis. * Significance level at 5%-10%. ** Significance level at 1%-5%. *** Significance level at < 1%.

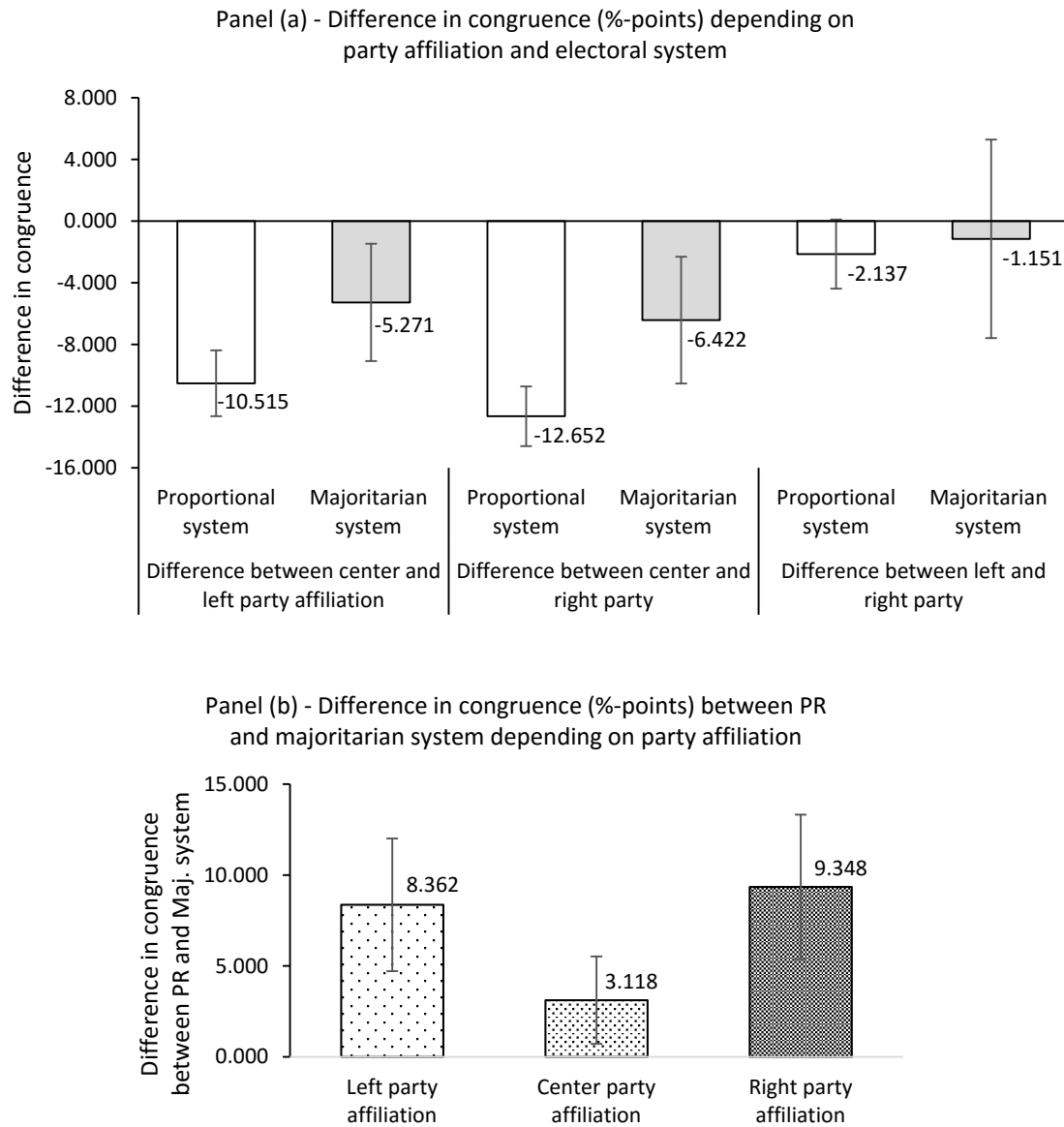
Sources: Swiss Federal Statistical Office for referenda data; Swiss Official Bulletin video footage for individual senators' voting records.

Table 2: Influence of party affiliation on congruence between politicians and constituents under proportional and majoritarian systems

| | <i>(1) PR sys. only (National Council)</i> | <i>(2) Maj. sys. only (Council of States)</i> | <i>(3) Interaction model - Logit</i> | <i>(4) Interaction model - Linear Probability</i> |
|-------------------------------|--|---|--|---|
| Member Council of States | | | 0.147** (0.070) | 0.030** (0.014) |
| Left Party | -0.451*** (0.055) | -0.240** (0.106) | -0.451*** (0.055) | -0.102*** (0.013) |
| Right Party | -0.537*** (0.051) | -0.296** (0.115) | -0.538*** (0.051) | -0.123*** (0.012) |
| (Member Council of States) * | | | 0.207* (0.119) | 0.052** (0.026) |
| (Left Party) | | | | |
| (Member Council of States) * | | | 0.244* (0.125) | 0.061** (0.027) |
| (Right Party) | | | | |
| Referendum type fixed effects | yes | yes | yes | yes |
| Pseudo-R2 | 0.028 | 0.037 | 0.033 | 0.024 |
| Brier Score | 0.23 | 0.203 | 0.226 | |
| n. Obs. | 8724 | 1736 | 10460 | 10460 |

Notes: * Significance level at 5%-10%. ** Significance level at 1%-5%. *** Significance level at < 1%. Center party affiliation forms the omitted category. Robust clustered standard error estimates are given in parenthesis below the coefficient. "Discrete effects" denote the change in the probability of congruence if the respective independent variable changes from 0 to 1 while all other variables are held constant at their median values.

Figure 1: Predicted changes in congruence levels for different party affiliations and different electoral systems



Notes: Panel (a) represents predicted changes in congruence levels for changes in party affiliations of individual representatives depending on the electoral system. Panel (b) represents predicted changes in congruence levels for changes from a proportional system to a majoritarian system depending on party affiliation. All reported changes in congruence for individual representatives are predictions based on coefficients of Table 2(3) and are expressed in %-points. Error bars represent a 10%-confidence interval for the prediction.

Table 3: Robustness - Influence of party affiliation on congruence under proportional and majoritarian systems

| | <i>(1) Average abstentions</i> | <i>(2) Excluding MPs due to missings</i> | <i>(3) Party reclassification</i> | <i>(4) Only parties that are in CS</i> | <i>(5) Personal characteristics</i> | <i>(6) Constituency characteristics</i> | <i>(7) Referendum characteristics</i> |
|---|------------------------------------|--|---------------------------------------|--|---|---|---|
| Member Council of States | 0.027* (0.016) | 0.030** (0.015) | 0.031** (0.015) | 0.028* (0.015) | 0.037*** (0.014) | 0.042*** (0.014) | 0.025** (0.011) |
| Left Party | -0.106*** (0.013) | -0.106*** (0.013) | -0.105*** (0.013) | -0.109*** (0.013) | -0.101*** (0.013) | -0.106*** (0.014) | -0.098*** (0.014) |
| Right Party | -0.129*** (0.012) | -0.129*** (0.012) | -0.127*** (0.012) | -0.133*** (0.012) | -0.117*** (0.013) | -0.118*** (0.014) | -0.112*** (0.014) |
| (Member Council of States) * (Left Party) | 0.056** (0.027) | 0.050* (0.029) | 0.052** (0.026) | 0.057** (0.027) | 0.051** (0.026) | 0.041* (0.024) | 0.046* (0.025) |
| (Member Council of States) * (Right Party) | 0.071** (0.029) | 0.074** (0.032) | 0.062** (0.028) | 0.063** (0.029) | 0.060** (0.028) | 0.059* (0.032) | 0.068*** (0.026) |
| MP average non observable | 0.019 (0.077) | | | | | | |
| MP average abstention | -9.8e-03** (4.8e-03) | -0.010** (5.1e-03) | | | | | |
| Female legislator | | | | | 1.2e-03 (0.010) | 3.2e-03 (9.8e-03) | 4.0e-03 (9.2e-03) |
| Age of legislator | | | | | -3.7e-03 (6.5e-03) | -4.4e-03 (6.6e-03) | -2.2e-03 (5.9e-03) |
| Has children | | | | | 1.9e-03 (0.010) | 7.5e-04 (0.011) | 6.6e-03 (9.6e-03) |
| University degree | | | | | 0.012 (9.5e-03) | 0.012 (9.7e-03) | 0.011 (8.7e-03) |
| Born outside of constituency | | | | | -0.018* (9.3e-03) | -0.017* (9.8e-03) | -0.013 (8.5e-03) |
| Time in office | | | | | -0.013** (6.2e-03) | -0.011 (6.6e-03) | -6.6e-03 (5.8e-03) |
| Referendum type fixed effects | yes | yes | yes | yes | yes | yes | no |

| | | | | | | | |
|--|---------------------|---------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| Constituency fixed effects | no | no | no | no | no | yes | no |
| Referendum fixed effects | no | no | no | no | no | no | yes |
| Effect of left party affiliation in majoritarian system | -0.050** (0.024) | -0.056** (0.027) | -0.053** (0.023) | -0.053** (0.023) | -0.049** (0.023) | -0.065*** (0.023) | -0.052** (0.023) |
| Effect of right party affiliation in majoritarian system | -0.058** (0.026) | -0.055* (0.029) | -0.064** (0.025) | -0.069*** (0.026) | -0.057** (0.026) | -0.059** (0.030) | -0.044* (0.023) |
| Pseudo-R2 | 0.034 | 0.033 | 0.033 | 0.035 | 0.035 | 0.037 | 0.199 |
| Brier Score | 0.226 | 0.226 | 0.226 | 0.226 | 0.226 | 0.225 | 0.2 |
| n. Obs. | 10460 | 10261 | 10460 | 10103 | 10460 | 10460 | 10460 |

Notes: * Significance level at 5%-10%. ** Significance level at 1%-5%. *** Significance level at < 1%. Center party affiliation forms the omitted category. Logit models are estimated and logit coefficients are presented in an online appendix A4. We present discrete effects which denote the change in the probability of congruence if the respective independent variable changes from 0 to 1 while all other variables are held constant at their median values. The discrete effect of the interaction terms represent the differential effect on the probability of congruence of a left and right party politicians in the Council of States in comparison to a left party politician in the National Council.

Table 4: Refinement - Congruence with national voters, district sizes and party loyalty

| | <i>congruence with national voter</i> | | <i>variation in seats in National Council</i> | | | <i>Match with party as dependent variable</i> | |
|--|--|--|---|-------------------------|-----------------------|---|--------------------------------------|
| | <i>(1) no personal characteristics</i> | <i>(2) with personal characteristics</i> | <i>(3) Seats <=2</i> | <i>(4) Seats > 2</i> | <i>(5) Sweet spot</i> | <i>(6) Weighting by agreement</i> | <i>(7) Clear referendum decision</i> |
| Member Council of States | 1.6e-03 (0.015) | 7.7e-03 (0.014) | 0.032 (0.031) | 0.011 (0.018) | 0.019 (0.032) | -0.025 * (0.016) | 0.012 (0.011) |
| Left Party | -0.178*** (9.4e-03) | -0.173*** (9.3e-03) | -0.100 (0.073) | -0.177*** (9.7e-03) | -0.174*** (0.016) | | 0.053*** (9.6e-03) |
| Right Party | -0.168*** (9.9e-03) | -0.160*** (0.011) | -0.081 (0.049) | -0.167*** (0.010) | -0.164*** (0.017) | | -0.061*** (0.011) |
| (Member Council of States) * (Left Party) | 0.126*** (0.025) | 0.126*** (0.026) | 0.076 (0.077) | 0.115*** (0.029) | 0.129** (0.051) | | -0.056*** (0.019) |
| (Member Council of States) * (Right Party) | 0.104*** (0.028) | 0.104*** (0.027) | 0.050 (0.052) | 0.087** (0.039) | 0.119** (0.051) | | -0.213*** (0.050) |
| Personal characteristics | no | yes | no | no | no | no | yes |
| Referendum type fixed effects | yes | yes | yes | yes | yes | yes | yes |
| Effect of left party affiliation in majoritarian system | -0.052** (0.023) | -0.048** (0.024) | -0.023 (0.023) | -0.061** (0.027) | -0.045 (0.048) | | -2.8e-03 (0.017) |
| Effect of right party affiliation in majoritarian system | -0.064** (0.025) | -0.056** (0.025) | -0.030 (0.019) | -0.080** (0.037) | -0.045 (0.047) | | -0.274*** (0.050) |
| Pseudo-R2 | 0.060 | 0.061 | 0.034 | 0.060 | 0.072 | 0.034 | 0.077 |
| Brier Score | 0.223 | 0.223 | 0.217 | 0.224 | 0.219 | 0.092 | 0.090 |
| n. Obs. | 10460 | 10460 | 878 | 9582 | 3386 | 10298 | 10298 |

Notes: Notes: * Significance level at 5%-10%. ** Significance level at 1%-5%. *** Significance level at < 1%. Center party affiliation forms the omitted category. Logit models are estimated and logit coefficients are presented in an online appendix A6. We present discrete effects which denote the change in the probability of congruence if the respective independent variable changes from 0 to 1 while all other variables are held constant at their median values. The discrete effect of the interaction terms represent the differential effect on the probability of congruence of a left and right party politicians in the Council of States in comparison to a left party politician in the National Council.

Table 5: Refinement - Using parties directly - Congruence under proportional and majoritarian systems

| | <i>(1) PR sys. only</i> | <i>(2) Maj. sys. only</i> | <i>(3) PR sys. only - grouping smaller parties</i> | <i>(4) Maj. sys. Only - grouping smaller parties</i> | <i>(5) PR sys. only - full party controls</i> | <i>(6) Maj. sys. only - full party controls</i> |
|-------------------------------|-------------------------|---------------------------|--|--|---|---|
| Party CVP | 0.096*** (0.015) | 0.066 (0.048) | 0.134*** (0.015) | 0.097 (0.062) | 0.139*** (0.014) | 0.091 (0.063) |
| Party FDP | 0.051*** (0.012) | 0.023 (0.047) | 0.088*** (0.012) | 0.053 (0.057) | 0.090*** (0.012) | 0.049 (0.059) |
| Party SP | -7.6e-03 (0.015) | -0.025 (0.074) | 0.031** (0.016) | 5.2e-03 (0.097) | 0.026* (0.015) | 0.019 (0.095) |
| smaller Parties | | | 0.093*** (0.019) | 0.070 (0.073) | | |
| Party GLP | | | | | 0.278*** (0.028) | 0.078 (0.088) |
| Party BDP | | | | | 0.195*** (0.033) | 0.070 (0.083) |
| Party GPS | | | | | 0.017 (0.022) | 0.016 (0.106) |
| smaller left Parties | | | | | 0.081*** (0.030) | |
| smaller center Parties | | | | | 0.077*** (0.027) | |
| smaller right Parties | | | | | 0.071 (0.050) | 0.101 (0.131) |
| Personal characteristics | yes | yes | yes | yes | yes | yes |
| Referendum type fixed effects | yes | yes | yes | yes | yes | yes |
| Pseudo-R2 | 0.022 | 0.040 | 0.026 | 0.041 | 0.035 | 0.039 |
| Brier Score | 0.231 | 0.203 | 0.230 | 0.203 | 0.229 | 0.203 |
| n. Obs. | 8724 | 1736 | 8724 | 1736 | 8724 | 1736 |

Notes: * Significance level at 5%-10%. ** Significance level at 1%-5%. *** Significance level at < 1%. The Swiss People's Party (SVP) forms the omitted category. Logit models are estimated and logit coefficients are presented in an online appendix A7. We present discrete effects which denote the change in the probability of congruence if the respective independent variable changes from 0 to 1 while all other variables are held constant at their median values.