

Constituency preferences and MP preferences: the electoral connection*

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Abstract

The question how constituency preferences relate to the preferences of members of parliament has attracted scholarly attention for some time. The relationship between the two sets of preferences is clearly influenced by the mediating electoral system. Empirical studies of this nexus are, however, plague by serious measurement problems. More specifically, most studies rely on more or less similar survey measures for both sets of actors with all the known drawbacks and problems. While behavioral data may be used in most countries to infer MPs' preferences, similar data fails to exist for voters making up the MPs' constituencies. We employ a novel dataset on voting behavior by MPs in the two chambers of the Swiss parliament which are selected with the help of different electoral systems, and combine this with voting decisions by the constituencies on identical issues in referendums. This allows us to make inferences on the basis of identical behavioral data, and we find that MPs elected in proportional representation are more widely dispersed around the median voter of their constituencies.

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1 Introduction

Theoretical work tends to agree that different electoral rules produce different tendencies in the outcomes. One of the main claims is that MPs elected under majority (MA) rule locate themselves closer to the median voter and that, conversely, MPs elected under proportional rule are more dispersed around the median voter (see for example Hotelling (1929) and Downs (1957)). There have been many attempts to test this claim in cross-country analysis as well as in studies focusing on countries with mixed-member districts, but the results do not lead to a clear consensus. In the empirical studies the data used almost always stem from surveys, which can represent a drawback when direct comparison among voters and legislators are necessary. Our aim here is to test the effect of the electoral rule using behavioral data. The Swiss case presents two particular features. The first is that the direct democratic institutional elements lead to situations where both voters and legislators vote on the same object. This allows us to locate on a same scale the legislators and their respective median voters. Another feature of the Swiss system is that in parliament some MPs are elected in MA rule elections and others in proportional representation (PR) elections, depending on the canton and on the House (upper or lower) of parliament. The first feature allows to locate both actors on a same scale, while the second feature allows us to compare the dispersion of MPs around their respective median voters under MA and under PR electoral rule.

The next part of this paper will briefly review the literature related to our research question (a more complete review appears in Hug and Martin (2009)). In the third part, the data, as well as some features of the Swiss political system that are relevant for our analyses, will be discussed. The method employed and the findings will also be presented in this section. After showing that MA rule effectively reduces the dispersion in the location of MPs around their respective median voter compared to those elected under PR, we assess the robustness of our results in a series of additional analyses. The last part offers a short discussion of our insights and some concluding remarks.

2 Literature review

The first approach investigating the behavior of the actors in the electoral game comes from models of spatial competition. It focuses on party competition in a one dimensional space with a given distribution of the voters. Hotelling (1929) showed in the context of economic competition that by taking into account a satiable dimension (among the dimensions that characterizes a product), the sellers will tend to follow centripetal forces on that given dimension. In other words, the different offers will tend to be very similar. Hotelling (1929) proposed to extend his model of economic competition to others fields, among others to electoral competition. Following this idea, Downs (1957) showed that two parties in a majority system tend to converge toward the median voter. Greenberg and Shepsle (1987) proposed a model that takes into account the decision for a potential candidate to enter the competition or not. They found that in party systems with more than two parties, equilibria dissuading candidates to enter the competition may not exist. Cox (1990) was the first who proposed a systematic assessment of how the dispersion of candidates should look like in a plurality system compared to the one in a PR system. According to him, MPs follow centrifugal or centripetal tendencies, depending on the number of candidates (m), the size of the constituency expressed by the number of legislators in the constituency (k) and the numbers of votes each voter can give (v). In an MA system, if $k < m \leq 2v$, the trend is centripetal and if $m > k$ and $m > 2v$, the trend is centrifugal. In PR systems, the trend is centripetal if $v < m \leq 2v$ and centrifugal if $m > 2v$.

Other attempts to theorize the electoral competition are based on probabilistic voting. Schofield, Sened and Nixon (1998) use a probabilistic model and find that there is no convergence in a multiparty system under PR, whereas Lin, Enelow and Dorussen (1999) find that in multi-candidate spatial models, non-convergent equilibrium do not exist.

On the empirical side, there have been many attempts to explain the quality of representation. However, the definition of representation as well as the factors affecting the former differ largely among the studies. Some studies focus on the degree to which legislators take into account the interests of their constituencies versus other influences. For example, Denzau and Munger (1986) locate the MPs somewhere in between spending all their efforts for organized groups (interests

groups) and spending all their efforts for the unorganized group: the voters. Where the legislators are located between those two extreme cases depends on the degree of information available to voters. Bawn and Thies (2003) follow the same logic of analysis but focus on the electoral system as the main factor explaining the quality of representation. Their model allows them to state that PR systems tend to have legislators serving the interest groups more than in single member district (SMD) elections (i.e., MA elections). Another study that places the political parties in the center of the question of representation is proposed by Carey and Shugart (1995). They propose a scale opposing the degree of personal reputation and party reputation that the MPs try to reach. The personal reputation can have several meanings and one of them is the incentive to cultivate a personal vote by serving the constituency. Depending on the selection rules of the party, the electoral rules and the district magnitude, the MPs will strive more or less for personal votes.

Another part of the literature defines quality of representation as the distance from the legislators or parties to the voters, called absolute median citizen congruence by Golder and Stramski (2010), who propose several ways to define congruence based on measures of ideal points. Studies in this area estimate the positions on one (or more) dimension and then use the distance between the legislators or parties and the voters as a measure of congruence. Some of this empirical work is based on surveys (see for example Blais and Bodet, 2006; Ezrow, 2007; Ezrow, 2008; Warwick, 2009; Golder and Stramski, 2010). Among those, some use different scales for the voters and the representatives and encounter the problem highlighted by Achen (1977), namely that in such a situation congruence is almost impossible to assess. Several studies use voter's self-locations and party locations estimated by the same voters. As different sets of individuals are likely to respond differently (more or less informed) to abstract questions of ideological positions (e.g., Feldman, 1991), this may also lead to biases. Other studies tried to avoid those problems by inferring the position of the median voter from the parties' positions and their vote share (the Kim and Fording (2003) method) or infer the parties' positions from the voters' positions. However, the first technique is not optimal in the sense that, as explained by Powell (2010, 1478f), it assumes voters to be located exactly where the party they vote for is located, and the second assumes intrinsically that the electoral system translates correctly voters'

preferences.

But what are the results of the different studies comparing representation in MA and PR systems? Although the theory on electoral competition rather tends to expect a centrifugal effect of PR on parties, the empirical literature is divided. Bawn and Thies (2003) find that the legislators devote generally more effort to the voters (vs. to interest groups) in PR than in SMD. According to Warwick (2009), the government will follow much less a party's wishes under PR than under MA. To the contrary, Stratmann and Baur (2002) show that the legislators elected under PR in Germany follow more the party line and less the constituency. Dow (2001) finds that PR gives rise to less centrist parties than MA. Golder and Stramski (2010) do not use a measure of centrality but find that the dispersion of the legislators fits more the distribution of the voters under PR than under MA and that the distribution of the government is not closer to the one of the voters under PR.¹ On the other side, authors show that there is no effect of PR on congruence at the governmental level, as there are two opposite effects of PR (Blais and Bodet, 2006). One is that the PR induces centrifugal forces as explained by Cox (1990) and leads to an increase in the number of parties. The second is that, as there are more parties in government in a PR system, the government will tend to be more centrist. Blais and Bodet (2006) conclude that the effect of PR on congruence is not significant. Ezrow's (2008) work also leads to the conclusion that there is no effect of PR on congruence. Finally, Powell (2010) shows that the effect of PR on congruence varies over time.

However, neither of the studies cited above uses behavioral data for locating both types of actors. The estimation of ideal points based on behavioral data allows to locate different types of actors on a same scale. Several studies have included in a same database the votes of actors from different institutions and using the method proposed by Clinton, Jackman and Rivers (2004), position these actors on a same political space. The idea is that if some actors have voted in two institutions, their votes can be used as bridging observations and thus allow to estimate both types of actors on the same scale. Likewise, if the same votes occurred in two institutions those votes are bridging observations across both institutions and allow to position all actors on a same scale. Bailey and Chang

¹However, as their measure of congruence is the difference between the cumulative distribution of the voters and the cumulative distribution of the representatives, we can wonder how strongly the number of representatives influences this measure.

(2001) and Bailey (2005) located the Presidents, Senators and Justices on a same scale, using public positions of the president on legislation and cases as bridging observations and estimating the positions with the method first used and implemented by Clinton, Jackman and Rivers (2004) (see also the attempt to link the three institutions over time by Bailey, 2007). Masket and Noel (2012(forthcoming)) use legislative referendums as bridging observations between the median voters and legislators in California. In their case, bridging observations across representatives and voters are possible thanks to direct democracy institution.

Based on the theoretical work discussed above, and in order to provide additional insights for the empirical work we propose the following hypothesis:

Hypothesis 1: In proportional representation systems the MPs are more widely dispersed around the median voter, while in majoritarian systems MPs cluster more closely around the median voter.

3 Empirical analysis

As highlighted by Achen (1977, 1978), measuring representation necessitates voters and legislators to be located on the same scale. Data allowing for this are rare. If such data exists, it comes from surveys where the different contexts for both actors can induce a bias, and thus comparability of the scales can not be ensured. As referendums are quite frequent in Switzerland, we will use them here as bridging observation across the parliament and the median voters of the 26 cantons. Moreover, as for both chambers of the Swiss parliament the electoral rule differs among cantons, the estimated ideal points will allow for a direct comparison between the effects of PR and MA.

3.1 Data

In Switzerland, the number of legislators per canton is proportional to the population size of the cantons in the Lower House (with a minimum of one in the small cantons), and equal to two for each canton in the Upper House, except for the 6 cantons called “half cantons” with one MP each. While the electoral rule for the Lower House is specified in the Federal constitution (PR except for the cantons with a single MP), the electoral rule for elections to the Upper House is

defined by the cantonal law and thus differs among cantons. Table 1 displays the numbers of MPs in each canton and the rule by which they are elected for the two Houses respectively. We see that most of the legislators in the Lower House are elected by PR rule whereas in the Upper House, the electoral rule is mostly MA. The fact that elections are not all driven by the same rule will allow us to test the effect of the electoral system on dispersion.

Table 1: Allocation of Parliament’s seats to the Cantons

Cantons		Lower House		Upper House	
AG	Argovia	15	PR	2	MA
AI	Appenzell Inner-Rhodes	1	MA	1	MA
AR	Appenzell Outer-Rhodes	1	MA	1	MA
BE	Berne	26	PR	2	MA
BS	Basle-Town	5	PR	1	MA
BL	Basle-Country	7	PR	1	MA
FR	Fribourg	7	PR	2	MA
GE	Geneva	11	PR	2	MA
GL	Glarus	1	MA	2	MA
GR	Grisons	5	PR	2	MA
JU	Jura	2	PR	2	PR
LU	Lucerne	10	PR	2	MA
NE	Neuchatel	5	PR	2	MA
NW	Nidwalden	1	MA	1	MA
OW	Obwalden	1	MA	1	MA
SG	St. Gall	12	PR	2	MA
SH	Schaffhausen	2	PR	2	MA
SO	Solothurn	7	PR	2	MA
SZ	Schwyz	4	PR	2	MA
TG	Thurgovia	6	PR	2	MA
TI	Ticino	8	PR	2	MA
UR	Uri	1	MA	2	MA
VD	Vaud	18	PR	2	MA
VS	Valais	7	PR	2	MA
ZG	Zug	3	PR	2	MA
ZH	Zurich	34	PR	2	MA

Now let us turn to the data used for estimating the ideal points. Between 2003 and 2007, that is during the 47th legislature, the 200 MPs of the Lower House and the 46 MPs of the Upper House voted on the same 245 final votes.² All the votes in the Lower House are roll call votes. In the Upper House the votes are not recorded (except the few roll call votes), but as there exist video-tapes of the votes, the final votes have been manually recorded. For more details on

²We could also have used all 3765 votes of the Lower House. Indeed, all the votes are electronically recorded, and this allows to avoid selection bias problems see Hug (2010). However, intermediate votes do not allow to link the upper and the Lower Houses as the votes are not the same. Moreover non final votes can induce tactical voting behavior, while final votes should not (see Bütikofer and Hug, 2008). And estimations of the positions of MPs of the Lower House do not differ significantly when taking into account only the final votes or all the votes (see an earlier version of this paper).

this coding, see the Appendix. Among these 245 final votes, 19 have also been popular votes.³ But why do both the voters and the parliament vote on the same topics? The reason is not the same for the referendums and the initiatives. In the case of a referendum, once the law has been accepted by the parliament, the law only passes if it is accepted in the popular votes. In the case of an initiative, the votes of the MPs are not decisive, but it is a recommendation to the voters. Consequently, we can wonder how importantly the recommendations influence voters' behavior. Trechsel and Sciarini (1998) show that the impact of the recommendations on the voters in Switzerland is quite weak. Another potential problem is mentioned by Masket and Noel (2012(forthcoming)). In their study, they have only referendums as bridging observations and thus all bridging observations have by definition been accepted by the assembly. In our case, as we also have initiatives, this feature of referendums is not a problem. We will thus estimate the positions of the 246 MPs and the 26 median voters using the votes. With the estimated ideal points, we will be able to measure what we call the *deviance* of each MP, that is the absolute distance between an MP's position and the median voter of his canton.

As a high dispersion of the voters also tends to increase the deviance of the legislators, we will have to control for this effect. An estimation of the variance of the voters in each canton can be obtained from the Swiss Electoral Studies data. This survey is part of the Comparative Study of Electoral Systems (CSES) project and involves a variable on self-positioning of the left-right scale. Thus we estimated the variance of the voters on this dimension in each canton from the 2007 study.⁴ The data are displayed in Table 4 in the Appendix.

3.2 Methods

Various kinds of techniques are used to position the voters on a dimension given their votes. Among those, the method proposed by Clinton, Jackman and Rivers (2004) assumes single peaked preferences and uses bayesian inference to estimate the ideal points. Masket and Noel (2012(forthcoming)) propose to use this

³The popular votes are listed in the Appendix

⁴We used the data of 2007, although the present paper focuses on the 2003 elections. It can be argued that the shift in time between the election and the survey matters. However, the same survey exists for 2003 but has too small samples, and this especially in the small cantons. As the standard deviations and the means are very similar in both surveys, we decided to use the most reliable estimates of the standard deviation.

method for estimating the positions of different types of actors on a same scale. This is exactly the case that we have here.⁵ In our case, the final votes play the role of bridging observations across both Chambers. And among those final votes, the referendums and initiatives are the bridging observations between the parliament and the voters. We use Clinton, Jackman and Rivers’s (2004) method in order to estimate our ideal points. Once the ideal points are estimated, the absolute distances between each MP and their respective median voters will be used as the dependent variable in our analysis.

3.3 Results

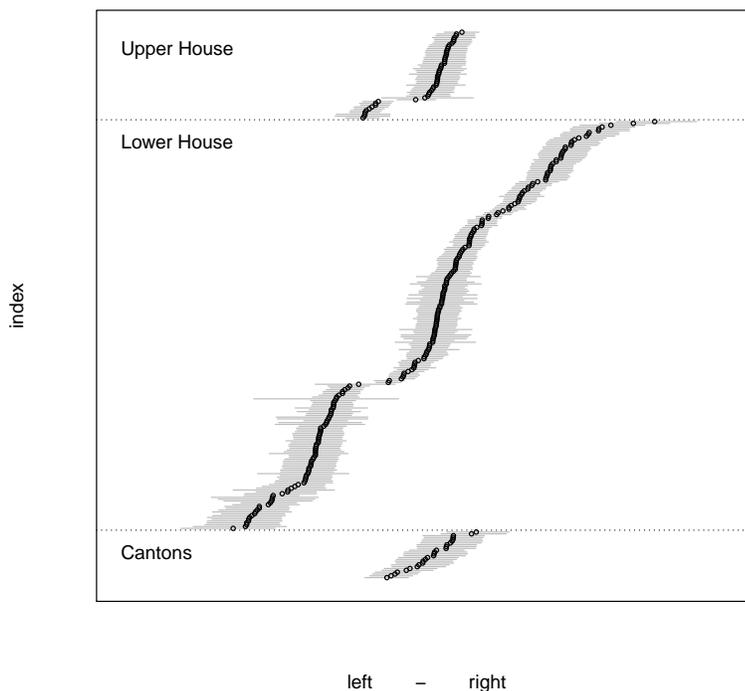
Figure 1 displays the estimated left-right positions of the members of the Upper House, the members of the Lower House and the cantons. The horizontal axis is the left-right scale and the vertical axis is an index, ranking in each institution separately, the persons from the left to the right. The horizontal lines are the 95% confidence intervals of each ideal point. The members of the Lower House are very dispersed, compared to the cantons. The members of the Upper House are much less dispersed than the MPs of the Lower House.

Now that we have estimated the left-right positions, we will use a regression to test the effect of PR on deviance. The units of observations are the legislators, and we expect that the MPs elected under MA will be closer to the median voter than the MPs elected under PR (for a direct comparison, see the boxplots presented in Figure 4 in the Appendix). However, when linking the deviance to the electoral system, it can be foreseen that the deviance of a legislator in a canton where the dispersion of the voters is small will, in terms of probability, be lower than the deviance of a legislator in a canton where the dispersion of the voter is high, everything else held constant. Thus we can use the relative voters’ dispersion in each canton (see Table 4 in the Appendix) estimated from the Selects 2007 survey for standardizing our measures of deviance.

Thus, the dependent variable will be the *standardized deviance*, which is the absolute distance between the legislator and the median voter of his canton divided by the dispersion of the voters of the canton. The main independent variable, *PR* is a dummy variable that equals 1 if the system is PR and 0 if the

⁵For an application of this method linking the Lower and the Upper Houses in Switzerland, see Bütikofer and Hug (2010).

Figure 1: The Ideal Points of the Legislators and the Cantons



system is MA. As control variables, we include *house*, a dummy equal to one if the legislator is a member of the Upper House and 0 if the legislator is a member of the Lower House. Indeed, it can be argued that an MP in the Upper House will not behave the same way as an MP in the Lower House, given that in the Upper House the MP represents his canton. Another factor that could influence the dispersion, as argued for example by Lijphart (1999) and Cox (1997) is the district magnitude as measured by the number of legislators that runs for the elections in a given district (these are listed in Table 1, above). As we expect the effect of the district magnitude on the deviance to be higher at lower than at higher district magnitudes, we include the $\log(\text{district magnitude})$ as a control variable in our analysis. Concerning the type of regression, as our dependent variable can not be negative, we use a generalized linear model from the gamma distribution family and the logarithm as the link function.⁶ The results of the

⁶For a discussion on the choice of the model, see the Appendix.

regression are displayed in the first column of Table 2.⁷

Table 2: Regression on the Standardized Deviance

	Model 1	Model 2
Constant	-1.607 (0.253)	-0.936 (0.207)
PR	0.606 (0.281)	
Upper house	-0.634 (0.261)	-1.307 (0.135)
log(district magnitude)	0.080 (0.063)	
Cox		0.125 (0.202)
N	272	272

Standard errors in parentheses

The results show that PR has a positive and significant effect on deviance, as expected. The members of the Upper House tend to have a lower deviance, and this is coherent with what we have seen in Figure 1. Finally, the district magnitude has a positive though statistically not significant effect on the deviance.

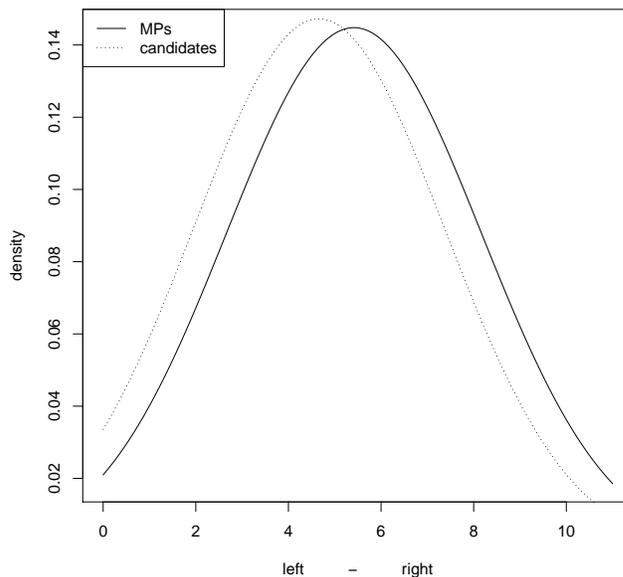
As Cox (1990) gives conditions under which different electoral systems should follow different tendencies, we also test for this. The second column of Table 2 displays the corresponding results. In this model, the dependent variable is the same as in the previous model: the *standardized deviance*. The main independent variable, named *Cox*, is a dummy equal to 1 if Cox (1990) predicts centrifugal trends and 0 if he predicts centripetal trends. As his measure is based on the district magnitude and the type of electoral system, we keep only the variable *house* as control variable. We see that Cox's (1990) variable has a positive but non significant coefficient. The variable *Upper House* has a stronger effect and is also more significant than in the first model.

⁷The number of observations is higher than 246, as some MPs left parliament during the legislative period and were replaced by new MPs.

3.4 Robustness

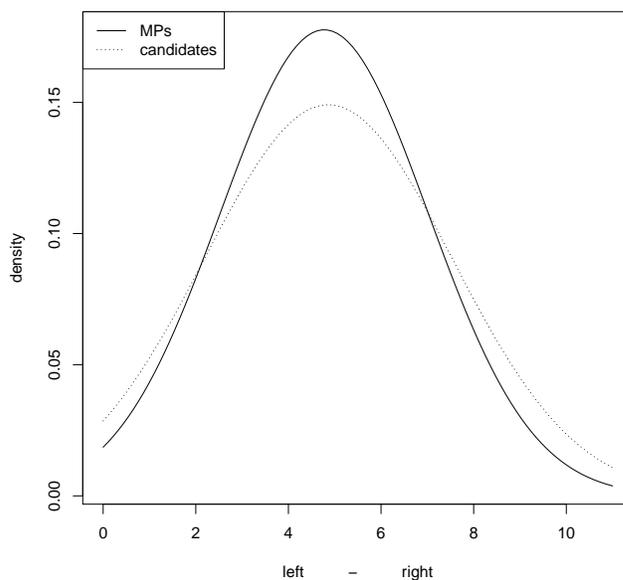
The choice that the voters make, however, also depends on the choices they have. It can be that the deviance is high because there was no candidate close to the median voter. It can also be that the deviance of a legislator is low because there were no extreme enough candidate; although those two scenarios are unlikely to happen if the number of candidates compared to the number of seats is high. The Swiss election studies of 2007 is also part of the CCS project and thus includes a survey of the candidates, elected and non-elected. The respondent answered a question on self-positioning. Figure 2 show the distribution of the candidates of the Lower House, and the distribution of the MPs of the Lower House. Figure 3 does the same for the Upper House.⁸ Each distribution is a normal density function given the empirical mean and variance.

Figure 2: Distributions of the MPs and Candidates - Lower House



⁸Among the 46 MPs in the upper house, 22 have answered the survey, and among the 141 candidates, 80 have answered the question. For the Lower House, we have 123 of 200 MPs and 1627 of 3100 candidates who answered this question.

Figure 3: Distributions of the MPs and Candidates - Upper House



In the Lower House, the distribution of the candidates is located a little more on the left than the distribution of the MPs. In the Upper House, we see that the candidates are more dispersed than the MPs. Nevertheless, in both cases, the differences are slight. Thus we conclude that the distribution of candidates does not affect the link between the type of electoral system and the deviance.

4 Conclusion

Our empirical analysis based on ideal points confirmed the theoretical implication according to which PR systems produce more centripetal trends than MA systems. In the literature, empirical studies testing for this assumption do not lead to a consensus. However, the studies are based on survey data and thus encountered the problem of comparability of different survey data as well as the comparability of answers coming from different types of respondents. The main characteristics of our analysis are twofold. First, the ideal points are estimated from behavioral data allowing to locate MPs and the median voters in a same space. Indeed, it is often the case in Switzerland that the MPs and the voters

are requested to vote on the same object. A second feature of the Swiss case is that part of the MPs are elected through PR and others through MA rule. So in addition of having MPs and median voters located in a same space, we also have MPs elected through two different electoral rules, in a same space. We thus were able to test the effect of PR rule vs. MA while avoiding the problems described by Achen (1977). Aside from our main hypothesis, our data also were consistent with Cox's predictions on centripetal versus centrifugal trends. For further research, it would be interesting to verify that our hypothesis holds on a longer period of time.

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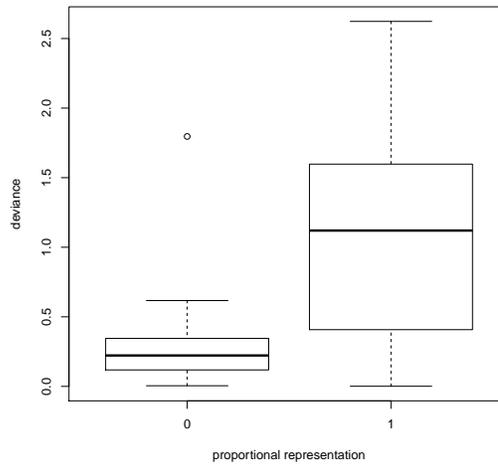
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Appendix

Figures

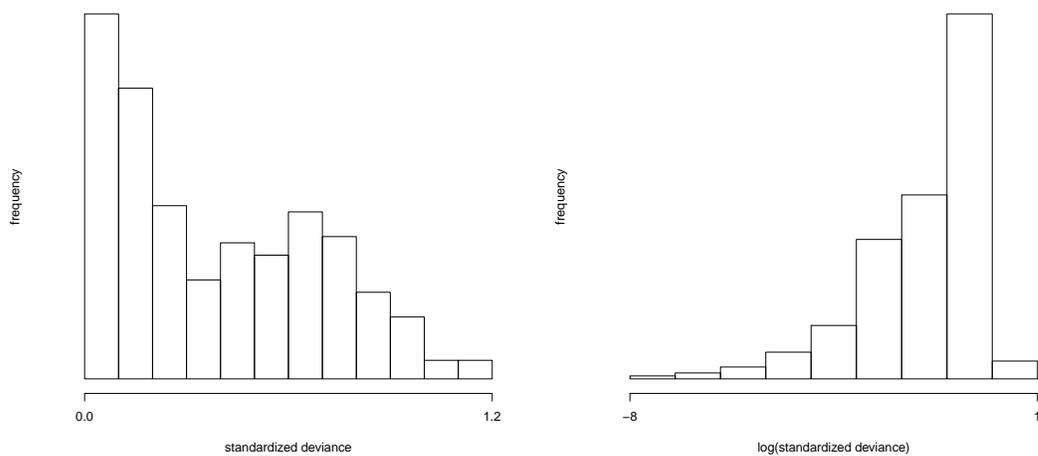
The following boxplots allow to compare the distribution of the deviance in PR and MA systems. The units of observations are the MPs.

Figure 4: The Absolute Value of the Dispersion in PR vs. MA Systems



We decided for our regressions to run a GLM model of gamma family and a logarithm link, as the distribution of the response variable can not be negative. One other possibility would have been to run a regression on the logarithm of the response variable. However, as the logarithm transformation seems to distort “too much” the data, the GLM model seemed to be a better option. The distribution of the response variable as well as the logarithm of the response variable are displayed in Figure 5:

Figure 5: Distribution of the Standardized Deviance and the Log of the Standardized Deviance



Tables

Table 3: Bridging observations in the 47th legislature

Vote number	Title	Date in Par- liament	Date in the Districts
4920	Popular initiative “for democratic naturalizations”	05.10.2007	01.06.2008
4216	Federal law on the improvement of the fiscal conditions of business activities and investments	22.03.2007	24.02.2008
4550	Popular initiative “against battle jet noise in tourism areas”	22.06.2007	24.02.2008
154	Federal law on the invalidity insurance	06.10.2006	17.06.2007
3479	Popular initiative “for a social and unique health insurance scheme”	07.10.2006	11.03.2007
3110	Federal law on family allowances	24.03.2006	26.11.2006
3116	Federal law on the co-operation with Eastern Europe	24.03.2006	26.11.2006
2860	Change of the asylum law	16.12.2005	24.09.2006
2819	Federal law on foreigners	16.12.2005	24.09.2006
2824	Popular initiative “for the remittance of national bank profits to the old-age and survivors insurance”	16.12.2005	24.09.2006
2815	Federal act modifying constitutional articles on education	16.12.2005	21.05.2006
1446	Labour law (opening hours of businesses in public transport centers)	08.10.2004	27.11.2005
2259	Popular initiative “for food from agriculture free of genetic engineering”	17.06.2005	27.11.2005
1745	Federal act on the expansion of the free movement of people agreement to the new EU governments and on the revision of the flanking measures	17.12.2004	25.09.2005
46	Federal law on the partnership registered between someones of the same gender (Partnership law)	18.06.2004	05.06.2005
1741	Federal act on approval and enforcement of the bilateral agreements between Switzerland and the EU about the association in the Schengen and Dublin areas	17.12.2004	05.06.2005
255	Federal law relative to research in embryo stem cells	19.12.2003	28.11.2004
531	Federal act on a new finance order	19.03.2004	28.11.2004
533	Popular initiative “postal services for all”	19.03.2004	26.09.2004

Table 4: Heterogeneity in left-right positions across cantons (Swiss election studies 2007)

Canton of residence ^b		2007		
		mean	StdD	N
AG	Argovia	5.6	2.24	137
AI	Appenzell Inner-Rhodes	6.49	2.15	94
AR	Appenzell Outer-Rhodes	5.13	2.1	112
BE	Berne	5.33	2.3	287
BS	Basle-Town	4.49	2.81	100
BL	Basle-Country	5.29	2.54	91
FR	Fribourg	5.27	2.14	95
GE	Geneva	4.75	2.72	550
GL	Glarus	5.52	2.14	99
GR	Grisons	5.46	1.99	91
JU	Jura	4.57	2.46	106
^a LU	Lucerne	5.15	2.01	99
NE	Neuchatel	4.8	2.81	98
NW	Nidwalden ^c	5.39	1.75	31
OW	Obwalden	5.3	1.89	104
SG	St. Gall	5.54	2.13	114
SH	Schaffhausen	5.64	2.39	112
SO	Solothurn	5.11	2.27	82
SZ	Schwyz	5.76	2.35	118
TG	Thurgovia	5.55	2.21	102
TI	Ticino	5.33	2.5	467
UR	Uri	5.75	2.17	95
VD	Vaud	5.27	2.65	151
VS	Valais	5.71	2.12	82
ZG	Zug	5.22	1.94	98
ZH	Zurich	5.08	2.45	622

^a*Source:* Peter Selb, Georg Lutz, Marc Buehlmann, Marco Steenbergen, Philipp Leimgruber, Sarah Nicolet, Alexander Widmer, Dominique Joye, Florence Passy, Daniele Caramani, Oscar Mazzoleni: Electoral Surveys in Switzerland - 2007 - national postquestioning [machine-readable record]. Production: University of Zurich, institute of political science - IPZ; University of Bern, institute of political science - IPW; University of Geneva, department of political science; University of Lausanne, institute of political and international studies - IEPI; University of Saint Gallen, institute of political science; Office of Statistics of the Canton of Ticino, Bellinzona; Swiss Federal Statistical Office - FSO, section of socioeconomic analyzes, Neuchâtel; Federal Chancellery, section political rights, Bern; FORS - Swiss foundation for research in social sciences, Lausanne. Financing: Swiss national funds to the promotion of the scientific research. Distributed by FORS.

^bThe cantons with majoritarian elections are AI, AR (only in 2003), GL, NW, OW, and UR.

^cDue to the fact that there was a tacit election, the datas come from the Swiss election studies 2003. *Source:* Marie-Christine Fontana, Peter Selb, Romain Lachat: Electoral Surveys in Switzerland - 1971 - 2003 (Cumulative dataset). Production: SIDOS, Swiss information and data archive service for the social sciences, Neuchâtel. Distributed by SIDOS (weighted according to provided weights).

Data

During the sessions of the Upper House in Switzerland, no roll call votes are recorded.⁹ However, as videos exist for every session of the 47th legislature, all final votes have been coded nominatively using those videos. The final votes take place on the last day of each session and the motions of order haven't been included in the database.

At the beginning of the session, the General Secretary of the federal Assembly proceeds to a nominative call. Afterwards, the voting session starts. For each vote, the President of the Upper House states the number of the object, the title of the object (and the title of the vote if there are several votes per object) and asks who agree, who disagree and then who abstains. After each question, the concerned MPs raise the hand. Then the counters give the results to the President who delivers orally the result (number of yes, number of no and number of abstentions¹⁰). For each vote, the video starts either from the left front corner, either from the right front corner¹¹ and turns until the opposite corner during the YES vote. Then it makes the way back during the NO vote.¹² When the video is too late or too early, the votes of the MPs positioned near the last/first corner are not visible. And it also happens that it goes too fast in the middle. So it can be that the people at the extreme left and right and at the center have more missing values than the others. As the MPs are positioned according to their groups, the proportion of unclear votes may differ among groups. For each variable (vote), the levels are the following:

- 0 = No
- 1 = Yes
- 2 = Abstention
- 3 = Absent
- 4 = Unclear
- 6 = President of Upper House does not vote
- N A = Not Legislator in the Upper House at the vote's time

⁹Except some very few votes, see Bütikofer and Hug (2010).

¹⁰Except in the first session of the 47th legislature, where the number of abstentions was not given.

¹¹Depending on if the cameraman is positioned at either of those corners and this can vary without any rule from a session to another or even from a vote to another.

¹²It happens that the video makes a second course for abstentions.

The two counters were recorded as “unclear,” as they include their votes in the count but do not raise the hand. In the case of unanimity with no abstention, we decided to attribute the corresponding result to all visually¹³ present MP, including the counters.

Given the technique used for recording the votes, we should discuss on the reliability of the data. It is possible that a legislator’s movement has been interpreted as voting although it was not. However such mistakes should not be numerous. Indeed, as the counter have to see clearly the raising hands, legislators generally avoid to make vague movements during the vote. Moreover, for all MPs who did not visibly raised the hand, they were coded as “unclear.”

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¹³Except for one session where one MP was absent, and whose seat was not visible. We controlled, however, on the nominative list available in the Parliament’s office.