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**Working Paper**

## Parliaments as Condorcet Juries: Quasi-Experimental Evidence on the Representation of Majority Preferences

CREMA Working Paper, No. 2011-14

**Provided in Cooperation with:**

CREMA - Center for Research in Economics, Management and the Arts, Zürich

*Suggested Citation:* Stadelmann, David; Eichenberger, Reiner; Portmann, Marco (2011) : Parliaments as Condorcet Juries: Quasi-Experimental Evidence on the Representation of Majority Preferences, CREMA Working Paper, No. 2011-14, Center for Research in Economics, Management and the Arts (CREMA), Basel

This Version is available at:

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**Parliaments as Condorcet Juries:  
Quasi-Experimental Evidence on the  
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Working Paper No. 2011 - 14

# Parliaments as Condorcet Juries: Quasi-Experimental Evidence on the Representation of Majority Preferences<sup>\*</sup>

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1. Juli 2011

## Abstract

In parliament, individual representatives vote with a certain probability according to their constituents' preferences. Thus, the mechanism of the Condorcet Jury Theorem can be fruitfully applied to parliamentary representation: The probability that a majority of representatives votes according to the preferences of the majority of their constituents increases with the number of representatives per district. The political economy literature has so far disregarded this aspect. We provide a theoretical discussion and quasi-experimental evidence for the validity of the Condorcet Jury Theorem in parliamentary representation by contrasting unique data from parliamentary roll call votes and popular referenda decisions.

**Key words:** Condorcet Jury Theorem, Preference Aggregation, Voting  
Behavior, Legislature, Political Representation.

**JEL Classification:** D78, D70, D80.

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<sup>\*</sup> We are grateful to the participants of the seminar on Political Economy and Organization at the University of Zurich, the seminar on New Developments in Political Economy at the University of Basel.

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## 1 Introduction

In representative democracies, citizens delegate their decision-making power to their representatives in parliament. Good systems of political representation align representatives' voting behavior in parliament with the electorate's preferences (Cox 1997, Gerber and Lewis 2004, Persson and Tabellini 2000). Economists and political scientists have intensely studied the effects of political institutions on decisions made by representatives. While they focused mainly on how different voting rules shape the incentives of parliamentary representatives and on institutional rules translating individual preferences into aggregate decisions, they have been astonishingly mute on the effect of the pure number of parliamentary representatives per district. However, the number of representatives per district can easily be hypothesized to play an important role: If the probability of each individual representative to vote according to her constituents' preferences is below 100 percent but higher than 50 percent, the likelihood that majority decisions by parliamentary representatives meet the preferences of the majority of their constituents increases with the number of representatives per district.

Of course, this hypothesis is closely related to the mechanism of the Condorcet Jury Theorem which states that the size of a jury is systematically related to the quality of its decision. While this theorem has been widely investigated in other areas (see, e.g., Miller 1996, Mueller 2003, Congleton 2007 for overviews), its consequences for the match between legislative decisions of parliamentary representatives and their constituents' preferences have – to the best of our knowledge – neither been addressed theoretically nor empirically.

We employ unique quasi-experimental data from Switzerland which allow us to empirically test the application of the Condorcet Jury Theorem's mechanism in parliaments. Swiss voters reveal their preferences on real policy outcomes in popular referenda.<sup>1</sup> We analyze 102 referenda and match revealed constituents' preferences with their political representatives' roll call votes in parliament. Representatives, i.e. members of the Swiss Lower House, are elected in districts which are identical to the 26 Cantons. As the number of representatives per district is proportional to population size, it varies widely from 1 to 34. Combining the variation in the number of representatives per district with information on whether representatives decide in parliament according to their district voters' preferences results in a unique test for the mechanism of the Condorcet Jury Theorem in parliaments.

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<sup>1</sup> See the large economic literature on Swiss direct democracy starting with Schneider et al. (1981).

This paper contributes to the literature twofold. Firstly, we address the link between parliamentary representation of constituents' preferences and the Condorcet Jury Theorem theoretically. Secondly, we provide unique quasi-experimental evidence on the Condorcet Jury Theorem with data from real parliamentary decisions which are matched with real decisions in popular referenda on exactly the same issues with the identical wording. Section 2 relates parliamentary political representation to the existing literature on the Condorcet Jury Theorem. Section 3 describes unique quasi-experimental data which allow us to match real decisions of political representatives with revealed citizen preferences and outlines our empirical approach. Section 4 provides empirical results which indicate that, due to the Condorcet Jury Theorem, the probability that a majority of representatives decide according to the preferences of their district voters is higher with many representatives per district than with few representatives or single-member districts. Section 5 concludes.

## **2 Parliamentary representation and the Condorcet Jury Theorem**

When citizens delegate their decision-making power to parliaments they expect their delegates to represent their preferences. But representatives may largely deviate from voters' interests as has been broadly discussed in the literature (Gerber and Lewis 2004). Therefore, economists and political scientists have intensely studied the effects of a large number of most diverse political institutions on the representation of voters' preferences, such as majoritarian vs. plurality party systems, single vs. multi-member districts, presidential vs. parliamentary systems, open vs. closed list elections, media and campaigning regulations, remuneration and side income regulations, lobbying regulations, committee structures, term restrictions, and many more (see Persson and Tabellini 2000 or Mueller 2003 for an overview). However, they seem to have disregarded the mechanism of an old but related theorem, the Condorcet Jury Theorem.

In his book "Essai sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix" Marquis de Condorcet (1785) first described the quality enhancing property of majority decisions by many actors in the context of judicial juries: When juries try to find the truth, they may occasionally judge wrongly. Yet, if individual jury members more often judge rightly than wrongly, the majority decision of a sufficiently large jury will most likely reflect the truth. Clearly, this follows from the law of large numbers and Marquis de Condorcet therefore refers in his analysis to Jacques Bernoulli (Condorcet 1785, p. viij).

The Jury Theorem was originally developed by Marquis de Condorcet to analyze the quest for truth by juries in lawsuits (see, e.g., Stutzer 2004). However, the mechanism of the theorem may be applied more widely. Under simple majority voting the Condorcet Jury Theorem provides the important statement that as the size of the group goes to infinity the accuracy of the group's decision goes to one (Young 1988, 1997). While the Condorcet Jury Theorem has been used to defend voter referenda and elections in democracies (see Miller 1996, Mueller 2003 and Congleton 2007) it has not been taken into account for parliamentary decisions.<sup>2</sup> As the task of parliamentary representatives consists of representing voters' true preferences, the Condorcet Jury Theorem's mechanism can be fruitfully applied to parliaments where legislators may either represent voters' preferences or not. Transferred to parliamentary decisions the theorem implies that the likelihood of a majority of parliamentary representatives to vote according to the preferences of the majority of their constituents increases with the number of representatives per district.

Political representatives accept or reject legislative issues in parliament. District citizens have preferences concerning the consequences of legislative issues. An individual representative deciding on a legislative issue votes with probability  $p$  according to the preferences of the majority of her constituents. With probability  $1 - p$  she votes against them. Probability  $p$  may depend on the differences in preferences between a representative and citizens, the representative's incentives to cater to the preferences of her constituents, the representative's information about the preferences of her constituents, and individual errors (see, e.g., Bohnet and Frey 1994, Frey 1994, 1997). As the respective incentives and information are not perfect, probability  $p$  is below 100 percent. However,  $p$  is typically above 50 percent. If this were not true, a representative could easily improve her performance as seen by the electorate, and thus her reelection chance, by just doing the opposite of what the other representatives are doing. Moreover, it would be better for the district majority to have a panel of experts advancing legislative proposals and to determine by flipping a coin which proposals should be accepted and which ones should be rejected. Therefore, it can be safely assumed that  $0.5 < p < 1$ .

Thus, decisions of individual and independent parliamentary representatives, who represent the preferences of the majority of their constituents, follow in essence the assumptions of the Condorcet Jury Theorem. Denote with  $P_{\lfloor n/2 \rfloor}$  the probability that a strict majority of  $n$  representatives votes according to the preferences of the district

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<sup>2</sup> In the masterly volume by Persson and Tabellini (2000), the Condorcet Jury Theorem is not even mentioned. In Mueller's (2003) important book the theorem is discussed with respect to decision making in general but it is not applied to the size of parliaments.

majority, where  $\lfloor n/2 \rfloor$  is the greatest integer less than or equal to  $n/2$ . In the simplest form of the Condorcet Jury Theorem, the probability that a strict majority of  $n$  independent and identically distributed parliamentary representatives of a certain district vote according to the majority of their constituents may be given by expression (1)

$$P_{\lfloor n/2 \rfloor} = 1 - \sum_{k=0}^{\lfloor n/2 \rfloor} \frac{n!}{k!(n-k)!} p^k (1-p)^{n-k} \quad (1)$$

for  $n$  odd (see Mueller 2003, pp. 128-129 for a similar formula applied to juries). Formula (1) represents a direct application of the basic Jury Theorem's mechanism to political representatives and their constituents: The probability that a strict majority of parliamentary representatives vote according to the majority's preferences of their electoral district increases with the number of representatives per district. While the depicted formula reflects the Condorcet Jury Theorem in its simplest form, it has been further generalized to, for instance, collective choices with dependent decision makers (see, e.g., Berend and Sapir 2007).<sup>3</sup>

As a consequence of the undue neglect of the Condorcet Jury Theorem's mechanism in the context of parliamentary representation of district majority's preferences, there exists so far no empirical evidence on its validity. We analyze whether decisions of the majority of representatives from the same district correspond to their constituents' preferences. As the number of representatives per districts varies across Switzerland, we have an ideal setting to provide strong empirical evidence for the relevance of the Condorcet Jury Theorem for parliamentary decision making.

### 3 Matching political choices with preferences

We apply the insights from the Condorcet Jury Theorem's mechanism to parliaments and test the proposed mechanism empirically, i.e. we test whether a large number of representatives per district produce majority decisions which are closer to the preferences of the majority of their constituents.

Switzerland offers a unique quasi-experimental setting to analyze the Condorcet Jury Theorem in political representation because it allows matching popular referenda data with decisions in parliament on exactly the same issues with the identical wording. The Swiss National Council (parliament) has 200 members from whom we possess individual voting records on 102 final votes (roll calls) from 1995 to 2007. These roll call votes were

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<sup>3</sup> The literature on political representation brought also forward substantial theoretical considerations and evidence on the effect of group size on the incentives of individual agents. Those different effects are ambiguous and we leave them to further research.

subsequently presented to the citizens in referenda from 1996 to 2008. The 26 Swiss cantons form the parliament's electoral districts. The number of political representatives differs largely across electoral districts. Six districts have only one representative while the largest district, the canton of Zurich, has 34 representatives.

Political representatives in Switzerland vote on laws and law changes. The Federal Parliamentary Services Office records their individual votes on legislative proposals. Accepted legislative proposals do not directly turn into law. Swiss citizens may demand a popular referendum on parliamentary decisions before laws are enacted. Moreover, all constitutional amendments have to be confirmed by citizens, and citizens may also propose constitutional amendments and demand a referendum on their proposal. In popular votes, citizens reveal their preferences for policy outcomes by ranking law proposals against the status quo (as already argued in Schneider et al. 1982, Matsusaka 1992, Frey 1994).

Referenda results are available for every electoral district and for the whole period of analysis from 1996 to 2008 by the Swiss Federal Statistical Office. Referenda results for districts can be matched with voting data for political representatives on exactly the same political issues with the identical wording. More specifically, our data allow us to directly identify whether a representative in parliament voted according to her constituents' preferences as revealed in the respective referendum. Appendix Table A1 provides the original text of each referendum's topic in our dataset and the national result.

Individual political representatives to the Swiss Parliament generally vote with a probability higher than 50% with their district majority. Over the period analyzed we find 393 different individual representatives who voted at least once on an issue which was subject to a referendum. Figure 1 presents a boxplot of the average number of times each individual representative voted during her time in parliament with her district majority.

**< Figure 1 here >**

Analyzing individual correspondence of 393 representatives to district majority preferences, the average representative votes according to the preferences of the majority of her district voters in 67.9% of the cases (the standard deviation is 16.4). Over all representatives, the median corresponds in 71.3% of the cases with the preferences of the majority of her district voters, while the first quartile politician corresponds in 57.6%, and the third quartile politician in 79.4%, of the cases with majority preferences. Eleven representatives always voted according to the majority preferences and four outliers systematically voted against the majority of their constituents during their time in parliament. For our purpose it is important to note that *individual* correspondence to district



majority preferences does not increase but even slightly decreases with the number of representatives per district as could be expected theoretically.<sup>4</sup>

By comparing revealed constituents' preferences in referenda with representatives' decisions on the same issues we can test whether the majority of representatives is more likely to vote according to the preferences of the majority of their constituents when the number of representatives per district increases. We thus analyze decisions on individual issues in parliament and check whether the majority of representatives have voted according to the district preferences. If strictly more than 50% of representatives have voted according to the revealed preferences of the majority of their constituents, we set the dependent variable *MajorityMatch* equal to 1, otherwise *MajorityMatch* is 0.<sup>5</sup>

#### 4 Evidence for the Condorcet Jury Theorem in parliamentary decisions

We use the following logistic specification to evaluate the validity of the Condorcet Jury Theorem's mechanism in political representation:

$$P(\text{MajorityMatch}) = \Lambda(\alpha_0 + \alpha_1(\# \text{Representatives}) + \sum_j \alpha_j x_j + \varepsilon), \quad (2)$$

where  $\Lambda$  denotes the logistic function  $\Lambda = \exp(X)/(1 + \exp(X))$  (with  $X$  a design matrix).  $\alpha_1$  captures the effect of increasing the number of a district's representatives and  $\alpha_j$  measures the effect of other controls. Appendix Table A2 provides descriptive statistics for all variables. If the Condorcet Jury Theorem in political representation holds, we expect  $\alpha_1 > 0$ . Table 1 presents the empirical results. We report robust standard errors which are clustered at district level.

#### < Table 1 >

Specification (1) confirms the Condorcet Jury Theorem in political representation. The coefficient for the variable *#Representatives* is positive and significant at the 1%-level. As the number of representatives increases, the probability that the majority of them votes according to the preferences of the majority of their constituents increases too. From the theoretical model, i.e. equation (1), we can infer that due to the mechanism of the

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<sup>4</sup> In districts with several representatives there is proportional representation while in districts with only one representative elections follow a plurality rule. Plurality rule is generally believed to induce higher individual congruence between representatives and the median constituent (see, among others, Cox 1997 for a theoretical discussion and Portmann et al. 2010 for empirical evidence with Swiss data).

<sup>5</sup> Consider two examples: (1) 57% of the population of Uri voted "yes" in the referendum "Postal service for everybody (Postdienst für alle)" while the only representative of Uri voted against the proposal in parliament. Thus, *MajorityMatch* equals 0. (2) The same referendum was rejected by the district of Zurich and a majority of its representatives. Thus, *MajorityMatch* equals 1.

Condorcet Jury Theorem in its simplest form, an increase in the number of representatives per district from 1 (lowest observed) to 34 (highest observed) should raise the probability that a majority of representatives votes according to their district majority's preferences by 29.8 percentage points when  $p = 0.6786$ , i.e. at the observed mean value for individual representatives. To confront this theoretical prediction with the empirical data, we calculate a discrete change from 1 to 34 representatives for the predicted probability that the majority of representatives votes according to the district majority. The discrete change indicates that an increase in the number of representatives from 1 to 34 raises the probability that the majority of representatives votes according to the district majority by 26.0 percentage points. This is a large and important effect. It is, for instance, larger than the standard deviation (16.4) of the probability with which an average representative votes according to her constituents' preferences and it is also larger than the inter-quartile range ( $79.4-57.6=21.8$ ) of individual congruence.

In specification (2) we drop those observations from the dataset where exactly 50% of representatives voted according to the district majority's preferences.<sup>6</sup> Consequently, we exclude unclear majorities where *MajorityMatch* was defined as 0 before. Again, we find a positive and significant effect of the number of representatives on the probability to vote according to the preferences of the majority of constituents. The discrete change when increasing the number of representatives per district from 1 to 34 is 19.2 percentage points which is approximately two thirds of the theoretical prediction.

Thus, increasing the number of representatives per district leads to a closer match between constituents' preferences and the *majority of their representatives* even if *individual incentives* for good representation are constant or decrease slightly in the number of representatives per district. This prediction by the Condorcet Jury Theorem for parliaments is strongly confirmed empirically. In the remaining specifications (3) to (8) we analyze whether the effect of the number of representatives remains stable for the inclusion of different controls.

We control whether the district majority's vote in a referendum equals the national majority's vote for all observations in specification (3) and for a restricted dataset in specification (4). Thereby, we capture the influence of diverging local and national interests on parliamentary decisions. If the district majority voted in line with the national majority the probability that a majority of representatives votes as the district (and the nation) increases, i.e. the variable *DistrictMatchesCH* is positive and significant. The effect of the number of representatives (*#Representatives*) remains positive and significant in both

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<sup>6</sup> This can happen when there is an even number of representatives.

specifications. The discrete change is 20.7 percentage points in specification (3) which is again about two thirds of the theoretical prediction by the simplest form of the Condorcet Jury Theorem. In specification (4) the discrete change is with 14.0 percentage approximately half of the Jury Theorem's prediction which does not take account of other controls. Still, its absolute size is of obvious importance.

In specifications (5) and (6) we control for the time to the next parliamentary election (*TimeToElection*), i.e. whether a referendum took place shortly ahead of parliamentary elections or not. The coefficient of this control is negative and significant. The longer the distance between the respective referendum and next parliamentary election, the larger the divergence between the majority of representatives and the majority of citizens. The sign, size and significance of *#Representatives* does not change compared to earlier specifications.

Specifications (7) and (8) control for the district's GDP (*Income*), population density (*Density*), and a dummy for French and Italian speaking districts (*Latin*). Again, *#Representatives* remains positive and significant confirming the Condorcet Jury Theorem's mechanism in political representation. The discrete change is close to two thirds of the theoretical prediction in specification (7) and approximately 7 percentage points lower in specification (8) where the reduced number of observations is used.

## 5 Conclusion

The literature on political representation tries to analyze whether “what legislators do” reflects “what citizens want”. We show that, due to the Condorcet Jury Theorem's mechanism, the probability that a majority of representatives votes according to the preferences of their district majority increases in the number of representatives per district. So far, this has been a neglected fact in political economy when analyzing parliamentary representation.

To establish the Condorcet Jury Theorem for parliaments empirically and quantify its importance, we take advantage of unique data from a quasi-experiment in Switzerland: Swiss referenda reflect voting behavior of citizens and thus how the majority of voters in each district value legislative proposals against the status quo. Referenda results can be matched with voting data for political representatives on exactly the same legislative issues with the identical wording.

Our results show that the probability that a majority of representatives votes according to the district preferences strongly increases with the number of representatives per district. The empirical effect is of a similar magnitude as the simplest form of the Condorcet Jury Theorem predicts. We usually establish more than half of theoretically predicted

congruence between the majority of constituents' preferences and representatives' legislative decisions. In other words, in line with the Condorcet Jury Theorem, a majority of many representatives per district is more likely to produce congruence with the majority of their constituents than a majority of few representatives.

## Bibliography

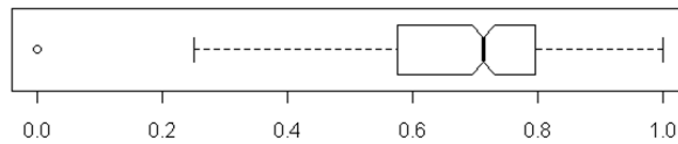
- Berend, D. & Sapir, L. (2007), 'Monotonicity in Condorcet's Jury Theorem with dependent voters', *Social Choice and Welfare* **28**(3), 507-528.
- Bohnet, I. & Frey, B. S. (1994), 'Direct-Democratic Rules: The Role of Discussion', *Kyklos* **47**(3), 341-54.
- Condorcet, Marquis de, J.-A.-N. (1785), *Essai sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix*, Imprimerie royale, Paris.
- Congleton, R. (2007), 'Informational limits to democratic public policy: The jury theorem, yardstick competition, and ignorance', *Public Choice* **132**, 333-352.
- Cox, G. W. (1997), *Making Votes Count: Strategic Coordination in the World's Electoral Systems*, Cambridge University Press, Cambridge (MA).
- Frey, B. S. (1997), 'A Constitution for Knaves Crowds out Civic Virtues', *Economic Journal* **107**(443), 1043-1053.
- Frey, B. S. (1994), 'Direct Democracy: Politico-economic Lessons from Swiss Experience', *American Economic Review* **84**(2), 338-42.
- Gerber, E. R. & Lewis, J. B. (2004), 'Beyond the Median: Voter Preferences, District Heterogeneity, and Political Representation', *Journal of Political Economy* **112**(6), 1364-1383.
- Matsusaka, J. G. (1992), 'Economics of Direct Legislation', *Quarterly Journal of Economics* **107**(2), 541-71.
- Miller, N. (1996), 'Information, individual errors, and collective performance: Empirical evidence on the Condorcet Jury Theorem', *Group Decision and Negotiation* **5**, 211-228.
- Mueller, D. C. (2003), *Public Choice*, 3<sup>rd</sup> edition, Cambridge University Press, Cambridge.
- Persson, T. & Tabellini, G. (2000), *Political Economics: Explaining Economic Policy*, MIT Press, Cambridge (MA).
- Schneider, F.; Pommerehne, W. W. & Frey, B. S. (1981), Politico-economic interdependence in a direct democracy: The case of Switzerland, in Douglas A. Hibbs & Heino Fassbender, ed., 'Contemporary Political Economy, Studies on the Interdependence of Politics and Economics', North Holland, Amsterdam.
- Portmann, M.; Stadelmann, D. & Eichenberger, R. (2010), 'District Magnitude and

Representation of the Majority's Preferences: Evidence from Popular and Parliamentary Votes', Mimeo, University of Fribourg (Switzerland).

- Stutzer, A. (2004), Where can the insights from the Condorcet Jury Theorem be applied? Comment on Luc Bovens and Wlodek Rabinowicz, *in* Anne van Aaken, Christian List & Christoph Luetge, ed., 'Deliberation and Decision', Ashgate Publishing, Hants.
- Young, H. P. (1988), 'Condorcet's Theory of Voting', *American Political Science Review* **82**(4), 1231-1244.
- Young, P. H. (1997), Group Choice and Individual Government, *in* Dennis C. Mueller, ed., 'Perspectives on Public Choice: A Handbook', Cambridge University Press, Cambridge (MA).

**Figure 1: Probability of representatives to vote as district population**

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*Notes:* The Box-Whisker-Plot is based on votes of individual political representatives to the Swiss Parliament with the preferences of the majority of their constituents expressed in referenda over the years 1996 to 2008. The whiskers extend to the most extreme data point which is no more than 1.5 times the interquartile range from the box. Dots represent observations outside the interquartile range.

**Table 1: The Condorcet Jury Theorem's mechanism in political representation - Explaining preference matches**

	Dependent variable: MajorityMatch							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
#Representatives	0.0470*** (0.0108)	0.0401*** (0.0095)	0.0420*** (0.0114)	0.0350*** (0.0101)	0.0421*** (0.0114)	0.0353*** (0.0101)	0.0452*** (0.0103)	0.0343*** (0.0082)
DistrictMatchesCH			1.8235*** (0.2484)	2.0213*** (0.2460)	1.8286*** (0.2531)	2.0319*** (0.2546)	1.8197*** (0.2593)	2.0450*** (0.2525)
TimeToElection					-2.5e-04* (1.5e-04)	-4.3e-04** (1.8e-04)	-2.5e-04* (1.5e-04)	-4.2e-04** (1.8e-04)
Income							-7.5e-06 (7.5e-06)	-1.1e-05 (8.9e-06)
Density							-3.6e-05 (8.5e-05)	9.6e-05 (1.1e-04)
Latin							-0.3842** (0.1647)	-0.0612 (0.1299)
(Intercept)	0.4780*** (0.1527)	0.8578*** (0.1412)	-1.0516*** (0.2196)	-0.8121*** (0.2432)	-0.8801*** (0.2127)	-0.5159** (0.2466)	-0.3812 (0.3355)	0.0436 (0.3617)
R2	0.0322	0.0226	0.14	0.1561	0.1425	0.1626	0.1511	0.1658
Log-Likelihood	59.2598	35.5751	268.0282	257.8128	273.1856	269.2047	290.4913	274.9143
Brier	0.2077	0.1794	0.1887	0.1587	0.1883	0.158	0.1872	0.1577
n. Obs.	2568	2344	2568	2344	2568	2344	2568	2344
Discrete change: 1 to 34 (Standard error)	0.2603*** (0.0528)	0.1917*** (0.0423)	0.2072*** (0.0524)	0.1403*** (0.0390)	0.2072*** (0.0524)	0.1402*** (0.0388)	0.1977*** (0.0458)	0.1315*** (0.0310)

**Notes:** \*\*\* indicates a significance level of below 1 %; \*\* indicates a significance level between 1 and 5 %; \* indicates significance level between 5 and 10 %. Robust standard errors for logistic models using clustering at district level are given in parenthesis below the coefficient. The "Discrete change: 1 to 34" represents the change of the predicted probability that the majority of representatives votes according to the district majority when the number of representatives increases from 1 to 34 when all other variables are entered at the median value. The standard error is calculated according to the Delta-Method.

**Appendix Table A1: Referenda in Switzerland (detailed; not intended for publication)**

<i>Original topic of referendum</i>	<i>Date</i>	<i>% yes in population and type</i>
Volksinitiative «Gegen Kampfjetlärm in Tourismusgebieten» Initiative populaire du 03.11.2005 'Contre le bruit des avions de combat à réaction dans les zones touristiques» Iniziativa popolare del 03.11.2005 'Contro il rumore dei velivoli da combattimento nelle regioni turistiche»	24.02.08	31.92 initiative
Bundesgesetz über die Verbesserung der steuerlichen Rahmenbedingungen für unternehmerische Tätigkeiten und Investitionen Loi fédérale du 23.03.2007 sur l'amélioration des conditions fiscales applicables aux activités entrepreneuriales et aux investissements (loi sur la réforme de l'imposition des entreprises II) Legge federale del 23.03.2007 sul miglioramento delle condizioni quadro fiscali per le attività e gli investimenti imprenditoriali (legge sulla riforma II dell'imposizione delle imprese)	24.02.08	50.53 facultative
Bundesgesetz über die Invalidenversicherung Modification du 6.10.2006 de la loi fédérale sur l'assurance-invalidité (LAI) Modifica del 6.10.2006 della legge federale sull'assicurazione per l'invalidità (LAI)	17.06.07	59.09 facultative
Volksinitiative «Für eine soziale Einheitskrankenkasse» Initiative populaire du 09.12.2004 'Pour une caisse maladie unique et sociale» Iniziativa popolare del 09.12.2004 'Per una cassa malati unica e sociale»	11.03.07	28.76 initiative
Bundesgesetz über die Zusammenarbeit mit den Staaten Osteuropas Loi fédérale du 24.03.2006 sur la coopération avec les Etats d'Europe de l'Est Legge federale del 24.03.2006 sulla cooperazione con gli Stati dell'Europa dell'Est	26.11.06	53.42 facultative
Bundesgesetz über die Familienzulagen Loi fédérale du 24.03.2006 sur les allocations familiales (loi sur les allocations familiales, LAFam) Legge federale del 24.03.2006 sugli assegni familiari (legge sugli assegni familiari, LAFam)	26.11.06	67.98 facultative
Volksinitiative «Nationalbankgewinne für die AHV» Initiative populaire du 09.10.2002 'Bénéfices de la Banque nationale pour l'AVS» Iniziativa popolare del 09.10.2002 'Utili della Banca nazionale per l'AVS»	24.09.06	41.74 initiative
Bundesgesetz über die Ausländerinnen und Ausländer Loi fédérale du 16.12.2005 sur les étrangers (LEtr) Legge federale del 16.12.2005 sugli stranieri (LStr)	24.09.06	67.97 facultative
Änderung des Asylgesetzes Modification du 16.12.2005 de la loi sur l'asile (LAsi) Modifica del 16.12.2005 della legge sull'asilo (LAsi)	24.09.06	67.76 facultative
Bundesbeschluss über die Neuordnung der Verfassungsbestimmungen zur Bildung Arrêté fédéral du 16.12.2005 modifiant les articles de la Constitution sur la formation Decreto federale del 16.12.2005 sul nuovo ordinamento delle disposizioni costituzionali nel settore della formazione	21.05.06	85.58 obligatory
Volksinitiative «für Lebensmittel aus gentechnikfreier Landwirtschaft» Arrêté fédéral concernant l'initiative populaire «pour des aliments produits sans manipulations génétiques» Decreto federale concernente l'iniziativa popolare «per alimenti prodotti senza manipolazioni genetiche»	27.11.05	55.67 initiative
Arbeitsgesetz (Ladenöffnungszeiten in Zentren des öffentlichen Verkehrs) Loi fédérale sur le travail dans l'industrie, l'artisanat et le commerce (Loi sur le travail) Legge federale sul lavoro nell'industria, nell'artigianato e nel commercio (Legge sul lavoro)	27.11.05	50.56 facultative
Bundesbeschluss über die Ausdehnung des Personenfreizügigkeitsabkommens auf die neuen EU-Staaten und über die Revision der flankierenden Massnahmen Arrêté fédéral portant approbation et mise en oeuvre du protocole relatif à l'extension de l'accord entre la Confédération suisse, d'une part, et la Communauté européenne et ses Etats membres, d'autre part, sur la libre circulation des personnes aux nouve Decreto federale che approva e traspone nel diritto svizzero, mediante revisione delle misure collaterali, il Protocollo concluso con la Comunità europea e i suoi Stati membri relativo all'estensione dell'Accordo sulla libera circolazione delle	25.09.05	55.98 facultative
Bundesbeschluss über die Genehmigung und die Umsetzung der bilateralen Abkommen zwischen der Schweiz und der EU über die Assoziierung an Schengen und Dublin Arrêté fédéral du 17.12.2004 portant approbation et mise en oeuvre des accords bilatéraux d'association à l'Espace Schengen et à l'Espace Dublin Decreto federale del 17.12.2004 che approva e traspone nel diritto svizzero gli accordi bilaterali con l'UE per l'associazione della Svizzera alla normativa di Schengen e Dublino	05.06.05	54.63 facultative
Bundesgesetz über die eingetragene Partnerschaft gleichgeschlechtlicher Paare (Partnerschaftsgesetz, PartG) Loi fédérale du 18.06.2004 sur le partenariat enregistré entre personnes du même sexe (loi sur le partenariat, Lpart) Legge federale del 18.06.2004 sull'unione domestica registrata di coppie omolesuali (legge sull'unione domestica registrata, LUD)	05.06.05	58.04 facultative
Bundesbeschluss zur Neugestaltung des Finanzausgleichs und der Aufgabenteilung zwischen Bund und Kantonen (NFA) Arrêté fédéral du 03.10.2003 concernant la réforme de la péréquation financière et de la répartition des tâches entre la Confédération et les cantons (RPT) Decreto federale del 03.10.2003 concernente la nuova impostazione della perequazione finanziaria e della ripartizione dei compiti tra Confederazione e Cantoni (NPC)	28.11.04	64.37 obligatory
Bundesbeschluss über eine neue Finanzordnung Arrêté fédéral du 19.03.2004 sur un nouveau régime financier Decreto federale del 19.03.2004 concernente un nuovo ordinamento finanziario	28.11.04	73.81 obligatory



Bundesgesetz über die Forschung an embryonalen Stammzellen Loi fédérale du 19.12.2003 relative à la recherche sur les cellules souches embryonnaires (Loi relative à la recherche sur les cellules souches, LRCS) Legge federale del 19.12.2003 concernente la ricerca sugli embrioni soprannumerari e le cellule staminali embrionali (Legge sulla ricerca embrionale, LRE)	28.11.04	66.39 facultative
Bundesbeschluss über die ordentliche Einbürgerung sowie über die erleichterte Einbürgerung junger Ausländerinnen und Ausländer der zweiten Generation Arrêté fédéral du 03.10.2003 sur la naturalisation ordinaire et sur la naturalisation facilitée des jeunes étrangers de la deuxième génération Decreto federale del 03.10.2003 sulla naturalizzazione ordinaria e la naturalizzazione agevolata dei giovani stranieri della seconda generazione	26.09.04	43.24 obligatory
Bundesbeschluss über den Bürgerrechtserwerb von Ausländerinnen und Ausländern der dritten Generation Arrêté fédéral du 03.10.2003 sur l'acquisition de la nationalité par les étrangers de la troisième génération Decreto federale del 03.10.2003 sull'acquisto della cittadinanza degli stranieri della terza generazione	26.09.04	48.37 obligatory
Volksinitiative 'Postdienst für alle' Initiative populaire du 26.04.2002 'Services postaux pour tous' Iniziativa popolare del 26.04.2002 'Servizi postali per tutti'	26.09.04	49.77 initiative
Bundesgesetz über die Erwerbsersatzordnung für Dienstleistende in Armee, Zivildienst und Zivilschutz (Erwerbsersatzgesetz, EOG) Modification du 03.10.2003 de la loi fédérale sur le régime des allocations pour perte de gain en faveur des personnes servant dans l'armée, dans le service civil ou dans la protection civile (Loi sur les allocations pour perte de gain, LAPG) Modifica del 03.10.2003 della legge federale sulle indennità di perdita di guadagno in caso di servizio militare, servizio civile o servizio di protezione civile (Legge sulle indennità di perdita di guadagno, LIPG)	26.09.04	55.45 facultative
Bundesgesetz über die Alters- und Hinterlassenenversicherung (11. AHV-Revision) Loi fédérale sur l'assurance-vieillesse et survivants (LAVS) (11e révision de l'AVS) Legge federale sull'assicurazione per la vecchiaia e per i superstiti (LAVS) (11a revisione dell'AVS)	16.05.04	32.1 facultative
Bundesbeschluss über die Finanzierung der AHV/IV durch Anhebung der Mehrwertsteuersätze Arrêté fédéral du 03.10.2004 sur le financement de l'AVS/AI par le biais d'un relèvement de la taxe sur la valeur ajoutée Decreto federale del 03.10.2003 relativo al finanziamento dell'AVS/AI mediante l'aumento delle aliquote dell'imposta sul valore aggiunto	16.05.04	31.42 obligatory
Gegenentwurf zur Volksinitiative «Avanti – für sichere und leistungsfähige Autobahnen» Contre-projet de l'Assemblée fédérale du 03.10.2003 relatif à l'Initiative populaire «Avanti - pour des autoroutes sûres et performantes» Controprogetto dell'Assemblea federale del 03.10.2003 relativo all'Iniziativa popolare «Avanti - per autostrade sicure ed efficienti»	08.02.04	37.2 initiative (cp)
Obligationenrecht (Miete). Änderung Code des obligations (Bail à loyer) Codice delle obbligazioni (Locazione)	08.02.04	35.93 facultative
Bundesgesetz über die Armee und die Militärverwaltung (Armee XXI) Loi fédérale sur l'armée et l'administration militaire (Loi sur l'armée, LAAM), Modification Legge federale sull'esercito e sull'amministrazione militare (Legge militare, LM), Modifica	18.05.03	76.04 facultative
Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz Loi fédérale sur la protection de la population et sur la protection civile (LPPCi) Legge federale sulla protezione della popolazione e sulla protezione civile (LPPC)	18.05.03	80.56 facultative
Volksinitiative «Ja zu fairen Mieten» Initiative populaire «pour des loyers loyaux» Iniziativa popolare «Per delle pigioni corrette»	18.05.03	32.73 initiative
Volksinitiative «für einen autofreien Sonntag pro Jahreszeit - ein Versuch für vier Jahre» Initiative populaire «Pour un dimanche sans voitures par saison - un essai limité à quatre ans (Initiative des dimanches)» Iniziativa popolare «per una domenica senz'auto ogni stagione - una prova per quattro anni (iniziativa per le domeniche)»	18.05.03	37.65 initiative
Volksinitiative «Gesundheit muss bezahlbar bleiben» Initiative populaire «La santé à un prix abordable (initiative-santé)» Iniziativa popolare «La salute a prezzi accessibili (iniziativa sulla salute)»	18.05.03	27.09 initiative
Volksinitiative «Gleiche Rechte für Behinderte» Initiative populaire «Droits égaux pour les personnes handicapées» Iniziativa popolare «Parità di diritti per i disabili»	18.05.03	37.67 initiative
Volksinitiative «Strom ohne Atom - Für eine Energiewende und die schrittweise Stilllegung der Atomkraftwerke» Initiative populaire «Sortir du nucléaire - Pour un tournant dans le domaine de l'énergie et pour la désaffectation progressive des centrales nucléaires (Sortir du nucléaire)» Iniziativa popolare «Corrente senza nucleare - Per una svolta energetica e la disattivazione progressiva delle centrali nucleari (Corrente senza nucleare)»	18.05.03	33.71 initiative
Volksinitiative «MoratoriumPlus - Für die Verlängerung des Atomkraftwerk-Baustopps und die Begrenzung des Atomrisikos» Initiative populaire «Moratoire-plus - Pour la prolongation du moratoire dans la construction de centrales nucléaires et la limitation du risque nucléaire (Moratoire-plus)» Iniziativa popolare «Moratoria più - Per la proroga del blocco della costruzione di centrali nucleari e il contenimento del rischio nucleare (Moratoria più)»	18.05.03	41.6 initiative
Volksinitiative «für ein ausreichendes Berufsbildungsangebot» Initiative populaire «Pour une offre appropriée en matière de formation professionnelle (Initiative pour des places d'apprentissage)» Iniziativa popolare federale «per un'offerta appropriata di posti di tirocinio (Iniziativa sui posti di tirocinio)»	18.05.03	31.61 initiative

Bundesbeschluss über die Änderung der Volksrechte Arrêté fédéral relatif à la révision des droits populaires Decreto federale concernente la revisione dei diritti popolari	09.02.03	70.35 obligatory
Bundesgesetz über die Anpassung der kantonalen Beiträge an Spitalbehandlungen Loi fédérale sur l'adaptation des participations cantonales aux coûts des traitements hospitaliers dispensés dans le canton selon la loi fédérale sur l'assurance-maladie Legge federale sull'adeguamento dei contributi cantonali per le cure stazionarie all'interno dei Cantoni in base alla legge federale sull'assicurazione malattie	09.02.03	77.36 facultative
Volksinitiative «gegen Asylrechtsmissbrauch» Initiative populaire «contre les abus dans le droit d'asile» Iniziativa popolare «contro gli abusi in materia di asilo»	24.11.02	49.91 initiative
Bundesgesetz über die obligatorische Arbeitslosenversicherung und die Insolvenzschiädigung Modification de la loi fédérale sur l'assurance-chômage obligatoire et l'indemnité en cas d'insolvabilité Modifica della legge federale sull'assicurazione obbligatoria contro la disoccupazione e l'indennità per insolvenza	24.11.02	56.1 facultative
Volksinitiative «Überschüssige Goldreserven in den AHV-Fonds» Initiative populaire «pour le versement au fonds AVS des réserves d'or excédentaires de la Banque nationale suisse» Iniziativa popolare «per destinare le riserve d'oro eccedentarie della Banca nazionale svizzera al Fondo AVS»	22.09.02	46.37 initiative
Gold für AHV, Kantone und Stiftung (Gegenvorschlag zur Goldinitiative) Contre-projet: «L'or à l'AVS, aux cantons et à la Fondation» Controprogetto: «L'oro all'AVS, ai Cantoni e alla Fondazione»	22.09.02	46.39 initiative (cp)
Elektrizitätsmarktgesetz Loi sur le marché de l'électricité (LME) Legge sul mercato dell'energia elettrica (LMEE)	22.09.02	47.42 facultative
Schweizerisches Strafgesetzbuch (Schwangerschaftsabbruch, Fristenregelung) Modification du code pénal suisse (Interruption de grossesse) Modifica del Codice penale svizzero (Interruzione della gravidanza)	02.06.02	72.15 facultative
Volksinitiative «für Mutter und Kind - für den Schutz des ungeborenen Kindes und für die Hilfe an seine Mutter in Not» Initiative populaire «pour la mère et l'enfant» Iniziativa popolare «per madre e bambino»	02.06.02	18.25 initiative
Volksinitiative «für den Beitritt der Schweiz zur Organisation der Vereinten Nationen (UNO)» Initiative populaire fédérale «pour l'adhésion de la Suisse à l'Organisation des Nations Unies (ONU)» Iniziativa popolare federale «per l'adesione della Svizzera all'Organizzazione delle Nazioni Unite (ONU)»	03.03.02	54.61 initiative
Volksinitiative «für eine kürzere Arbeitszeit» Initiative populaire fédérale «pour une durée du travail réduite» Iniziativa popolare federale «per una durata ridotta del lavoro»	03.03.02	25.37 initiative
Bundesbeschluss über eine Schuldenbremse Arrêté fédéral concernant un frein à l'endettement Decreto federale sul freno all'indebitamento	02.12.01	84.74 obligatory
Volksinitiative «für eine gesicherte AHV - Energie statt Arbeit besteuern!» Initiative populaire «pour garantir l'AVS - taxer l'énergie et non le travail!» Iniziativa popolare «per garantire l'AVS - tassare l'energia e non il lavoro!»	02.12.01	22.86 initiative
Volksinitiative «für eine glaubwürdige Sicherheitspolitik und eine Schweiz ohne Armee» Initiative populaire «pour une politique de sécurité crédible et une Suisse sans armée» Iniziativa popolare «per una politica di sicurezza credibile e una Svizzera senza esercito»	02.12.01	21.9 initiative
Volksinitiative «Solidarität schafft Sicherheit: Für einen freiwilligen zivilen Friedensdienst (ZFD)» Initiative populaire «La solidarité crée la sécurité: pour un service civil volontaire pour la paix (SCP)» Iniziativa popolare «la solidarietà crea sicurezza: per un servizio civile volontario per la pace (SCP)»	02.12.01	23.21 initiative
Volksinitiative «für eine Kapitalgewinnsteuer» Initiative populaire «pour un impôt sur les gains en capital» Iniziativa popolare «per un'imposta sugli utili da capitale»	02.12.01	34.11 initiative
Bundesgesetz über die Armee und die Militärverwaltung (Bewaffnung) Modification du 06.10.2000 de la loi fédérale sur l'armée et l'administration militaire (LAAM) (Armement) Modifica del 06.10.2000 della legge federale sull'esercito e sull'amministrazione militare (Legge militare, LM) (Armamento)	10.06.01	50.99 facultative
Bundesgesetz über die Armee und die Militärverwaltung (Ausbildungszusammenarbeit) Modification du 06.10.2000 de la loi fédérale sur l'armée et l'administration militaire (LAAM) (Coopération en matière d'instruction) Modifica del 06.10.2000 della legge federale sull'esercito e sull'amministrazione militare (Legge militare, LM) (Cooperazione in materia di istruzione)	10.06.01	51.14 facultative
Bundesbeschluss über die Aufhebung der Genehmigungspflicht für die Errichtung von Bistümern Arrêté fédéral du 15 décembre 2000 portant abrogation de la disposition constitutionnelle soumettant l'érection des évêchés à l'approbation de la Confédération Decreto federale del 15 dicembre 2000 concernente la soppressione dell'obbligo d'approvazione per l'istituzione di diocesi	10.06.01	64.2 obligatory
Volksinitiative «Ja zu Europa!» Initiative populaire fédérale «Oui à l'Europe!» Iniziativa popolare «Sì all'Europa!»	04.03.01	23.15 initiative
Volksinitiative «für tiefere Arzneimittelpreise» Initiative populaire fédérale «pour des médicaments à moindre prix» Iniziativa popolare «Per farmaci a prezzi più bassi»	04.03.01	30.85 initiative

Volksinitiative «für mehr Verkehrssicherheit durch Tempo 30 innerorts mit Ausnahmen (Strassen für alle)» Initiative populaire fédérale «pour plus de sécurité à l'intérieur des localités grâce à une vitesse maximale de 30 km/h assortie d'exceptions (Rues pour tous)» Iniziativa popolare «per una maggior sicurezza stradale grazie alla velocità massima dei 30 km/h nelle località, con eccezioni (Strade per tutti)»	04.03.01	20.3 initiative
Volksinitiative «für eine Flexibilisierung der AHV - gegen die Erhöhung des Rentenalters für Frauen» Initiative populaire «pour un assouplissement de l'AVS - contre le relèvement de l'âge de la retraite des femmes» Iniziativa popolare «a favore di un'AVS flessibile - contro l'aumento dell'età di pensionamento per le donne»	26.11.00	39.47 initiative
Volksinitiative «für ein flexibles Rentenalter ab 62 für Frau und Mann» Initiative populaire «pour une retraite à la carte dès 62 ans, tant pour les femmes que pour les hommes» Iniziativa popolare «per un'età pensionabile flessibile: dai 62 anni per donne e uomini»	26.11.00	46.02 initiative
Volksinitiative «Sparen beim Militär und der Gesamtverteidigung - für mehr Frieden und zukunftsgerichtete Arbeitsplätze» Initiative populaire «Economiser dans l'armée et la défense générale - pour davantage de paix et d'emplois d'avenir» Iniziativa popolare 'Risparmi nel settore militare e della difesa integrata - per più pace e posti di lavoro con un futuro»	26.11.00	37.62 initiative
Volksinitiative «für tiefere Spitalkosten» Initiative populaire «pour des coûts hospitaliers moins élevés» Iniziativa popolare «per costi ospedalieri più bassi»	26.11.00	17.89 initiative
Bundspersonalgesetz Loi sur le personnel de la Confédération (LPers) Legge sul personale federale (LPers)	26.11.00	66.83 facultative
Volksinitiative «für einen Solarrappen» Initiative populaire «pour l'introduction d'un centime solaire (Initiative solaire)» Iniziativa popolare «per l'introduzione di un centesimo solare» (Iniziativa solare)	24.09.00	31.26 initiative
Gegenentwurf Verfassungsartikel über eine Förderabgabe für erneuerbare Energien Contre-projet: Article constitutionnel sur une redevance pour l'encouragement des énergies renouvelables Controprogetto: Articolo costituzionale sulla tassa di incentivazione per le energie rinnovabili	24.09.00	45.28 initiative (cp)
Verfassungsartikel über eine Energielenkungsabgabe für die Umwelt (Gegenentwurf zur zurückgezogenen Energie-Umwelt-Initiative) Article constitutionnel sur une redevance incitative sur l'énergie en faveur de l'environnement (contre-projet à l'initiative énergie et environnement, qui a été retirée) Articolo costituzionale sulla tassa di incentivazione sull'energia per l'ambiente (controprogetto concernente l'iniziativa energia e ambiente che è stata ritirata)	24.09.00	44.51 initiative (cp)
Volksinitiative «für eine Regelung der Zuwanderung» Initiative populaire «pour une réglementation de l'immigration» Iniziativa popolare «per una regolamentazione dell'immigrazione»	24.09.00	36.2 initiative
Volksinitiative «Mehr Rechte für das Volk dank dem Referendum mit Gegenvorschlag» Initiative populaire «pour davantage de droits au peuple grâce au référendum avec contre-proposition» Iniziativa popolare «Più diritti per il Popolo grazie al referendum con controproposta»	24.09.00	34.1 initiative
Bundesbeschluss über die Genehmigung der sektoriellen Abkommen zwischen der Schweizerischen Eidgenossenschaft einerseits und der Europäischen Gemeinschaft andererseits Arrêté fédéral portant approbation des accords sectoriels entre, d'une part, la Confédération suisse et, d'autre part, la Communauté européenne ainsi que, le cas échéant, ses Etats membres ou la Communauté européenne de l'énergie atomique Decreto federale che approva gli accordi settoriali fra la Confederazione Svizzera da una parte e la Comunità europea nonché eventualmente i suoi Stati membri o la Comunità europea dell'energia atomica dall'altra	21.05.00	67.19 facultative
Bundesbeschluss über die Justizreform Arrêté fédéral relatif à la réforme de la justice Decreto federale sulla riforma giudiziaria	12.03.00	86.36 obligatory
Volksinitiative «für Beschleunigung der direkten Demokratie (Behandlungsfristen für Volksinitiativen in Form eines ausgearbeiteten Entwurfs)» Initiative populaire fédérale «pour une démocratie directe plus rapide (Délai de traitement des initiatives populaires présentées sous forme de projet rédigé de toutes pièces)» Iniziativa popolare «per accelerare la democrazia diretta (termini di trattazione per le iniziative popolari in forma di progetto elaborato)»	12.03.00	30 initiative
Volksinitiative «für eine gerechte Vertretung der Frauen in den Bundesbehörden (Initiative 3. März)» Initiative populaire fédérale «pour une représentation équitable des femmes dans les autorités fédérales (Initiative du 3 mars)» Iniziativa popolare federale «per un'equa rappresentanza delle donne nelle autorità federali (Iniziativa 3 marzo)»	12.03.00	17.97 initiative
Volksinitiative «zum Schutze des Menschen vor Manipulationen in der Fortpflanzungstechnologie (Initiative für menschenwürdige Fortpflanzung [FMF])» Initiative populaire fédérale «pour la protection de l'être humain contre les techniques de reproduction artificielle (Initiative pour une procréation respectant la dignité humaine [PPD])» Iniziativa popolare «per la protezione dell'essere umano dalle manipolazioni nella tecnologia riproduttiva (Iniziativa per una riproduzione rispettosa della dignità umana [RRD])»	12.03.00	28.24 initiative
Volksinitiative «für die Halbierung des motorisierten Strassenverkehrs zur Erhaltung und Verbesserung von Lebensräumen (Verkehrshalbierungs-Initiative)» Initiative populaire fédérale «visant à réduire de moitié le trafic routier motorisé afin de maintenir et d'améliorer des espaces vitaux (initiative pour la réduction du trafic)» Iniziativa popolare «per il dimezzamento del traffico stradale motorizzato, allo scopo di salvaguardare e di migliorare gli spazi vitali (Iniziativa per dimezzare il traffico)»	12.03.00	21.33 initiative

Asylgesetz	13.06.99	70.59
Loi sur l'asile (LAsi)		facultative
Legge sull'asilo (LAsi)		
Bundesbeschluss über dringliche Massnahmen im Asyl- und Ausländerbereich	13.06.99	70.84
Arrêté fédéral sur les mesures d'urgence dans le domaine de l'asile et des étrangers (AMU)		facultative
Decreto federale concernente misura urgente nell'ambito dell'asilo e degli stranieri (DMAS)		
Bundesbeschluss über die ärztliche Verschreibung von Heroin	13.06.99	54.42
Arrêté fédéral sur la prescription médicale d'héroïne		facultative
Decreto federale concernente la prescrizione medica di eroina		
Bundesgesetz über die Invalidenversicherung	13.06.99	30.29
Loi fédérale sur l'assurance-invalidité (LAI)		facultative
Legge federale sull'assicurazione per l'invalidità (LAI)		
Bundesgesetz über die Mutterschaftsversicherung	13.06.99	38.99
Loi fédérale sur l'assurance-maternité		facultative
Legge federale sull'assicurazione per la maternità		
Bundesbeschluss über eine neue Bundesverfassung	18.04.99	59.16
Arrêté fédéral relatif à une mise à jour de la Constitution fédérale		obligatory
Decreto federale su una nuova Costituzione federale		
Bundesbeschluss über die Änderung der Voraussetzung für die Wählbarkeit in den Bundesrat	07.02.99	74.67
Arrêté fédéral concernant la modification des conditions d'éligibilité au Conseil fédéral		obligatory
Decreto federale concernente la modifica delle condizioni di eleggibilità al Consiglio federale		
Bundesbeschluss betreffend die Verfassungsbestimmung über die Transplantationsmedizin	07.02.99	87.77
Arrêté fédéral concernant un article constitutionnel sur la médecine de la transplantation		obligatory
Decreto federale concernente un articolo costituzionale sulla medicina di trapianti		
Volksinitiative «Wohneigentum für alle»	07.02.99	41.32
Initiative populaire fédérale «Propriété du logement pour tous»		initiative
Iniziativa popolare 'abitazione in proprietà per tutti»		
Bundesgesetz über die Raumplanung	07.02.99	55.94
Loi fédérale sur l'aménagement du territoire (LAT)		facultative
Legge federale sulla pianificazione del territorio (LPT)		
Bundesbeschluss über Bau und Finanzierung von Infrastrukturvorhaben des öffentlichen Verkehrs	29.11.98	63.5
Arrêté fédéral relatif à la réalisation et au financement des projets d'infrastructure des transports publics		obligatory
Decreto federale concernente la costruzione e il finanziamento dei progetti d'infrastruttura dei trasporti pubblici		
Bundesbeschluss über einen befristet geltenden, neuen Getreideartikel	29.11.98	79.43
Arrêté fédéral sur un nouvel article céréalier de durée limitée		obligatory
Decreto federale concernente un nuovo articolo di validità limitata sui cereali		
Volksinitiative «für eine vernünftige Drogenpolitik»	29.11.98	26.01
Initiative populaire «pour une politique raisonnable en matière de drogue»		initiative
Iniziativa popolare «per una politica ragionevole in materia di droga»		
Bundesgesetz über die Arbeit in Industrie, Gewerbe und Handel	29.11.98	63.38
Loi fédérale sur le travail dans l'industrie, l'artisanat et le commerce (Loi sur le travail)		facultative
Legge federale sul lavoro nell'industria, nell'artigianato e nel commercio (Legge sul lavoro)		
Bundesgesetz über eine leistungsabhängige Schwerverkehrsabgabe	27.09.98	57.2
Loi fédérale concernant une redevance sur le trafic des poids lourds liée aux prestations		facultative
Legge federale concernente una tassa sul traffico pesante commisurata alle prestazioni		
Volksinitiative «für preisgünstige Nahrungsmittel und ökologische Bauernhöfe»	27.09.98	22.99
Initiative populaire «pour des produits alimentaires bon marché et des exploitations agricoles écologiques»		initiative
Iniziativa popolare «per prodotti alimentari a buon mercato e aziende rurali di coltura ecologica»		
Volksinitiative «für die 10. AHV-Revision ohne Erhöhung des Rentenalters»	27.09.98	41.48
Initiative populaire «pour la 10e révision de l'AVS sans relèvement de l'âge de la retraite»		initiative
Iniziativa popolare «per la 10e revisione dell'AVS senza aumento dell'età di pensionamento»		
Bundesbeschluss über Massnahmen zum Haushaltsausgleich	07.06.98	70.7
Arrêté fédéral instituant des mesures visant à équilibrer le budget		obligatory
Decreto federale che istituisce provvedimenti intesi a equilibrare il bilancio		
Volksinitiative «zum Schutz von Leben und Umwelt vor Genmanipulation (Gen-Schutz-Initiative)»	07.06.98	33.29
Initiative populaire «pour la protection de la vie et de l'environnement contre les manipulations génétiques (Initiative pour la protection génétique)»		initiative
Iniziativa popolare «per la protezione della vita e dell'ambiente dalla manipolazione genetica (Iniziativa protezione		
Volksinitiative «S.o.S. - Schweiz ohne Schnüffelpolizei»	07.06.98	24.59
Initiative populaire «S.o.S. - pour une Suisse sans police fouineuse»		initiative
Iniziativa popolare «S.o.S. - per una Svizzera senza polizia ficcanaso»		
Bundesbeschluss über die Finanzierung der Arbeitslosenversicherung	28.09.97	49.18
Arrêté fédéral sur le financement de l'assurance-chômage		facultative
Decreto federale concernente il finanziamento dell'assicurazione contro la disoccupazione		
Volksinitiative «Jugend ohne Drogen»	28.09.97	29.34
Initiative populaire «Jeunesse sans drogue»		initiative
Iniziativa popolare «Gioventù senza droghe»		
Volksinitiative «EU-Beitrittsverhandlungen vors Volk!»	08.06.97	25.95
Initiative populaire fédérale «Négociations d'adhésion à l'UE: que le peuple décide!»		initiative
Iniziativa popolare «Negozianti d'adesione all'UE: decida il popolo!»		

Volksinitiative «für ein Verbot der Kriegsmaterialausfuhr» Initiative populaire fédérale «pour l'interdiction d'exporter du matériel de guerre» Iniziativa popolare «per un divieto di esportazione di materiale bellico»	08.06.97	22.5 initiative
Bundesbeschluss über die Aufhebung des Pulverregals Arrêté fédéral concernant la suppression de la régale des poudres Decreto federale concernente la soppressione della regalia delle polveri	08.06.97	82.18 obligatory
Volksinitiative «gegen die illegale Einwanderung» Arrêté fédéral concernant l'Initiative populaire «contre l'immigration clandestine» Decreto federale concernente l'Iniziativa popolare «contro l'immigrazione clandestina»	01.12.96	46.34 initiative
Bundesgesetz über die Arbeit in Industrie, Gewerbe und Handel Loi fédérale sur le travail dans l'industrie, l'artisanat et le commerce (Loi sur le travail) Legge federale sul lavoro nell'industria, nell'artigianato e nel commercio (Legge sul lavoro)	01.12.96	32.97 facultative
Gegenentwurf zur Volksinitiative «Bauern und Konsumenten - für eine naturnahe Landwirtschaft» Contre-projet relatif à l'Initiative populaire «Paysans et consommateurs - pour une agriculture en accord avec la nature» Controprogetto relativo all'Iniziativa popolare «Contadini e consumatori - per un'agricoltura in armonia con la natura»	09.06.96	77.59 initiative (cp)
Bundesbeschluss über den Uebertritt der bernischen Gemeinde Vellerat zum Kanton Jura Arrêté fédéral sur le transfert de la commune bernoise de Vellerat au canton du Jura Decreto federale sul passaggio del Commune bernese di Vellerat al Canton Giura	10.03.96	91.64 obligatory

**Table A2: Data Description & Sources**

<i>Variable</i>	<i>Description &amp; Source</i>	<i>Mean</i>	<i>SD</i>
MajorityMatch	Indicator variable: Majority of representatives voted according to district majority. Swissvotes Database and Swiss Parliamentary Services.	0.6943	0.4608
#Representatives	A district's number of representatives in the Swiss National parliament. Swiss Parliamentary Services.	7.9040	7.9520
DistrictMatchesCH	Indicator variable: If majority of voters in a representatives's districts votes as majority of voters in Switzerland. Swissvotes Database.	0.8777	0.3277
TimeToElection	Number of days between referendum and the next parliamentary election. Swissvotes Database.	689.40	407.44
Income	District GDP per capita in Swiss Francs. Federal Statistical Office.	51750.0	14156.1
Density	Population density. Federal Statistical Office.	456.30	983.86
Latin	Indicator variable: If the canton is largely French or Italian speaking value is 1. Federal Statistical Office.	0.2765	0.4473

**Notes:** Descriptive statistics are for 2568 observations (district majority decisions) based on 17674 individual decisions of members of parliament on 102 referenda from 1996 to 2008. Data sources indicated next to variable descriptions.