POLITICIANS AND PREFERENCES OF THE VOTER MAJORITY: DOES GENDER MATTER?

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Does the gender of political representatives affect the extent to which they adhere to the voter majority's preferences? By matching individual male and female representatives' votes on legislative proposals with real referendum outcomes on the same issues, we obtain a direct measure of divergence. We find that female and male representatives adhere equally close to the majority's preferences if party affiliations are taken into account. This suggests that observed gender differences with respect to the national majority of voters may be reduced to an ideological left–right dimension.

1. INTRODUCTION

Political representation is often regarded as the activity of making citizens' voices present in the political process (Pitkin, 1967). Delegates in parliament are expected to represent voters' opinions. But the literature documents large deviations of parliamentary decisions from overall voters' preferences (Gerber and Lewis, 2004; Stadelmann et al., 2012, 2013). Economists and political scientists have studied the effects of diverse political institutions on representation of voters' preferences, such as media and campaigning regulations, lobbying, majoritarian vs. plurality party systems, term restrictions, and many more (see Persson and Tabellini, 2000; Mueller, 2003 for overviews).

The influence of personal characteristics and, in particular, of gender on political representation of the voter majority's preferences has been comparatively understudied. This is astonishing for at least three reasons: First, differential gender effects have been documented to exist in many areas of human behavior (see, among others, Davis et al., 2006 for an overview). Second, in parliaments around the world the share of women holding seats has increased substantially during the last decades to an average of approximately 21.4% of representatives in 2013 according to the Inter-Parliamentary Union. Third, there is evidence that women affect political processes differently than men and that women in politics are more socially minded (see, e.g., Chattopadhyay and Duflo, 2004 for a frequently cited study). So far, however, we have little knowledge about gender effects in parliaments and no knowledge at all about whether female parliamentarians represent revealed preferences of the voter majority at the national level differently than male parliamentarians. In this study we contribute to filling this gap.

We analyze whether female or male members of parliament adhere more closely to the preferences of the national voter majority. Switzerland offers a highly informative setting for a systematic analysis of representatives' voting behavior and the majority's preferences. Like in other democratic countries, members of the Swiss national parliament vote on amendments to the law and the constitution. But all amendments may

be subject to a popular vote before they are enacted. In addition, citizens can start an initiative for a constitutional amendment. Referenda reveal preferences of voters for policy outcomes and allow ranking proposals against the status quo (Frey, 1994; Matsusaka, 2010; Schneider et al., 1981). Referendum results can be matched with votes from female and male members of parliament on exactly the same political decision with identical wording resulting in a direct measure of political congruence and divergence.

We empirically investigate whether representatives of either gender adhere differently to citizens' preferences in legislative decisions controlling for personal characteristics of representatives, differences between district and national preferences, economic variables and, in particular, party position. A first look at data provides a number of interesting insights: Partial correlations suggest that women adhere slightly less to the majority's preferences than men, when political party affiliations are not accounted for. However, once we control for party affiliations, women's lower responsiveness to the majority's preferences vanishes entirely, i.e., women do not diverge more from the majority than men when party affiliation is accounted for. Similar to other countries, elected Swiss female legislators affiliate rather with left parties than with right parties and divergence is mainly driven through party affiliations instead of gender. The rich Swiss institutional setting allows us to explore the moderating influence of cultural factors, potential biases against women in politics and pro-welfare voting recommendations. Such moderating factors do not play a substantial role when directly focusing on representation of the majority's preferences. Thus, the ideological left–right dimension reflected by parties alone accounts for all observed differences in overall divergence by elected female and male representatives, a result which is analogous to the reduction of the effect of nationality to a left–right dimension for members of the European parliament (Hix et al., 2007).[1] As we know the party affiliation of all representatives, we explore divergence within left, center, and right parties separately. Divergence patterns within parties point to a residual effect of gender. In particular, we find evidence consistent with a stronger left alignment of women in politics in general: Results indicate that women from left parties tend to diverge slightly more while women from right parties diverge significantly less than men from citizens' preferences.

The remainder of this study is structured as follows: section 2 provides a review of the literature on representation and gender effects. Our econometric model and data on Swiss referenda and parliamentary decisions are discussed in section 3. Empirical results for all members of parliament in 118 national referenda over the years 1996–2009 are presented in section 4. Finally, section 5 offers some concluding remarks and suggests first potential policy consequences.

2. LITERATURE

2.1 Representation of Voter Preferences

Political representatives deviate from voters' positions (see, among others, Gerber and Lewis, 2004; Levitt, 1996; Matsusaka, 1995; Stadelmann et al., 2013). Theoretical and empirical contributions suggest that representatives react to the most diverse stimuli apart from voters' positions, such as campaign contributions (e.g., Stratmann, 1992),

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[1]Gender effects in representation of the majority's preferences are effectively reduced to a single left–right policy dimension.

district magnitude (e.g., Portmann et al., 2012), political parties (e.g., Carey, 2007) or, in particular, the national electorate with its different subsets of constituents (e.g., Jung et al., 1994). However, the effect of a gender on representation of revealed preferences of the national majority has not been directly analyzed.

In general, Stratmann (1995), Gerber and Lewis (2004), and Golder and Stramski (2010) argue that a major problem of empirical studies analyzing representation is to determine voters' preferences with respect to law proposals and to match them with decisions or positions of members of parliament. We overcome such measurement problems and complement the literature on congruence by comparing real decisions in parliament with referendum results on precisely the same issues with identical wording. Thus, we are able to identify how the gender of a representative affects the probability that she or he votes with the voter majority. The use of a direct measure of congruence relying on referenda and roll call votes has been advocated by Hermann and Leuthold (2007) for Switzerland and suggested by Matsusaka (2010) for the United States. In Switzerland this measure of congruence has been recently applied by Portmann et al. (2012), Stadelmann et al. (2012, 2013), and Carey and Hix (2013); for the United States Brunner et al. (2013) provide an application. None of these contributions analyzes the effect of gender on representation of the national majority's preferences.

While gender differences in parliamentary representation are understudied, socioeconomic gender differences and their effects have been analyzed and documented in many areas including the welfare state, family, education, labor markets, and politics (see, among others, Blau and Kahn, 2000; Croson and Gneezy, 2009; Davis et al., 2006). In particular, experimental results of variants of prisoner's dilemma games show that differences in preferences between women and men exist and they may affect representatives' behavior and policy outcomes.

2.2 *Effects of Gender on Policies and in Parliaments*

Focusing on policy consequences of female suffrage, Lindert (1994) shows that extending voting rights to women is associated with the political will to redistribute, and that the share of franchised-gender adults shaped the impact of democracy on the welfare state. Aidt et al. (2006) and Aidt and Dallal (2008) examine the effect of female suffrage on fiscal policies in Europe and show that it increased public spending on health, education, housing, redistribution, and social insurance. Lott and Kenny (1999) argue that the adoption of female suffrage coincided with increases in expenditures and more liberal voting patterns for representatives. Edlund and Pande (2002) explain female preferences with respect to redistribution and left-wing policies by the decline in marriage rates which made women relatively poorer than men in the United States. Abrams and Settle (1999) use Swiss data to show that voting rights increased social welfare spending as well as the size of government in general. For the Swiss cantons Stutzer and Kienast (2005) do not find a direct effect of female suffrage on total expenditure while results by Krogstrup and Wälti (2011) indicate that level female enfranchisement reduces budget deficits. Analyzing data from 1870 to 1930 for 22 OECD countries, Bertocchi (2011) finds that women's suffrage correlates positively with income and negatively with a more conservative environment, but the effect of suffrage is moderated by cultural factors. Funk and Gathmann (2008) suggest that women tend to favor a different composition of government spending which centers

on welfare, health, and the environment. Focusing on political responsiveness in the form of health spending, Miller (2008) shows that suffrage rights for American women contributed to declining child mortality.

Turning to representatives' behavior, Washington (2008) provides evidence that it is affected by personal characteristics, in particular, having daughters. The propensities of legislators to vote more liberally increase with the number of daughters. Focusing on voters' children, Oswald and Powdthavee (2010) use longitudinal data for the United Kingdom which indicate that having daughters makes people more likely to support left-wing political parties. Using a random allocation of council head positions in India, Chattopadhyay and Duflo (2004) show that women's policy decisions are different from men's decisions which affects the types of public goods provided. Swers (2005) argues that the activity of women for social welfare issues is higher when they gain majority party status. Milyo and Schosberg (2000) suggest that, due to barriers to entry faced by female candidates, female incumbents tend to be of higher quality than male incumbents on average. Women try to moderate discussions in committees and atmosphere becomes more consensual when women are present according to Jones et al. (2009). Drawing on a cross-country dataset Dollar et al. (2001) conclude that increases in the share of women in parliament coincide with decreases in the overall level of corruption. Gagliarducci and Paserman (2012) find that the probability of early termination of mayors in Italian municipal governments is higher when the council is mostly made up of men. Finally, Childs and Withey (2004) show that female members of the Labour party are more likely than male members to sign feminist women's early day motions in the British Parliament.

All these studies suggest that women have different preferences or act differently than men in parliament. Women seem overall more socially minded and politically more to the left. However, the literature does not explicitly and directly address the question how preferences of voters are represented by parliamentary representatives. In democracies it is important to know whether gender affects the behavior of representatives toward the voter majority. Majority decisions by voters serve as a natural benchmark to evaluate legislative decisions by representatives since the majority rule is probably the most widely accepted decision rule for social choices. Thus, we analyze the question whether women in parliament represent the preferences of the national voter majority differently than men and thereby complement the existing literature.

3. DATA AND ESTIMATION STRATEGY

3.1 Matching Representatives' Choices With Voters' Preferences

Our measure for divergence contrasts real policy decisions by female and male members of parliament with the preferences of the national voter majority. In referenda, Swiss citizens regularly vote on law proposals and constitutional amendments which have passed national parliament with exactly the same wording. Thus, referendum results determine policy outcomes but also reveal the preferences of the majority of voters for these outcomes over the status quo.

Similar to the United States, Switzerland is one of the oldest democracies with a federal constitution dating back to 1848. As far as political participation of women at the federal level is concerned, women were enfranchised through an explicit referendum

decision by male voters in 1971, relatively late compared to other western countries.[2] Our analysis aims at the national/federal level but will also exploit cantonal variation from the referendum in 1971 to obtain additional insights regarding moderating effects of long-lasting cultural biases and traditions. The male and female politicians analyzed are from the Swiss National Council, i.e., the lower house, which has 200 members. The parliamentary services electronically record the votes of each member of the council and make them publicly available since 1996. In parliament the law proposals and constitutional amendments are adopted if they are approved by the majorities of both the National Council and the Council of States[3] (i.e., the upper house).

Proposals adopted by parliament do not immediately turn into law. If the parliament decides to amend the constitution, a popular vote is mandatory. If it decides to change or enact a new law, a popular vote is not mandatory but citizens may demand a referendum ("facultative referendum") by collecting at least 50,000 signatures. Moreover, citizens may demand a constitutional amendment by referendum ("initiative") by collecting at least 100,000 signatures, i.e., only approximately 2% of registered voters. Members of parliament are required to vote on the text of an initiative but cannot annul it unless formal rules are violated (see Frey, 1994; Stadelmann et al., 2013 for further detail).[4]

Referendum results are provided for the whole period of analysis from 1996 to 2009 by the Swiss Federal Statistical Office and the Swissvotes Database. We analyze all 118 referenda held during this period. The corresponding decisions in parliament precede referenda and were made from 1995 to 2009. We compare legislative decisions by female and male members of parliament with referendum outcomes on the same legislative issues with exactly the same wording. Thus, we observe decisions of voters and members of parliament in the unique policy dimension which is defined by the referendum itself. This permits us to test empirically whether female and male members of parliament represent the preferences of the majority of Swiss voters differently. Hermann and Leuthold (2007) and Matsusaka (2010) advocate the use of such a direct and natural measure of congruence based on the comparison of roll call votes and referendum results.

Importantly, Swiss referenda cover all major socioeconomic and political issues and with 118 referenda decisions and roll calls, we analyze a much more comprehensive sample than other studies focusing on Americans for Democratic Action (ADA) scores which typically only stem from few and selected legislative roll calls. For constitutional amendments a referendum is always mandatory which permits us to avoid potential selection problems for a full category of high-profile legislative issues. Due to low signature requirement, referenda and initiatives are a steady threat to legislators which assures that any remaining selection bias can be expected to be particularly low. Representative surveys also show that although not all eligible citizens cast their votes in a referendum, non-voters do not systematically oppose the majority's choice. Thus, our matching variable reflects the representation of the will of the voter majority made up

[2]Interestingly, it was not politicians as agents but male voters as principals who democratically "gave up" part of their political influence by empowering women. For cantonal decisions and elections enfranchisement occurred differentially, starting in 1959 in the Canton of Vaud until 1990 in Appenzell Innerrhoden.

[3]Votes in the Council of States are not registered electronically and, thus, research on individual voting behavior in the Council of States is still rare (see Stadelmann et al., 2012 for an exception).

[4]Parliament can work out a counter-proposal to the initiative which is presented to the voters at the same time as the respective initiative.

by females and males. As legislators vote before citizens, direct democracy does not provide them with more information on voters' views on the specific legislative proposals than it is the case in a representative democracy. Thus, similar to parliamentary democracies legislators gather information on public opinions through personal communication or opinion polls. Brunner et al. (2013) and Stadelmann et al. (2013) provide a discussion of congruence measures based on the match between choices in referenda and decisions in roll call votes in parliament. Although we recognize that not all political activity can be confronted with referendum data, we believe that our results may generalize to many high-profile political decisions and to constitutional matters in general.

As the dependent variable we employ an indicator variable. The indicator takes the value of one when a member of parliament does not vote in the same way as the majority of the Swiss voters ($MP \neq Citizens$) and zero if she or he votes as the national majority.[5] Thus, the dependent variable measures effectively how female and male members of parliament adhere to the will of the majority of the people.

3.2 Estimation Strategy

Our econometric model aims at explaining the probability of divergence from the majority's preferences:

$$P(MP \neq Citizens) = \Lambda\left(\alpha + \beta_1 Female + \sum_j \beta_j x_j\right) \tag{1}$$

We use a logistic model ($\Lambda(X) = \exp(X)/(1 + \exp(X))$ with X as design matrix) because the dependent variable is a binary measure. The model estimates the probability that a member of parliament votes against the national voter majority, $MP \neq Citizens$. If female members of parliament respond less to the preferences of the voter majority than male members of parliament, it follows that $\beta_1 > 0$. If male members adhere less to the voter majority than females, it follows that $\beta_1 < 0$. An insignificant coefficient for β_1 would indicate that male and female members of parliament do not represent the preferences of the voter majority differently. x_j stands for other control variables and we always control for legislature fixed effects as well as referendum type fixed effects, i.e., dummies for mandatory referenda and initiatives leaving facultative referenda as reference category. With mandatory referenda and initiatives, politicians know in advance that voters decide in a referendum; otherwise such proposal cannot be enacted. For each coefficient we estimate robust standard errors. Standard errors are clustered at the cantonal level.

Relevant Control Variables.   Political decisions of members of parliament are not only influenced by their respective gender. We include a number of other personal characteristics of representatives and economic variables in the model. Their different impacts are represented by the coefficients β_j. In addition, the empirical analysis controls for the congruence between district and national preferences, as well as other controls which might affect congruence and be correlated with gender. In particular, we include and analyze the effect of individual party affiliations of members of parliament.

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[5]For instance, a member of parliament who voted "yes" on the "Law on Family Allowances" did not deviate from the preferences of the majority of citizens since more than 50% of Swiss voters voted "yes" in the referendum on 26 November 2006 (i.e., the indicator variable is 0).

As further personal characteristics of representatives, we control for whether a representative is married or not (*Married*). We include the number of children (*Children*) a representative has and control for the age in years (*Age*). Apart from personal characteristics, we always take account of whether the majority of the voters from the representative's canton have voted the same way as the national population by including a dummy variable which equals one if this applies (*Canton = Country*). It captures differences between national and cantonal preferences which occur because elected representatives in the national parliament may not only represent national interests.[6] They may also try to please their cantonal voters, i.e., their constituency, or engage in pork barrels. Therefore, we control for such potential influences of the preferences of the cantonal population. We expect that a member of parliament adheres more (negative sign) to the national majority if her/his canton votes in line with the majority of the national population.

The voter majority is made up of women and men. While there is information about the female-to-male ratio in the national population as well as at the district level, this ratio is mostly time invariant over the period analyzed and close to unity. To account for a gender-specific dimension of the voting majority, we gathered data on the fraction of female legislators in cantonal parliaments (*Women in cantonal parliaments*). The number of women in cantonal parliaments varies between districts and over time which makes it a valuable control variable for our purposes. It also allows us to approximate potential gender preferences which may explain the behavior of female legislators at the national level. We control for this variable throughout the whole analysis. Moreover, we use it to form subsets by focusing specifically on districts with a high percentage of female legislators in their cantonal parliaments. This refined analysis permits not only to measure a gendered dimension among voters but also to specifically focus on how female representatives from more female friendly cantons adhere to the voter majority.[7]

We account for female and male members of parliament's sorting patterns into parties. In our setting the centrist Christian Democrats (Christlichdemokratische Volkspartei CVP, in German) forms the omitted party. On a left–right scale, the major Swiss parties are commonly ordered as follows: Greens (GPS, Grüne Partei Schweiz, left), Social democrats (SP, Sozialdemokratische Partei, left); Christian Democrats (CVP, center) and Liberals (FDP, Freisinnig Demokratische Partei, center-right); Swiss Peoples Party (SVP, Schweizerische Volkspartei, right). There are also a number of smaller parties with only few representatives in parliament. We can control for these smaller parties and their political positions with separate dummies for small left, small center, and small right parties. Generally, we observe that the number of female representatives is far higher in left parties than in center and right parties. This might be explained by female preferences for left parties (Edlund and Pande, 2002), as women may be more socially minded, greater openness to women of left parties, etc. To measure the effects of party affiliation of female representatives on a left–right

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[6]While members of the National Council are expected to represent national voters' interests according to the constitution they may diverge from the national majority to favor their canton in specific decisions. We also analyzed whether a member of parliament deviates from her/his cantonal (district) voters. The qualitative results remain the same.

[7]We also analyze differential effects of female representatives in cantons which rejected female suffrage in 1971 as a further proxy for a gender-specific dimension of the voting majority and to account for long run cultural traditions.

dimension, we also group parties into left and right categories for easier interpretation.

From a theoretical perspective, district magnitude, i.e., a district's number of seats in parliament, determines the incentives for representatives (Cox, 1997; Portmann et al., 2012). We control for the effect of district magnitude by including the number of seats a canton has in parliament (*Seats*).

The cost of individual female and male representatives to diverge from the majority's position are the lower, the more confident they are about reelection. Thus, new members of parliament may try to satisfy the majority more than long-time representatives. We control whether a representative is new to parliament or not (*NewToParliament*).

Apart from controlling for the heterogeneity of politicians and parties, economic and social heterogeneity within a district may play a role. We control for heterogeneity by including population density (*Density*), income inequality (*Inequality*), and district income (*Income*). Swiss voters are allowed to alter party lists by substituting their preferred candidates from other parties for less preferred candidates on the list (panachages) as well as by listing specific candidates twice on the list and, thus, giving them two votes (cumulation). This may induce competition between candidates. We control for the extent of panachage and cumulation by including the number of changed ballot papers (*ChangedBallotPapers*). In line with existing empirical work on Switzerland, we always use a dummy for the *Latin* (i.e., French and Italian speaking) cantons and perform additional refinements focusing on language differences.

Descriptive Statistics and Indicative Results.   Matching referendum data with individual voting records in parliament allows us to study 20,632 individual decisions of 451 different members of parliament for 118 referenda from 1996 to 2009. Note that members of parliament may be absent at votes due to sickness, voyage, or other duties. Data for the independent control variables were obtained from the Federal Statistical Office, the Swissvotes Database and the Swiss Parliamentary Services.[8] All variables, their sources, and a number of descriptive statistics are given in Table A1 in the Appendix.

Over the whole dataset, individual members of parliament deviate from the preferences of the voter majority in approximately a third of all decisions. Panel (a) of Figure 1 provides a histogram for the average individual divergence of members of parliament from the preferences of the national voter majority.

Overall, adherence to voters' preferences is different between male and female representatives. Panel (b) of Figure 1 provides the respective box plots. Female members of parliament tend to adhere less to voters' preferences than their male counterparts. On average, elected male members of parliament deviate from the voter majority in 31.78% of all votes. In contrast, elected female members of parliament deviate on average in 36.97% of all votes from the preferences of the voter majority. Thus, pure observational data are suggestive for gender differences in adherence to the majority's preferences.

Of course, there are several possible sources for these differences in representation of the voter majority. An important explanation supported also by this research is a

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[8]See http://www.bfs.admin.ch/ (Federal Statistical Office), http://www.swissvotes.ch/ (Swissvotes), and http://www.parlament.ch (Swiss Parliamentary Services) for the respective databases and contact information.

(a)

Histogram of average individual divergence

(b)

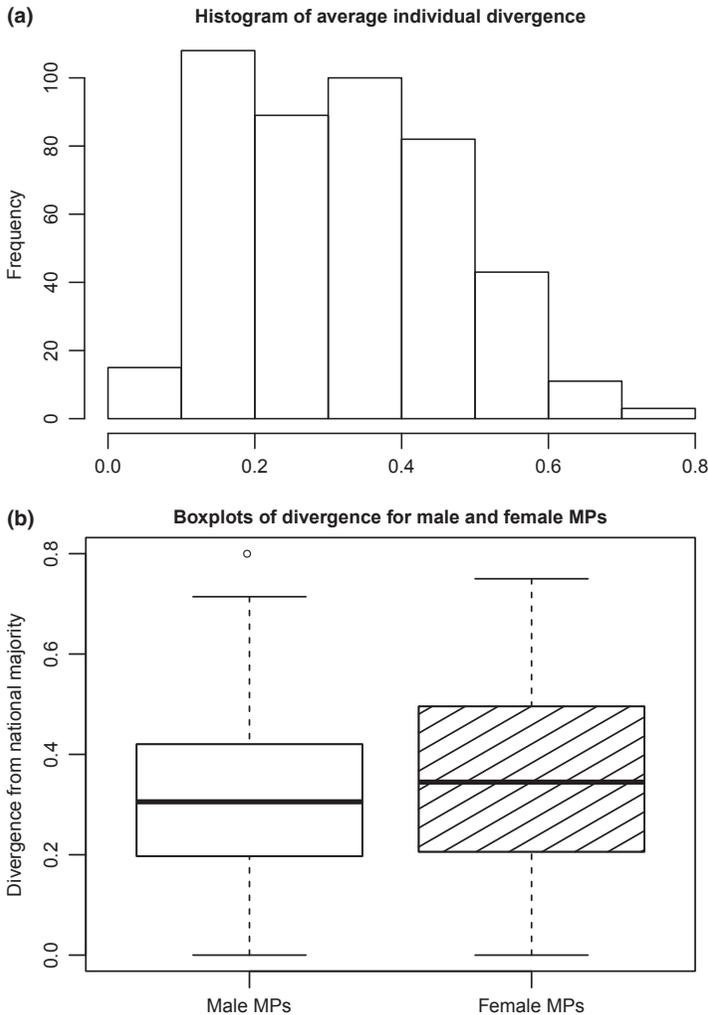**Boxplots of divergence for male and female MPs**

Figure 1. Probability of divergence between members of parliament and the preferences of the national voter majority

Note: Histogram and box plot are based on the average number of times an individual member of parliament votes against the majority of Swiss voters (variable $MP \neq Citizens$).

substantial dissimilarity in party affiliation between female and male legislators which is not uncommon in many democracies around the world. The pie chart of Figure 2 indicates the average percentage of women for all parties in parliament over the period of analysis.

In Switzerland, as in many other countries, the share of female members of parliament is particularly high in left parties, i.e., 42.28% compared to only 9.62% and 21.89% in right and center parties, respectively. During the whole period of analysis the share of women in the major right party, the SVP, was on average only 8.66%. With almost 60% female representatives the Greens have the highest share and the

(a)   Women and men according to party affiliations

Female MPs from left parties: 13.88%
(~42.28% of left MPs)

Male MPs from left parties: 18.94%
(~57.72% of left MPs)

Male MPs from center parties: 34.58%
(~78.11% of center MPs)

Female MPs from right parties: 2.2%
(~9.62% of right MPs)

Male MPs from right parties: 20.7%
(~90.38% of right MPs)

Female MPs from center parties: 9.69%
(~21.89% of center MPs)

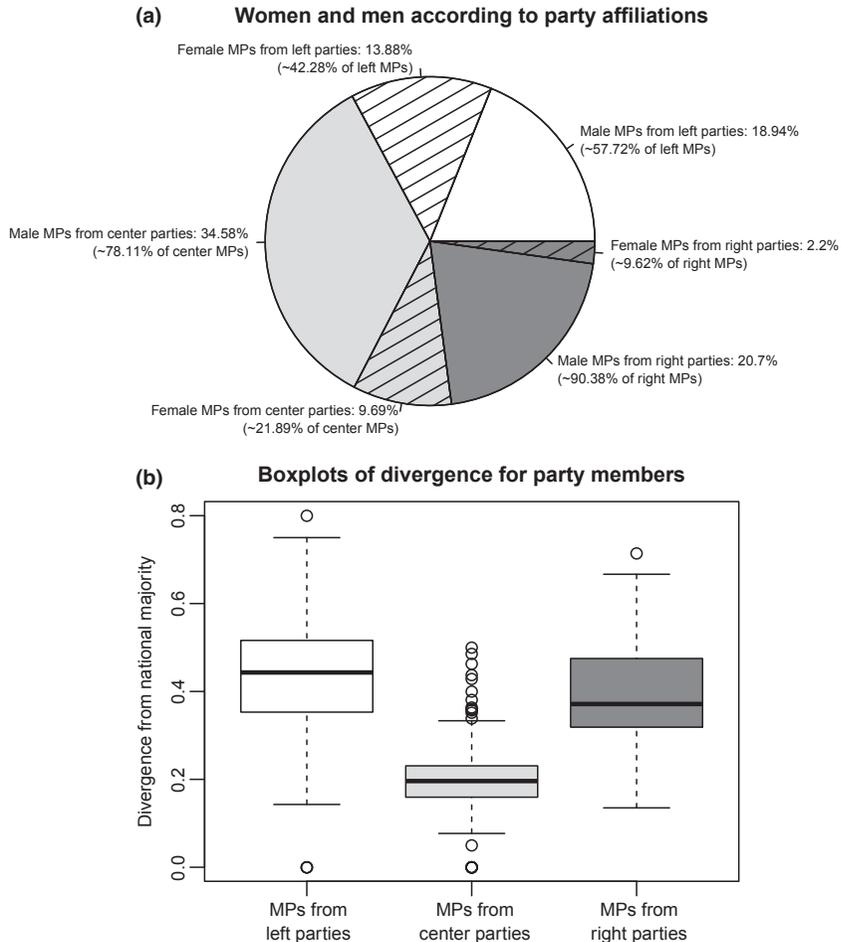**(b)   Boxplots of divergence for party members**

Figure 2.   Women and men in different parties and the probability of divergence of party members from the national voter majority

Note: Pie chart is based on averages over the years 1996 to 2009. Boxplots are based on the average number of times an individual member of parliament votes against the majority of Swiss voters (variable $MP \neq Citizens$).

Social democrats exhibits a self-imposed female quota of 40% since 1992.[9] Representatives from left parties make up approximately one-third of parliament. The three box plots below the pie chart indicate individual deviations within left, right, and center parties. As expected, representatives from left and right parties generally tend to adhere less to the majority's preferences than representatives from center parties. Thus, it is important to investigate to what extent party affiliations explains major differences in the responsiveness to the majority's preferences between female and male members of parliament.

[9]Even before 1992 almost 30% of the Social democrats' representatives were women.

4. EMPIRICAL ANALYSIS

4.1. Divergence and Gender Effects Without Accounting for Party Affiliations

Table 1 presents our first empirical results focusing on personal characteristics without controlling for individual party affiliation. We also report the change in the probability to diverge from the majority's preferences for the variable *Female* (and other personal characteristics when introduced). The discrete effect represents a change from zero to one for the variable *Female* while all other variables are held at their medians.

When not controlling for individual party affiliation, we find that female members of parliament adhere significantly less to the majority's preferences than men (specification 1), i.e., the variable *Female* has a positive sign and is significant at the 1% level. As indicated in the row below the coefficients, a discrete change from male to female increases the probability of a member of parliament to vote against the majority's preferences by 4.56 percentage points when all remaining variables are at their median values. If the decision of the voter majority from the representative's canton coincides with the decision of the nationwide voter majority, members of parliament are less likely to disagree with citizens as indicated by the negative and significant coefficient of *Canton = Country*. Legislators from cantons with a higher fraction of women in their cantonal parliament seem to deviate slightly more while cultural differences approximated by language do not have a significant influence.

Gender and Other Personal Characteristics. In specifications (2)–(4) we include other personal characteristics step by step. In each of these three specifications the variable *Female* remains significant and the discrete effects become slightly smaller. Female members of parliament always tend to adhere less to the preferences of the national voter majority than their male counterparts. Specification (2) shows that marriage exerts no significant influence on deviations. The higher the number of children, the lower the probability to deviate as shown in specification (3). Increasing the number of children from zero to two reduces the probability of divergence by 2.81 percentage points. Finally, older members of parliament tend to be significantly closer to the voter majority as indicated in column (4). The effect of age on divergence from citizens' preferences is significant and negative. A discrete change in age from 35 to 65 years reduces the probability of a member of parliament to deviate from the preferences of the voter majority by 6.56 percentage points.

In specification (5) we check whether the effects of personal characteristics on divergence also hold jointly, i.e., we include *Female*, *Married*, *Children*, and *Age* at the same time. The effect of gender on representatives' responsiveness to the majority's preferences still holds at the 10% level. The discrete effect for the variable *Female* amounts to 2.88 percentage points. However, the effect of marriage and having children on divergence vanishes. A politician's age still has a negative and significant impact.

Accounting for Differences in the Voter Majority and Cultural Factors. The position of women in society may differ with respect to culture. The richness of our data allows us to explore cultural dimensions including language and traditions which may potentially be related to the way how female representatives adhere to the majority of voters.

TABLE 1   Gender Differences in Parliament and the National Majority's Preferences

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	0.214***	0.192***	0.153**	0.175***	0.136*	0.179**	0.161**	0.229**	0.101
	(0.066)	(0.067)	(0.077)	(0.064)	(0.070)	(0.079)	(0.065)	(0.100)	(0.073)
Married		−0.084			0.039	0.040	0.059	−6.1e-03	0.077
		(0.055)			(0.063)	(0.065)	(0.060)	(0.117)	(0.078)
Children			−0.067**		−0.062	−0.061	−0.066*	−5.7e-03	−0.086**
			(0.033)		(0.038)	(0.038)	(0.038)	(0.035)	(0.043)
Age				−0.011***	−8.5e-03***	−8.2e-03***	−8.8e-03***	−1.9e-03	−0.011***
				(2.3e-03)	(3.0e-03)	(2.9e-03)	(2.9e-03)	(4.2e-03)	(4.6e-03)
(Female) × (Latin)						−0.187			
						(0.155)			
(Female) × (No vote in 1971)							−0.214		
							(0.274)		
Canton = Country	−0.703***	−0.704***	−0.703***	−0.705***	−0.704***	−0.705***	−0.716***	−1.080***	−0.609***
	(0.138)	(0.138)	(0.137)	(0.138)	(0.137)	(0.136)	(0.139)	(0.207)	(0.141)
Women in cantonal parliaments	0.013***	0.012**	0.011**	0.014***	0.012**	0.012**	7.7e-03	−0.030	0.015**
	(4.8e-03)	(4.8e-03)	(5.2e-03)	(4.9e-03)	(5.4e-03)	(5.4e-03)	(6.0e-03)	(0.023)	(5.9e-03)
Latin	0.052	0.054	0.040	0.044	0.033	0.073	−0.020	−0.106	0.085*
	(0.047)	(0.047)	(0.047)	(0.050)	(0.050)	(0.051)	(0.061)	(0.140)	(0.050)
No vote in 1971							−0.132		
							(0.083)		
Referendum type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legislature fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Discrete effect in percentage points	Male to female: 4.56	Male to female: 4.05 Unmarried to married: −1.73	Male to female: 3.22 0 children to 2: −2.81	Male to female: 3.72 35–65 years: −6.56	Male to female: 2.88	Male to female: 3.80	Male to female: 3.48	Male to female: 4.76	Male to female: 2.17

TABLE 1 (continued)

Sample	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full sample	Full sample	Full sample	Full sample	Full sample	Full sample	Full sample	Women > 30%	Women ≤ 30%
N	20,632	20,632	20,632	20,632	20,632	20,632	20,632	5,409	15,223
Pseudo-R^2	0.043	0.043	0.046	0.045	0.047	0.047	0.048	0.049	0.048
Brier	0.215	0.215	0.214	0.214	0.214	0.214	0.214	0.224	0.210

Notes: Dependent variable is *MP ≠ Citizens*. Robust standard errors for logistic models using clustering at cantonal level are given in parenthesis below the coefficient. All estimates include an intercept. The "Women > 30%" sample is restricted to those observations where the fraction of women in cantonal parliaments is greater (smaller or equal) to 30%.
***Indicates a significance level of below 1%; **indicates a significance level between 1% and 5%; *indicates significance level between 5% and 10%.

In specification (6) we analyze language as a cultural factor. We distinguish between cantons with a Latin language origin (French and Italian speaking cantons) and cantons with a Germanic language origin.[10] We then interact the dummy for Latin-speaking cantons with the gender of representatives to analyze whether gender plays a differential role in representation of the majority's preferences which may depend on the dimension of culture captured by the language dummy. The interaction effect turns out to be negative but statistically insignificant. The cultural dimension captured by language does not annihilate differential gender effects in representation of the majority.

In Switzerland women's suffrage at the national level was introduced by male voters via a referendum in 1971. In specification (7) we investigate the aftermath of ancient differences in preferences toward women's participation in politics. While the male national majority agreed to enfranchise women, eight cantons opposed it.[11] We identified the cantons where men rejected female enfranchisement and coded them with a dummy (*No vote in 1971*). For these districts we know that at least in the past the male voter majority was opposed to national political decisions made by women in general. We interact the dummy with whether a representative is a female or not and find a negative but not significant interaction term. Interestingly, past bias against female voters does not seem to affect the behavior of elected female representatives today and the cultural heritage plays a negligible role to account for differential gender effects in parliamentary representation of today's voter majority.

To extend the analysis further, we split the sample into two groups: Specification (8) reports results for districts where today's voters elected more than 30% of women to their cantonal parliament while specification (9) analyzes cantons with fewer than 30% of women in cantonal parliaments. This setting allows us to consider the majority's preferences for women in politics in general and by using heterogeneity across cantons regarding the dimension of female representatives in district parliaments. When not controlling for party affiliation, our results suggest that female representatives from districts where voters also elected a higher fraction of women to the cantonal parliament tend to diverge significantly more from the national majority's preferences. The effect of female representatives from cantons with a lower fraction of women in cantonal parliaments is less pronounced and only statistically relevant at the 15% level.[12]

These first results indicate that female members of parliament tend to adhere less to the preferences of the national voter majority than male members of parliament and interaction effects with cultural proxies show insignificant moderation effects. However, observed divergence could be a result of affiliation to political parties. Politics is shaped by individuals but individuals belong to political parties. Especially left parties have higher shares of female representatives than center and right parties. Due to different preferences, political pressure, potential discrimination in center and right parties, or other institutional influences such as political openness and quotas, women in politics rather affiliate themselves with left parties which may deviate more

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[10]Note that the language dimension also partly accounts for cultural differences regarding other factors such as traditions, or conservatism regarding social issues or religion.

[11]Only German-speaking cantons opposed it and in particular cantons, which are even today regarded as relatively conservative.

[12]We also study interaction effects between gender and the share of women in cantonal parliaments as well as all other personal characteristics. Only the interaction between gender and the number of children turns out to be marginally significant but only when individual party affiliation is not accounted for.

from the voter majority. We have information on party affiliation and can analyze whether it explains observed patterns of responsiveness between female and male representatives. Thus, we can check whether adherence of women to the majority's preferences really depends on their gender directly or rather on their party affiliation patterns.

4.2 Divergence and Gender Effects: The Importance of Party Affiliations

Controlling for Party Affiliation. Table 2 reports results which include different controls for parties and other variables.

In specification (1) we include dummy variables for each individual representative's party affiliation. Once taking account of a member of parliament's party affiliation women's lower responsiveness to voters' preferences vanishes entirely,[13] and the point estimates would, if anything suggest *lower* divergence of female representatives. Importantly, all gender effects with respect to differential adherence to the voter majority are now captured by party affiliations. Thus, how members of parliament represent the majority's preferences, once elected and sorted into parties, does not directly depend on their gender but on their party affiliations instead. Female politicians are more often members of parties which tend to adhere less to the preferences of the majority. The effects of gender on representation of the majority are reduced to the dimensions represented by parties. In specification (2) we include additional political and economic control variables. Our variable of interest *Female* remains insignificant as soon as party affiliations of individual members of parliament are accounted for.

We analyze party affiliations of women more closely by reducing individual affiliations to a left–right dimension, i.e., instead of including separate dummy variables for all major parties, we identify the three categories commonly used in the literature and in political discussions: left, center, right. Center party affiliation forms the omitted category. The coefficients in specification (3) reveal that the variable *Female* is insignificant once controlling for left and right party affiliation. Figure 2 has already indicated that women are indeed more present in left than in center and right parties. Estimation results show that compared to center parties, members of parliament from either left or right parties tend to adhere less to the preferences of the majority. Observed overall divergence of elected representatives is not driven directly by gender but rather by party. The fact that we observe higher divergence of female representatives when not controlling for party affiliations suggests that gender likely plays an indirect role, i.e., more women tend to be in left parties which diverge more from voters than center parties (and than right of center parties).[14] When including additional political and economic control variables in specification (4) we find essentially the same result. Thus, all effects of gender regarding overall representation of voters' preferences by elected politicians can be reduced to a single left–right ideological dimension.[15] Moreover, the effects of gender also vanish entirely when we estimate interaction effects to account for culture and tradition and when we split up the

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[13]Alongside, the influence of all other personal characteristics vanishes too.
[14]Absolute divergence from the majority's preferences is smaller in right than in left parties for the sample analyzed.
[15]That is, the empirical evidence suggests specific sorting patterns into different ideological parties. But once representatives are elected, gender has no additional direct effect on the representation of the voter majority.

TABLE 2 CONTROLLING FOR PARTIES – GENDER DIFFERENCES IN PARLIAMENT AND THE NATIONAL MAJORITY'S PREFERENCES

	(1)	(2)	(3)	(4)	(5)	(6)
Female	−0.030	−0.034	−0.047	−0.054	−0.044	−0.086
	(0.044)	(0.046)	(0.042)	(0.044)	(0.056)	(0.066)
Other personal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Party Left			1.305***	1.295***	1.683***	0.375***
			(0.032)	(0.026)	(0.057)	(0.047)
Party Right			0.764***	0.750***	0.784***	0.916***
			(0.054)	(0.051)	(0.062)	(0.089)
Party fixed effects	Yes	Yes	No	No	No	No
Canton = Country	−0.745***	−0.752***	−0.740***	−0.751***	−0.849***	−0.805***
	(0.147)	(0.150)	(0.147)	(0.149)	(0.195)	(0.141)
Women in cantonal parliaments	−5.6e-04	−3.0e-03	3.3e-04	−2.8e-03	−2.1e-03	−7.2e-03
	(5.5e-03)	(6.1e-03)	(5.3e-03)	(5.6e-03)	(6.2e-03)	(6.0e-03)
Latin	0.035	0.117*	0.020	0.122**	0.233***	−0.052
	(0.050)	(0.062)	(0.050)	(0.056)	(0.082)	(0.067)
Seats		4.1e-03		5.9e-03**	6.5e-03*	5.7e-03*
		(3.0e-03)		(3.0e-03)	(3.6e-03)	(3.1e-03)
New to parliament		−0.057		−0.060*	−0.053	−0.015
		(0.037)		(0.035)	(0.056)	(0.056)
Density		5.1e-05*		5.3e-05*	6.3e-05*	5.0e-05
		(3.1e-05)		(3.1e-05)	(3.5e-05)	(4.5e-05)
Inequality		−0.859		−0.920	−1.006	−1.024
		(0.657)		(0.610)	(0.796)	(0.724)
Income		−8.2e-07		−7.7e-07	−6.3e-07	−1.7e-06
		(3.2e-06)		(3.1e-06)	(3.4e-06)	(4.1e-06)
Changed ballot papers		0.314		0.377*	0.663**	−0.191
		(0.204)		(0.199)	(0.273)	(0.289)
Referendum type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Legislature fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 2 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Full sample	Full sample	Full sample	Full sample	Social democrats	People's party
					YES	YES
No. Obs.	20,632	20,632	20,632	20,632	12,985	8,963
R²	0.126	0.126	0.122	0.123	0.177	0.182
Brier	0.202	0.202	0.202	0.202	0.184	0.182

Notes: Dependent variable is *MP ≠ Citizens*. Robust standard errors for logistic models using clustering at cantonal level are given in parenthesis below the coefficient. All estimates include an intercept. "Other personal characteristics" include the variables *Married*, *Kids* and *Age*.
***Indicates a significance level of below 1%; **indicates a significance level between 1% and 5%; *indicates significance level between 5% and 10%.

sample into districts where the voter majority elected more women to the district parliament (results not shown in table).

Literature on gender effects suggests that men are more individually oriented and selfish than women and women may behave differently with respect to questions related to civil rights and welfare. To analyze whether such differences matter for representation of the majority's preferences, we look at referenda which are likely to affect women and welfare positively. While it is not difficult to classify referenda and the respective parliamentary decisions according to different topics, it is difficult to determine whether policy consequences of referenda affect female voters and welfare positively. While no perfect identification is readily available, the richness of the Swiss institutional setting as a laboratory helps us to overcome such issues to a considerable extent. Parties in Switzerland usually issue voting recommendations prior to referenda. We gathered data from the left-leaning Social Democrats and the right-leaning and conservative Swiss People's Party on all their voting recommendations. In specification (5) we analyze a sample of referenda for which the Social Democrats recommended to vote "yes," i.e., they are rather pro-welfare. In specification (6) we use "yes" voting recommendations of the Swiss People's Party. For this sample of referenda we know, they are rather pro-business, individually oriented, focused on traditional values and conservatism. It is interesting to note that for both samples the coefficient for female legislators never turns significant when left and right party affiliations are controlled for. Thus, gender does not affect the representation of the national majority's preferences when referenda are pointing to a pro-welfare dimension nor when conservative preferences are to vote "yes" as soon as general party affiliation patters are accounted for.[16]

Gender Effects Within Parties.   We explore gender effects in greater detail by splitting the sample of observations into left, right, and center parties. Results are presented in Table 3. In specifications (1)–(3) we look at the sample of left parties, in specifications (4)–(6) at the sample of right, and in specifications (7)–(9) at the sample of center parties only.

Women in left parties tend to adhere slightly less to the preferences of the voter majority than their male counterparts as indicated by the positive coefficient of the variable *Female* in specifications (1). A female representative in a left party is 1.34 percentage points more likely to deviate from the majority's preferences than a male representative according to the discrete effect. If we control for the full set of additional variables in specification (2) the effect of the variable *Female* remains positive but turns insignificant at conventional levels. Focusing specifically on referenda where voting "yes" can be expected to mean pro-welfare, we do not find a significant effect according to specification (3) for women in left parties.

At highly significant levels the opposite holds true in right parties, i.e., female representatives in right parties tend to adhere *more closely* to preferences of the majority in referenda than males in right parties. The coefficient for *Female* is negative and highly significant in specifications (4) and (5). Interestingly, even for issues where Social Democrats suggest to vote "yes" female representatives from right parties tend to match the majority of voters significantly better than their male counterparts in right

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[16]If we did not control for party affiliation, the effect of gender on divergence would be positive for the specific subsamples chosen.

TABLE 3   Refinements – Minor Gender Effects Within Parties

	Sample of left parties			Sample of right parties			Sample of center parties		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female	0.073*	0.069	0.059	−0.504***	−0.472***	−0.527***	−0.149**	−0.165**	−0.141
	(0.042)	(0.049)	(0.076)	(0.177)	(0.136)	(0.111)	(0.065)	(0.069)	(0.110)
Canton = Country	−0.894**	−0.903**	−1.537***	−1.138***	−1.158***	−0.940	−0.432*	−0.445*	−0.466
	(0.380)	(0.384)	(0.459)	(0.332)	(0.330)	(0.609)	(0.230)	(0.235)	(0.343)
Women in cantonal parliaments	4.0e-03	4.4e-03	−2.7e-03	4.2e-04	−0.017	−3.4e-03	1.7e-03	−2.9e-03	−8.4e-05
	(6.3e-03)	(9.3e-03)	(0.012)	(0.012)	(0.013)	(0.020)	(6.4e-03)	(8.5e-03)	(9.5e-03)
Latin	0.013	0.145**	−1.9e-03	−0.166	−0.022	0.115	0.120*	0.197**	0.512***
	(0.049)	(0.066)	(0.101)	(0.183)	(0.178)	(0.244)	(0.070)	(0.096)	(0.151)
Other personal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other control variables	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Referendum type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legislature fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Discrete effect in percentage points	Male to female: 1.34	Male to female: 1.26	Male to female: 0.68	Male to female: −12.58	Male to female: −11.60	Male to female: −13.07	Male to female: −2.62	Male to female: −2.79	Male to female: −1.18
Sample	Full sample	Full sample	Social democrats YES	Full sample	Full sample	Social democrats YES	Full sample	Full sample	Social democrats YES
No. Obs.	6,745	6,745	4,280	5,287	5,287	3,301	8,600	8,600	5,404
R^2	0.13	0.13	0.502	0.204	0.208	0.313	0.108	0.109	0.146
Brier	0.224	0.224	0.144	0.193	0.193	0.156	0.152	0.152	0.126

Notes: Dependent variable is $MP \neq Citizens$. Robust standard errors for logistic models using clustering at cantonal level are given in parenthesis below the coefficient. All estimates include an intercept. "Other personal characteristics" include the variables *Married*, *Kids*, and *Age*. "Other control variables" include *Latin*, *Seats*, *NewToParliament*, *Density*, *Inequality*, *Income*, and *ChangedBallotPapers*.
***Indicates a significance level of below 1%; **indicates a significance level between 1% and 5%; *indicates significance level between 5% and 10%.

parties. The quantitative effects are large, too: Women from right parties tend to match the majority's preferences between 11.6 and 13.1 percentage points better than male representatives from right parties. This effect suggests that women in right parties tend to be relatively more left leaning and thus representing the voter majority more closely than men in right parties.

For center parties a similar result holds as for right parties but the quantitative effects are smaller as shown in specifications (7) and (8). The discrete effect of being female in a center party is between 2.6 and 2.8 percentage points, i.e., female representatives from center parties also match the majority's preferences better than male representatives from center parties. Taking the sample of referenda where voting yes corresponds to voting pro-welfare we find, however, no significant differences between female and male legislators (specification 9).

These results from real legislative choices in parliament and revealed preferences in referenda allow interesting interpretations for the effect of women in parliament on representation of the majority's preferences. To summarize, when party affiliations are not accounted for, women tend to deviate slightly more from the majority's preferences than men (Table 1). However, the overall divergence from the majority can be reduced to differences in ideological positions and once these are controlled for, there is no direct effect of gender any more (Table 2). Thus, party affiliation plays a crucial role and gender effects on overall representation of the national majority's preferences can be reduced to party affiliation, i.e., a single left–right ideological dimension. We dig deeper into this issue by analyzing females from separate parties (Table 3). This table offers new and important insights on how gender affects the representation of the majority which are consistent with the literature regarding the behavior of women in politics. Women are often identified as being more socially minded and further to the left than their male counterparts. This is one reason why more women are found in left parties. More importantly, our results are consistent with the view that women in parliament are, independent of their party affiliation, more to the left than men. Being more to the left in a generally left party leads to *more* divergence from the voter majority while being more to the left in a generally right party leads to *less* divergence from the voter majority.[17] This pattern is confirmed by our empirical results.

5.   CONCLUSIONS

5.1   Summary

We provide a comparative econometric analysis and explore whether female or male members of parliament adhere more closely to the voter majority. The existing literature points to differential gender effects which have political and economic consequences. Women were also shown to be more socially minded and rather on the left of the political spectrum. However, no study has so far analyzed whether female members of parliament represent the preferences of the national majority of voters differently than men even though representation of the majority's preferences is of central importance for democracies.

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[17]In center parties women and men should be similar regarding their responsiveness to citizens' preferences. Our results show that this is likely to be true but that women in center parties tend to be closer to the majority of citizens.

To analyze whether gender differences exist in political representation, we match Swiss referenda with voting data from members of parliament on exactly the same issues with identical wording. Swiss referenda reflect voting behavior of voters and, thus, how the majority values legislative proposals against the status quo. They serve as a measure for revealed preferences of citizens.

A first look at partial correlations indicates that female representatives tend to adhere less to the preferences of the majority than men when not controlling for party affiliation. These partial correlations do not seem to be moderated by cultural differences to a large extent. However, when party affiliations of representatives are accounted for, the direct effect of gender on representation of the majority's preferences vanishes entirely in the full sample as well as in the sample restricted to pro-welfare policy choices. Importantly, observed differences in the overall divergence from the voter majority's preferences of elected female and male politicians may be reduced to an ideological dimension reflected by parties.[18]

We are further interested whether a residual effect of gender exists within parties. When analyzing left, center, and right parties separately, we observe that female representatives from center and, in particular, from right parties adhere more to the majority's preferences than men from these respective parties. Women from left parties deviate slightly more from the preferences of the majority than their male counterparts. These results are consistent with the view that women in parliament, independent of their party affiliation are more socially minded and further to the left than men. This brings women from right parties closer to the majority's preferences and tends to move women in left parties away from voters which results in no overall gender-specific divergence from voters once controlling for party affiliation.

Our research focused on gender differences in representation of the national majority where we find that over all parties the distance between representatives and the majority of voters is on average equal for either gender. Future research may specifically focus on female policy issues if a direct identification for such issues can be found. Moreover, it would be very interesting to try to distinguish female from male voter preferences and analyze how female and male representatives act toward female voters while holding the majority's preferences constant. Currently, we only analyze how gender affects the representation of the majority's preferences. However, if certain policy issues have a clear gender dimension female politicians may represent women differently. We feel that this would constitute an highly important future research field which is entirely different to the present contribution. Representation effects with regard to female voter preferences would not show up in our analysis which focusses on the representation of the majority made up of women and men.

5.2 Policy Conclusions

Women and men do not represent the national majority's preferences differently when political party affiliations are taken into account. If anything, women in center and right parties seem to more closely adhere to the preferences of the majority. Thus, overall divergence of parliamentary representatives from citizens' preferences is not a direct result of gender differences but at most an indirect one due to gender-specific

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[18]When analyzing whether female and male members of parliament represent their respective canton's preferences differently, we find quantitatively the same results. There is no overall difference in representation when party affiliation is accounted for.

patterns of political party affiliation. Moreover, cultural differences seem to play a minor role with respect to representation of the majority.

Given the objective of a more even distribution of women and men in parliament and the aim to bring more women into parliament, it is important to achieve openness toward women within all parties symmetrically. Especially within center and right parties the share of women is (too) low. Prejudices or discrimination against women in the past may still be present today and may restrain women from joining certain parties. Abolishing existing prejudices and providing information for potential female candidates may induce more women to join center or right parties.

If a quota for women in parliament is politically considered to be necessary, such an active intervention to promote women in parliament would need to consider symmetric a quota for parties instead of a quota for women in parliament in general or a quota in single parties only.[19] This could increase the number of women in non-left parties and thereby lead to a more even distribution of female political positions in parliament which could foster a better overall representation of the electorate. Women and men in the electorate are more evenly distributed over the political spectrum than women and men in today's parliaments who are concentrated on the left and right, respectively.

Having more women in parliament could entail additional advantages with respect to aggregate representation of the citizens' majority. Our analysis focuses on individual voting behavior by female and male politicians. However, in parliament it is not only the individual decision which matter but how the majority decides. A more pluralistic and differentiated parliament with respect to gender may generate better aggregate decisions than a parliament with a strong majority of men (or women). Finally, so far we have little knowledge how gender differences affect the process of decision making and finding. Consequently, it is possible that a more equal descriptive representation may have additional positive indirect effects on policy outcomes which might be explored in future research.

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[19]Note that any quota may always induce different selection problems which can lead to unintended outcomes.

APPENDIX

TABLE A1 DESCRIPTIVE STATISTICS

Variable	Description and source	Mean	SD
MP ≠ Citizens	Indicator variable: Member of parliament votes against majority of Swiss voters. Swiss Parliamentary Services and Final Votes Dataset	0.330	0.470
Female	Indicator variable: If member of parliament is a woman value is 1. Swiss Parliamentary Services	0.243	0.429
Married	Indicator variable: If member of parliament is married value is 1. Swiss Parliamentary Services	0.713	0.452
Children	Member of parliament's number of children. Swiss Parliamentary Services	1.953	1.511
Age	Member of parliament's age. Swiss Parliamentary Services	52.600	7.886
Parties in analysis	Separate indicators used for SVP (Swiss People's Party), FDP (Free liberals), CVP/CSP (Christian Democratic People's Party), SP (Social democrats), and the Greens. Smaller parties are captured by dummies for small left, small center, and small right parties. Swiss Parliamentary Services		
PartyLeft	Indicator variable: If member of parliament belongs to a party from the left value is 1	0.327	0.469
PartyCenter	Indicator variable: If member of parliament belongs to a party from center and smaller parties or independents value is 1	0.417	0.493
PartyRight	Indicator variable: If member of parliament belongs to the party from the right value is 1	0.256	0.437
Canton = Country	Indicator variable: If majority decision in MP's district matches majority decision of all Swiss voters value is 1. Federal Statistical Office	0.900	0.300
Women in cantonal parliaments	Fraction of women in cantonal parliaments. Federal Statistical Office	26.180	5.834
RefMandatory	Indicator variable: If referendum is an obligatory referendum value is 1 (necessary for an amendment to the constitution initiated by the parliament). Swissvotes Database	0.179	0.384
RefFacultative	Indicator variable: If referendum is a facultative referendum value is 1. Swissvotes Database	0.313	0.464
RefInitiative	Indicator variable: If referendum is an initiative value is 1. Swissvotes Database	0.446	0.497
Latin	Indicator variable: If the canton is largely French or Italian speaking value is 1. Federal Statistical Office	0.274	0.446
Seats	Canton's number of seats in the national council. Federal Statistical Office	15.780	10.832
NewToParliament	Indicator variable: If MP is a member of parliament for less than a legislature value is 1. Swiss Parliamentary Services	0.408	0.492
Density	Inhabitants per km^2 in a canton. Federal Statistical Office	534.400	874.572
Inequality	Cantonal Gini coefficient of income inequality in 2003. Federal Statistical Office	0.390	0.041
Income	Cantonal income ("Volkseinkommen") per Capita in 2005 Swiss Francs. Federal Statistical Office	52,870.00	13,002.10
ChangedBallotPapers	Share of ballot papers which have been altered (e.g., cross voting) by the voters in the last election of the canton's National Councilors. Federal Statistical Office	0.547	0.108

Notes: Descriptive statistics are based on 20,632 decisions of members of parliament on 118 referenda from 1996 to 2009. Data sources indicated next to variable descriptions.

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