

## Multilevel governance and women's legislative representation

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**Abstract.** Research shows that electoral systems, gender quotas and a country's socio-economic development affect women's legislative representation (WLR). Less attention is paid to the effects of the rise of regional political arenas and multilevel politics on WLR. Due to less costly and competitive electoral campaigns, women can have easier access to regional legislatures. We argue that this relationship is mitigated by the distribution of competences between the different levels of the political system and that decentralization's effect on WLR at the regional level is dependent on the regions' political power. To test this, we use an original dataset on WLR in 383 regional parliaments in 19 European countries from 1970 to 2018. Results of the three-level models show that more political authority vested into regions leads to a lower level of WLR in the legislatures of the more politically powerful regions in comparison with not only the regions possessing less authority but also with the national parliament. Possible explanations for this effect, such as the attractiveness of these positions to the mostly male political elite and, consequently, increased costs and competitiveness of electoral campaigns, are suggested.

**Keywords:** multilevel governance; representation; women

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**Article by an MPIFG researcher**

### Introduction

Kristina Gushchina, André Kaiser: Multilevel Governance and Women's Legislative Representation. In: European Journal of Political Research 60(4), 934-953 (2021). Wiley-Blackwell  
The original publication is available at the publisher's web site: <https://doi.org/10.1111/1475-6765.12431>

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Women's political representation has become an increasingly salient topic, in both academia and real life, in recent decades. Much has been written about the factors that determine the level of women's representation in national parliaments and ministries, on the obstacles women face in running for office, on the role party gatekeepers play, and so on. We know from this literature that the type of electoral system, gender quotas, level of a county's socio-economic development and the prevailing political culture affect women's political representation (Inglehart & Norris 2003; Viterna et al. 2008). For instance, more female MPs are elected under proportional representation than majoritarian electoral systems (Krook 2010; Norris 2006). Clearly specified gender quotas at either the national or party level increase the number of female Member of Parliaments (MPs) (Dahlerup 2006; Thames & Williams 2013). General enhancement of women's socio-economic status, expressed in terms of their access to higher education and the labour market, positively affects their electoral prospects as well (Rosenbluth et al. 2006; Schwindt-Bayer 2005). However, less attention has been paid to the effects of the rise of regional political arenas and multilevel politics on women's legislative representation.

What effect<sup>1</sup> does decentralization and multilevel governance have on women's political representation? Are women represented better at the regional<sup>2</sup> than the national level? Is there a national–regional gender gap? There is no consensus in the few studies addressing these questions. Some argue that decentralization is disadvantageous for women's movements (Haussman 2005; Vickers 1994), because it fragments their resources between different levels of governments (Vickers 2010). In contrast, others claim that multiple layers of government provide more opportunities for women to be elected and to start their political career (Chappell 2000; Donaghy

2004; Stockemer & Tremblay 2015). Orbals et al. (2011) argue that the regional level can provide both advantages and disadvantages for women, depending on the particular characteristics of the national political system (see also Escobar-Lemmon & Funk 2018). Variation in the levels of women's political representation can also exist between regions within a country (Kenny & Mackay 2011).

In this article, we address the question of what effect multilevel politics has on women's legislative representation. More precisely, does it strengthen women's chances to be elected and, if so, at what level? Of course, these questions are quite broad. We therefore focus on a single aspect of the multilevel system. We argue that the effect of political decentralization on women's legislative representation depends on the political power, in terms of the level of political authority they possess, of the regional units in the national political system. On the one hand, we expect to see a generally increasing proportion of women elected at both national and regional levels over time. On the other hand, we hypothesize that the more politically powerful regions are, the fewer women are elected to their legislatures.

We use an original dataset on women's legislative representation in 383 regional legislatures in 19 European countries from 1970 to 2018. The results of a three-level longitudinal mixed-effects model confirm our expectations. Our analysis shows that, despite a general increase in women's representation over time, it remains lower in the legislatures of the more politically powerful regions in comparison with not only the regions possessing less authority but also with the national parliament. Potential explanations for this effect include the attractiveness of regional political positions to the mostly male political elite and, as a result, the increased costs of electoral campaigns and a higher competitiveness of the elections. All these factors inhibit women's electoral success in powerful regional legislatures.

Our analysis makes several important contributions to the literature. First, we collect an original dataset covering almost 50 years of women's representation in 383 regional legislatures in 19 European countries. This data is complemented with longitudinal data on regional, political and socio-economic indicators. Second, by using the Regional Authority Index (Hooghe et al. 2016), we exploit not only cross-country, but also within-country variation in how a region's political power affects women's legislative representation. This advances our understanding of the political processes occurring beyond the national political arena. Finally, we raise an important question on whether decentralization is unambiguously positive for women's legislative representation. We show that extensive decentralization reforms that allocate a considerable amount of political power to the regions can impede the electoral success of female candidates. To overcome this barrier and to enhance the achievement of gender parity at the regional level, particular measures such as the adoption of gender quotas need to be taken.

The rest of the article is organized as follows. In the second section, we outline previous research on women's legislative representation and multilevel politics. Then we describe in detail our dataset and variables. The fourth section presents and discusses the results of the statistical analysis. The last section concludes and suggests avenues for further research.

## **Multilevel governance and women's political representation**

The subfield of the literature on women in politics dealing with a multilevel structure of government and/or decentralization is small but diverse. Some studies assess whether federalism and/or decentralization is beneficial for women's political representation. In one of the few

large-N time-series cross-national analyses (of 99 democracies between 1995 and 2010), Stockemer and Tremblay (2015) find that approximately four per cent more women are elected to national parliaments in federal than in unitary states. This finding is mainly explained by the fact that federal states have two chambers in their national parliaments as well as directly elected regional legislatures, which creates more access points for women to get elected (Donaghy 2004; Mackay 2010). This is widely argued as the reason why federations have more women in political positions.

Some scholars also argue that more women are interested in running for office at the local or regional level because regional politics is closer to people (Johnson et al. 2003), deals with day-to-day problems (Sanbonmatsu & Carroll 2009), and does not require long travel time (Beall 2005; Darcy et al. 2003). Moreover, the eligibility criteria for participation in second-order elections are not as demanding as those for national electoral campaigns (Luciak 2005; Stockemer & Tremblay 2015). Thus, women, still considered by many voters to be less competent and fit for politics than male candidates, have a better chance of being elected there (Branton et al. 2018; Paul & Smith 2008; ). Electoral campaigns at the regional level are also less financially costly and competitive, which enhances women's chances to get elected (Chin 2004; Lovenduski 1986). As Nowacki (2003: 34) explains, '[i]n smaller districts where the costs of running a campaign are modest and it is possible to meet a significant number of the voters, women are able to compensate for their economic disadvantages through personal contacts'. Vickers (2010) points out that women's legislative representation is higher in less professional and well-paid U.S. state legislatures than in more powerful and competitive ones.

Another large-N study, analyzing the effect of the federal–unitary distinction on the percentage of women elected to 536 regional legislatures in 29 states, comes to a different conclusion from Stockemer and Tremblay (2015) (Vengroff et al. 2003). It finds no statistically significant impact of government structure on women's legislative representation at the regional level, nor on the national–regional disproportion in the percentages of female MPs. The latter relationship, they suggest, '[a]lthough there is some variation ... is more likely to run from the local to the national in the industrial democracies in which meso units have had a long existence and the reverse in those in which meso units are relatively new creations' (Vengroff et al. 2003: 171). However, as we will show in this article, the national–regional gap in women's legislative representation can be both positive and negative and can be explained by the political power of the region in the national political system.

Kenny and Mackay (2011), focusing on the devolution reforms in Spain and the United Kingdom, draw cautious conclusions about the impact of state architecture on women's political representation. They claim that the relationship is not linear and straightforward, because it is highly dependent on the particular party system, dynamics within parties,<sup>3</sup> and the degree of decentralization reforms in general. Similar arguments are put forward by Orbals et al. (2011) for Italy, Spain and Poland, who show that the significant variation in women's electoral success across unitary decentralized states can be explained by different degrees of decentralization and the ideology of the government in these countries.

A separate branch of research focuses on the influence of federalism and decentralization on women's substantive representation in terms of policy output and on women's movements (Hausman et al. 2010).<sup>4</sup> The results here are also mixed. Some scholars argue that federalism facilitates policy developments that can benefit women (Rincker & Orbals 2009), while others claim that the effect of federalism and decentralization is ambiguous and difficult to isolate

from the influence of other contextual factors (Gray 2006, Rincker 2009). However, the issue of women's substantive representation is beyond the scope of our analysis. We also do not consider studies where regions are treated as units of analysis only. For instance, Davidson-Schmich (2006) analyses gender-quota implementation strategies in 16 German states; this type of research is interesting in itself but does not contribute much to the debate on multilevel politics and women's political representation.

Departing from the research cited above, we argue that it is not enough to focus on the federal–unitary distinction in order to understand how multilevel politics influences women's legislative representation. Nowadays, many formally unitary, yet decentralized, countries – such as Italy and Spain – have more women elected than federal states – such as Germany or the United States (Inter-parliamentary Union).<sup>5</sup> Some unitary states have implemented far-reaching decentralization reforms that lead to a power distribution between national and regional levels comparable to that in some federal states (Ortbals et al. 2011). Dividing countries into only two groups (federal and unitary) can thus capture the overall differences between them in numbers of female MPs, but not the variation within the groups and not between regions within particular countries. To understand the general pattern in women's legislative representation in multilevel political systems, we need to perform a large-N analysis on the sample of both federal and unitary states, taking into account their multilevel decentralized structures.

However, the only two large-N studies, to our knowledge, by Stockemer and Trembley (2015) and Vengroff et al. (2003), use a categorical and a dummy variable, respectively, to account for the differences in countries' political structures. While in the first case the categorical variable can help to explain the percentages of women elected to national parliaments in various countries, a dummy variable is unable to shed light on the variations in percentages of female MPs between the regions within countries. The distinction between federal and unitary state structures depends on the constitutionally guaranteed division of competences between territorially defined governmental levels. The level of centralization or decentralization, on the other hand, refers to the capability (in terms of competences but also resources) to independently implement policies as disposed by some superordinate institution. Consequently, we may find unitary political systems that are highly decentralized when it comes to policy making on the ground (Biela et al. 2013).

The differences between federal and unitary states are, therefore, overstated because there is a certain degree of divided power in most countries. Thus, we argue that it is of particular importance not to focus on the distinction between *de jure* federal and unitary countries, but on the exact degree of political authority that regional levels have within them. This strategy will allow us to discover whether decentralization affects women's legislative representation, and to what extent the effect is dependent on the political power of the regional units.

We test two main hypotheses:

*H1 (Political power of a region):* Greater political power of regional units leads to a lower percentage of women being elected to their regional legislatures compared to the regional units with lower political power.

Our first hypothesis aims at testing whether the political power of a region, irrespective of the country it belongs to, has a direct impact on the percentage of women elected to its legislature over time. In this case, we are able to perform a cross-country comparison of women's legislative representation in the regions with higher and lower levels of political authority. At the same time,

there are countries where regions differ from each other in terms of the political power they possess. Thus, we are interested in whether these variations affect women's legislative representation within countries and, particularly, whether this contributes to the national–regional gender gap in the percentages of women elected. Thus, our second hypothesis is:

*H2 (Political power of a region in the national political system):* Greater political power of regional units in the national political system leads to a lower percentage of women being elected to their regional legislatures compared to the national parliament.

Taking into account that gender stereotypes still affect voting decisions – women are perceived by some voters as less competent than men (Bauer 2015; Fulton 2012, 2014) – we expect fewer women to be elected to the regional legislatures in the regions possessing more political authority. More politically powerful regions can be an attractive political arena for male elites and can be seen as a good launching pad for their future political career (Stolz 2003). A region's greater political power can increase the competitiveness of its elections and the costs of the electoral campaign, which, in turn, are known to be damaging to women's legislative representation (Schwindt-Bayer & Mishler 2005; Sanbonmatsu & Carroll 2009). Moreover, political parties may nominate fewer women to run for more politically important offices. At the national level, in turn, these barriers might be reduced, for instance, by a greater visibility of national political office and, consequently, by a higher pressure from voters and the international community to promote female candidates and to adopt national gender quotas (Stockemer 2018).

Thus, we are looking at the 'macro' relationship: fewer women are elected to the legislatures of more politically powerful regions. This derives from many 'micro' factors: women do not run for more prestigious political positions because the costs of electoral campaigns are too high (Sanbonmatsu & Carroll 2009); it is difficult to compete with male incumbents in very competitive elections (Schwindt-Bayer 2005); and women (and voters) do not consider themselves competent enough for office (Fox & Lawless 2004). These 'micro' factors have been tested in the literature on women in politics, but the 'macro' relationship, as described above, has not so far been properly studied. We focus, therefore, on the relationship between regional political authority and women's legislative representation and provide possible explanations for its particular direction and magnitude.

## Data

One of the reasons that research on women's political representation at lower levels of government is scarce, and less developed than at the national level, is the lack of cross-national, especially time-series, data on the share of women elected at the regional level and on the regional indicators of socio-economic development. Accordingly, we have compiled an original database on women's legislative representation in 383 regional parliaments in 19 European countries,<sup>6</sup> from 1970 to 2018, supplementing it with data on regions' political and socio-economic indicators.<sup>7</sup> Focusing on European countries, instead of covering as many countries as possible, comes with the advantage that cultural, economic, political and social heterogeneity is limited and, consequently, the number of relevant control variables does not overburden our statistical models. It should be noted that Russia is not a member of Organisation for Economic Cooperation and Development and is one of the biggest decentralized countries. Therefore, including it in the main models may 'drive' or bias

Table 1. Multilevel governance and women's legislative representation (Three-level linear mixed-effects model; standard errors in parentheses)<sup>15</sup>

	DV 1: % women elected to the regional legislature		DV 2: national–regional gap in % women elected	
	(1)	(2)	(3)	(4)
Intercept			8.09** (3.09)	
RAI	−14.41*** (3.79)	−16.50*** (3.99)		12.67*** (2.99)
Time	−0.29** (0.11)		0.39*** (0.09)	
Regional electoral system (PR)	0.43*** (0.02)	0.40*** (0.03)	0.16*** (0.02)	0.18*** (0.02)
Gender quota	0.01 (0.02)	−0.00 (0.02)	0.04** (0.01)	0.04** (0.01)
GDP per capita (log)	8.51*** (0.63)	5.92*** (0.60)	−5.57*** (0.55)	−5.49*** (0.55)
Federation		8.22*** (0.89)	−7.09*** (0.83)	−7.11*** (0.83)
		8.43*** (1.02)		3.90 (3.36)
N (regional legislatures)	1,807	1,816	1,807	1,816
N (regions)	276	276	276	276
N (countries)	18	18	18	18

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

the results to a great extent. Consequently, we include it only in the robustness check models to see whether our main independent variables of interest show the same direction and magnitude of the impact. It is essential to do this because Russia provides a large variation in political authority between the regions, especially in the 1990s and at the beginning of 2000s, as well as with regard to other control variables included in the statistical models.

The starting point of 1970 is not accidental. Before 1970, women were represented in regional and national legislatures sporadically in the most-developed countries. In the 1970s and 1980s, Scandinavian countries and Iceland surpassed a threshold of 20 per cent of women elected. In 1990, the United Nation Economic and Social Council set a goal of reaching 30 per cent women's legislative representation by 1995 (Dahlerup 2006). The adoption of the Beijing 1995 Declaration also contributed to further improvement in women's political representation (Fallon et al. 2012). Since the 1990s, many countries have started to adopt gender quotas to foster women's political representation (Dahlerup 2006). Of course, not all countries in our sample had regional elections in 1970. For each country, we take as a starting point either the first regional legislative elections for which data is available or the first elections to the regional legislatures to be held. (See Table 1A in the Online Appendix for the time periods analyzed for each individual country, which are included only from the time of becoming a democracy.)

We use two dependent variables in our models corresponding to Hypotheses 1 and 2, respectively. The first, DV 1, is the percentage of women elected to regional legislatures. In this step of the analysis, we will be able to see whether the political power of the regional units has



a direct impact on women's representation in the regional legislatures, irrespective of the country they belong to. We expect the proportion of female MPs to be higher in less powerful regions.

The second dependent variable (DV 2) is the gap between the percentages of women elected to the national legislature and to the regional legislature. It is calculated for each year because in many countries the years of national and regional legislative elections do not coincide. Then, the mean of the yearly values of this variable for each election period of a regional legislature is taken. Thus, positive values of the dependent variable show that more women are elected at the national than at the regional level.<sup>8</sup> We expect fewer women, than at the national level, to be elected in the more powerful regions of a particular country. Thus, national level is used only as a benchmark for comparison of the regions within countries, not between them (as in DV 1).

For instance, if the national parliament and the regional legislature have 20 and 10 per cent of women elected respectively, then  $DV\ 2 = 20 - 10$  per cent = 10 per cent. In the same way, if the national parliament and the regional legislature have 40 and 30 per cent of women elected respectively, then  $DV\ 2 = 40 - 30$  per cent = 10 per cent. Although in the first case the levels of women's legislative representation are lower than in the second example, the gap between the national and regional shares of female MPs is the same. While with DV 1 we estimate the levels of regional female representation (10 and 30 in this example), with the second dependent variable we assess women's legislative representation in each region in the context of the particular national political system. In the latter case, it is important for us whether women's legislative representation at the regional level is higher or lower than in the national parliament within one country. By calculating the gaps, we are also able to minimize the effect of some unobserved factors influencing women's legislative representation that differ between the regions, because this variation between the regions is smaller within countries than between them (as in DV 1). The general trends in the percentages of women elected to the regional legislatures and national parliaments over time are presented in Figure 1.

Figure 1 shows the general longitudinal trend in the increase of the share of women elected to the regional legislatures and national parliaments in all countries. We also see that the trajectories and magnitudes of the change differ between regions within countries. One possible explanation of these variations is the asymmetry between regions in terms of political authority. For instance, Scotland has a higher level of political power than Wales, Northern Ireland and London.

The main independent variable of interest is the Regional Authority Index (RAI) score, measuring the level of a region's legal authority in the domains of 'self-rule' within the region and 'shared rule'<sup>9</sup> within the country in ten subdimensions: institutional depth, policy scope, fiscal autonomy, borrowing autonomy, representation, law making, executive control, fiscal control, borrowing control and constitutional reform – for each year (Hooghe et al. 2016). We argue that all of the dimensions constituting RAI need to be included to measure the political power of the region. There are different fields where a region can exercise its authority and all of them are interconnected. As the authors of the index argue, all the dimensions 'can be thought of as indicators of a latent variable' measuring a region's political authority – that is, its legitimate power (Hooghe et al. 2016: 15).

It is necessary to highlight a main advantage of using RAI for testing our argument about the impact of a region's political power on women's legislative representation. Although RAI is also available as an aggregate measure at the national level, we use disaggregated scores assigned for each particular region at each particular point of time. Therefore, we have a variation in political

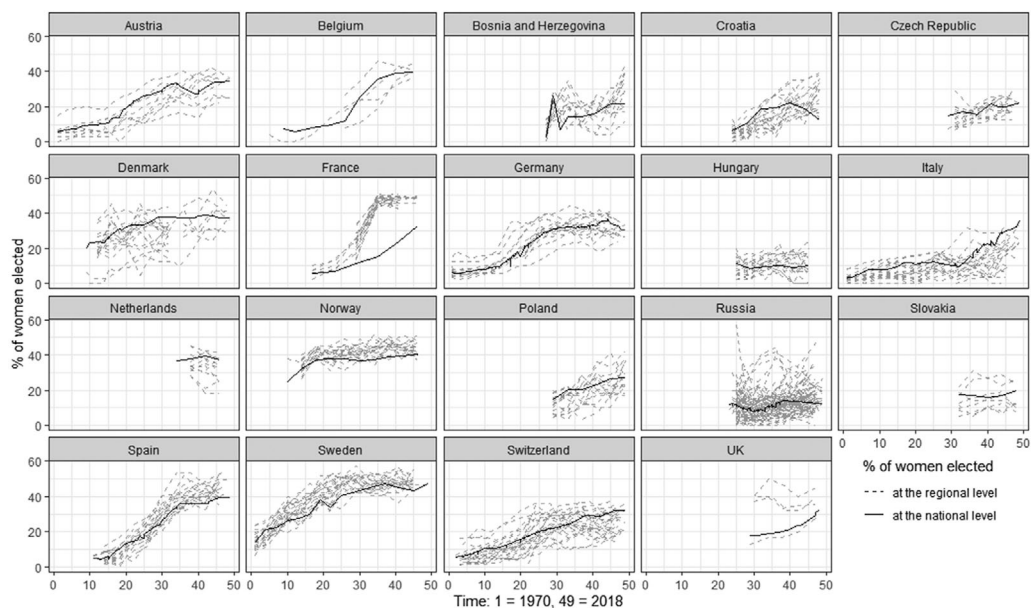


Figure 1. Percentages of women elected to regional and national legislatures over time.

power that regions possess over time within a country. Thus, we are able to perform not only cross-country, but also within-country comparison. The variation in RAI between, and in many cases within, regions covered by our dataset both within and between countries can be seen in Figure 2.

For the whole dataset, including Russia, the mean RAI score is 16.65. The average percentage of women elected to the legislatures in the regions with a low level of political authority, below the mean, is approximately 25.3 per cent. The average share of female MPs in the legislatures in the more politically powerful regions, above the mean, is approximately 17.97 per cent. At the level of descriptive statistics, we can already see that, on average, fewer women are elected to the legislatures of the regions possessing more political authority.

More specifically, we can distinguish two groups of countries concerning the variation in RAI. First, there are countries with a symmetrical configuration of power, for example Austria and Croatia, where there is no distinction between the regions in terms of the political authority they possess. Second, there are asymmetrical countries – the political power of their regions varies. In this second group, though, there are two subgroups. In one of them, differences in RAI between the regions remain constant over time, for instance in Denmark and France. As we can see in Figure 2, Denmark has three groups of regions with different RAI scores, France has two such groups, but for both countries the lines are always parallel and do not change over time. Thus, we test the impact of the increase in RAI of a region on the percentage of women elected to its legislature either compared to all other regions, irrespective of the country they belong to, or compared to the national parliament. In the other subgroup, however, the power of some regions decreases or increases but not unilaterally. The changes in RAI come simultaneously. Therefore, the existing differences in RAI levels between the regions remain constant over time. For instance, the changes



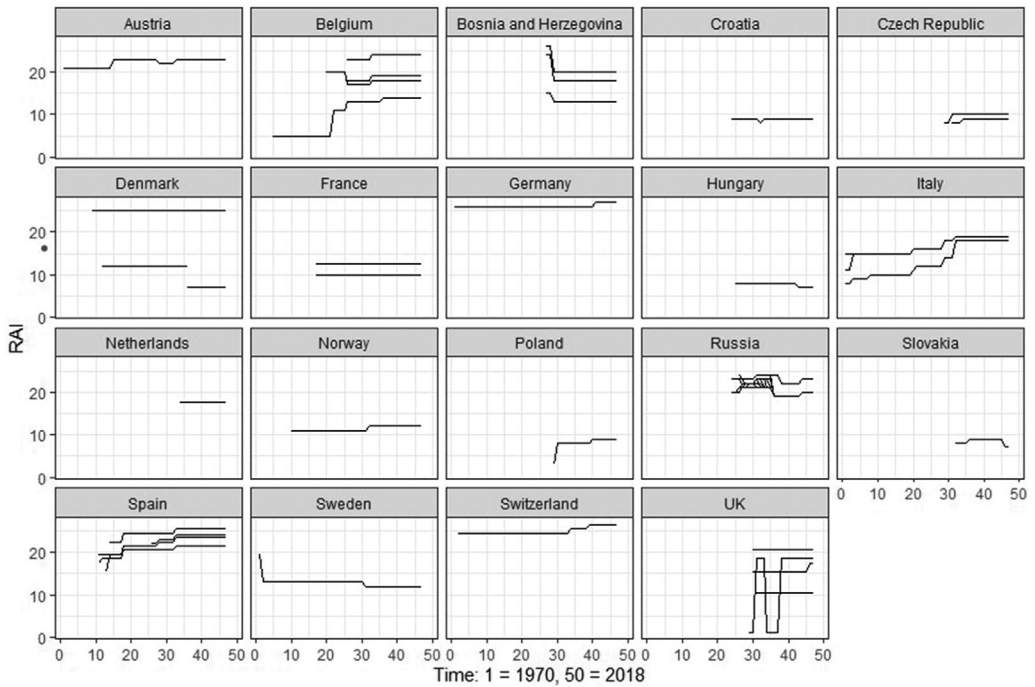


Figure 2. Variation in RAI over time.

in RAI in Belgium, Bosnia and Herzegovina and Czech Republic go usually in parallel with each other.

Thus, RAI is the best available measure of the political authority that regions possess. It captures variations both between and within countries as well as over time in different domains of power: financial, legal, policy, representational and constitutional (Hooghe et al. 2016: 6). By using this measure of regional political power, we evaluate whether the distribution of power between national and regional levels affects the gap in the ‘distribution’ of female MPs between them and the share of women elected to the regional legislature itself.

We know from the literature and the data on women’s legislative representation at the national level that it has increased in a majority of countries over time, due to general advances in women’s socio-economic and political status (Lovenduski & Hills 2018). Universal suffrage, easier access to secondary and tertiary education and to the labour market, and a gradual shift in cultural norms promoting the idea of gender equality have contributed to the overall increase in the number of women in politics. As our study is longitudinal, we expect to see a positive impact of time on women’s legislative representation at the regional level as well. We control for this by including a continuous variable ranging from ‘1’ (1970) to ‘49’ (Lovenduski & Hills 2018).

Following the literature on factors affecting women’s legislative representation, we include three other control variables measured at the regional level. First, the type of regional electoral system, measured as the proportion of seats allocated under proportional representation (PR).<sup>10</sup> Many studies show that PR positively affects women’s chances of being elected, due to a higher district magnitude (McAllister & Studlar 2002; Norris 2006). In our opinion, this way of operationalization is advantageous, since it captures more nuanced variations in electoral systems

between the regions than a dummy (PR – majoritarian) or a categorical (PR – majoritarian – mixed) variable. We expect that the percentage of women elected at the regional level should be higher the more proportional the electoral system is. However, we do not expect PR to have a considerable impact on our second dependent variable, because in the majority of countries in our sample the electoral system at national and regional levels is the same. More proportional representation at the regional level increases the percentage of women elected; at the same time, more proportional representation at the national level does the same. Thus, the national–regional gender gap should remain constant.

Next, legislated gender quotas adopted at the regional level. Many scholars have shown that all types of quota increase the percentage of women elected through the ‘fast track’, rather than ‘incrementally’ as happened in Scandinavian countries (Dahlerup & Freidenvall 2005). Although a positive effect of this affirmative action is confirmed by many studies (Dahlerup 2006; McAllister & Studlar 2002), it does not increase women’s representation if effective sanctions for non-compliance with the quota’s requirements and rank order of female and male candidates are not specified (Norris 2004, 2006; Schwindt-Bayer 2009). Consequently, legislated gender quotas are likely to be more effective than voluntary party quotas, due to better enforcement mechanisms (Dahlerup 2006; Davidson-Schmich 2006). Therefore, we focus only on the former; we assign a value of ‘1’ if a gender quota was in force during a particular regional legislative election and ‘0’ otherwise. We expect a positive impact of legislated gender quotas on the percentage of women elected to the regional legislature (DV 1) and, consequently, a decrease in the gap between percentages of female MPs at the national and regional levels (DV 2).

The last control variable is regional gross domestic product (GDP) per capita measured in constant 2010 USD (thousands) at purchasing power parity (PPP); we use the log because the original variable is skewed to the right. Two main data sources were used for calculating this variable: the Organisation for Economic Cooperation and Development database on regional statistics and European regional data provided by Cambridge Econometrics. Higher socio-economic development of the country, or of the region in our case, facilitates gender equality in politics through different channels such as urbanization, better child-care infrastructure, better education opportunities, and so on (Fallon et al. 2012; Schwindt-Bayer 2005; Thames & Williams 2013). Therefore, we expect regions with higher GDP per capita to have more women elected to their regional legislatures (DV 1), and the national–regional gap between the percentages of female MPs (DV 2) to decrease.

Unfortunately, we were forced to exclude a control for female labour force participation<sup>11</sup> at the regional level – another common variable known to affect women’s legislative representation (Rosenbluth et al. 2006; Viterna et al. 2008) – from the final model due to the high level of missing data for this indicator. Nevertheless, our results are robust in terms of the magnitude and direction of the effect of the main variables when including it in the model (see Table 4A in the Online Appendix).

Finally, to show that our measure of decentralization based on RAI performs better in evaluating the impact of multilevel governance on women’s legislative representation than the binary federal–unitary distinction used in previous studies, we also run the models with this dummy variable. Instead of RAI, we include a binary variable at the country level where 1 corresponds to de jure federations and 0 to unitary states. Thus, all of the independent variables included in the main models, except for federalism, are measured at the regional level (See Table 3A in the Online Appendix for the descriptive statistics of the variables included in the analysis.)

## Analysis

To test our hypotheses, we apply longitudinal multilevel regression modelling and run a three-level mixed-effects model with random intercepts at region and county level to account for the hierarchical data structure: 1,816 regional legislatures are nested within 276 regions nested within 18 countries (excluding Russia). We take means of the yearly values of the independent variables – RAI, PR, and GDP per capita – for each regional legislature. With regard to the time variable, we take the first value that corresponds to the beginning of the regional legislature's term. The intraclass correlation coefficients (ICCs) for the first dependent variable – percentage of women elected to the regional legislatures (DV 1) – are 0.00 for the regions and 0.45 for the countries. This suggests that the biggest part of the variance is at the lowest level of the regional legislatures, which is not surprising, considering how this dependent variable is measured. There is some cross-country variance to be explained, but the cross-region variance is minimal. The intraclass correlation coefficients (ICCs) for the national–regional gap dependent variable (DV 2) are 0.18 for regions and 0.42 for countries, meaning that while the biggest share of variance in that dependent variable is across regional legislatures, there is still some cross-region and cross-country variance in the gender gap to be explained.

The results of the statistical analysis are presented in Table 1. Models 1 and 2 are based on the percentage of women elected to the regional legislature as dependent variable (DV 1), while Models 3 and 4 have the national–regional gap in the percentages of women elected as the dependent variable (DV 2). Models 2 and 4 include a dummy variable for federalism instead of RAI, to account for the multilevel structure of the national political system.

The results in Table 1 show that both our hypotheses are confirmed. Greater political power of a region leads to fewer women being elected to its regional legislature than to the regional legislature of a less politically powerful region. From Model 1 we see that each increase in RAI of one point leads to 0.29 percentage points fewer female MPs elected to its regional legislature. While the effect is small, an increase of 10 points in RAI leads to a considerable three percentage points drop in the share of women elected. The upper Figure 1A in the Online Appendix shows predicted probabilities of the share of women elected to the regional legislature (DV 1) for different levels of regions' political authority. We see that the increase in RAI scores leads to a decrease in the percentage of women elected to the regional legislatures from approximately 27.5 per cent to 20 per cent. Due to the overlap of the confidence intervals of the estimation points for the minimum and mean values of RAI, its effect on DV1 there might be minimal. However, the association between DV1 and RAI is substantial at the minimum and maximum values of the latter, which we interpret as a significant effect.

Our second hypothesis is confirmed as well. Each increase in RAI of the region of one point leads to 0.39 percentage points fewer women elected to its regional legislature compared to the national parliament. The lower Figure 1A in the Online Appendix shows predicted probabilities of the national–regional gap in the percentage of women elected for different levels of RAI. We see that when the RAI score is approximately 16 points, our DV 2 becomes positive indicating that henceforth more women are elected at the national rather than at the regional level. Therefore, we can conclude that regions possessing more political authority in a particular national political system have fewer women elected to their legislative bodies than to the national parliament.

The attractiveness of the regional political positions in terms of the power and career prospects for the mostly male political elite inhibits women's electoral success in regional legislatures.

Women's representation at the national level, in turn, can grow faster for several reasons. For instance, the greater visibility of national politicians may put parties under pressure to nominate more women to run for the national legislature, in order to demonstrate their *de facto* or *de jure* adherence to gender equality ideals. This strategy can attract female voters and help parties win votes. As a result, women's legislative representation at the regional level decreases and, at the same time, the national–regional gap in the percentages of female MPs grows. Thus, the regional authority index scores, measuring the distribution of power between national and regional levels of government, help to explain the percentage of women elected at the regional level itself and also a more complicated pattern of the 'distribution' of female candidates between national and regional levels in a country.

RAI is a relevant factor in explaining where more women 'go' to – meaning that fewer women are elected in more powerful regions, but they might be elected at higher rates at other levels of government. In some countries, for example in Belgium, the federal level is much less powerful than the regional one and it might be easier for women to achieve legislative office there. In other countries, the national level is much more visible than the regional electoral arenas, so parties might be under more pressure to nominate and promote female candidates. Of course, there are many factors that help to explain an increase in female MPs in national parliaments, but that is beyond our scope here. Our analysis suggests, though, that one of these factors might be the power of regional units, which 'pushes' women away from the regional political game and prevents higher rates of female election there. Therefore, additional measures, such as the adoption of gender quotas at the regional level, that would help women get elected in the more powerful regions, still seem necessary to enhance gender parity in the regional legislatures and to decrease the national–regional gender gap.

Almost all basic regional political and economic indicators behave in a hypothesized manner. The positive (in Models 1 and 2) and negative (in Models 3 and 4) impact of regional GDP per capita is highly statistically significant. This implies that a higher economic development of a region leads to more women being elected to its legislature. It also decreases the national–regional gap in the percentages of women elected. In line with previous research, we find that legislated gender quotas adopted at the regional level have a considerable and highly statistically significant impact on the share of women elected to the regional legislatures. Gender quotas also decrease the gap in the percentages of women elected at the national and regional levels, lending support to our suggestion above that additional measures such as the adoption of gender quotas would help to boost women's legislative representation in more powerful regions.

Contrary to our intuition, a more proportional electoral system at the regional level does not increase the percentage of women elected to regional legislatures. The impact of this control variable on women's legislative representation at the regional level is positive, albeit not statistically significant. However, this is not a major concern for us, since additional institutional aspects of the electoral systems are not taken into account. Proportional electoral systems are widely used at the regional level in many countries in our sample; thus, the variation between regions is not great. But regional electoral systems differ in terms of electoral threshold, district magnitude<sup>12</sup>, and level of party system fragmentation, all of which may affect women's election (Vandeleene et al. 2013). However, PR has a positive and statistically significant effect on the national–regional gap in the percentages of women elected. Although electoral systems at national and regional levels coincide in the majority of cases, the identified effect suggests that PR works

more effectively at the national level because, as argued above, parties might be under more pressure to include women in their electoral lists.

Unsurprisingly, the impact of time is positive and statistically significant, as we hypothesized. Over time – that is, at each consecutive regional legislative election – the percentage of women elected increases by approximately 0.4 percentage points. Figure 1, presented above, illustrates this general longitudinal trend in the increase in the percentage of female MPs at both regional and national levels. The effect of time on the national–regional gap is also positive, meaning that more women are elected at the national than the regional level. This confirms our earlier assumption that the percentages of women elected to national parliaments grow faster, for one reason or another, than the percentages elected to the regional legislatures of politically powerful regions.

Finally, we see from Table 1 that the binary federal–unitary distinction, used in previous studies to account for the multilevel structure of politics, does not have a statistically significant impact on either of our dependent variables. Based on the direction of influence of this control variable, we can say that fewer women are elected to regional legislatures in federal than in unitary countries, and the national–regional gap increases in federations. However, we do not know what accounts for this relationship when using a dummy variable to test the impact of multilevel politics and decentralization on women’s legislative representation.

We also performed a robustness check by running two-level models with country dummies where regional legislatures are nested within regions. The results presented in Table 5A in the Online Appendix show the same direction and statistical significance of the independent variables as in the main models. Except for the robustness of our results, one more thing that should be noted is that some of the country dummies have a positive impact on DV 1 and/or DV 2, while others have a negative impact. Similarly, some country dummies are statistically significant, while others are not. Taking this and, especially, Figure 1 presented above into account, we can see that, of course, our sample is not homogeneous. We distinguish thus at least three major clusters of countries with similar patterns of women’s legislative representation at the regional level and in relation to the national level.

Post-communist countries show both progress and regress in the percentage of women elected to regional legislatures over time. For example, in Bosnia and Herzegovina, the Czech Republic, Hungary and Russia, there are both upward and downward trends at different points of time. A second group of countries (Belgium, France, Italy and Spain) exhibits a sudden jump in women’s legislative representation at the regional level, attributed to the introduction of some form of gender quota. They also have political parties which adopted voluntary gender quotas (Verge 2012).<sup>13</sup> The last clear group is the Scandinavian countries, where the percentage of women elected was higher than in any other country, starting from the very first regional legislature term we analyzed. Despite these country differences, we do not include any control variables at the national level in our models because, first, much has been written on the national factors of women’s legislative representation. Second, we are mainly interested in the regional units and their political and socio-economic characteristics. Controlling for spatial autocorrelation statistically with a three-level model or with the inclusion of country dummies is therefore sufficient for the purposes of this analysis.

Due to the high number of regions in Russia, we performed a separate robustness check of the main models on the sample including Russia. The results are robust for Hypothesis 2 (Table 6A in the Online Appendix). However, as we can see from Table 6A, the impact of RAI on the percentage of women elected to regional legislatures (DV 1) preserves the direction of influence but

becomes not statistically significant. Thus, the inclusion of Russia makes the relationship between the political authority of the regions and women's legislative representation less clear. There are several possible explanations for this. First, there is some evidence that the percentage of women elected is higher in more authoritarian countries than in democracies (Stockemer 2011). Loyalty is a more valuable feature than competence or gender in candidates running for office in less democratic countries. Therefore, a ruler or ruling party mostly nominates candidates irrespective of their qualifications and gender. Second, over time, political authority vested in the Russian regions has become less important in real life than on paper. The process of recentralization of power by the federal centre has led to the predominance of informal relations between Moscow and regional governments and to increased control of regional affairs by the federal centre (Goloso 2011, 2018). These factors blur the relationship in Russia between RAI and women's legislative representation.

The results are robust to different specifications of the variance–covariance matrix of the multilevel model. The results of the main model with different error covariance structures are presented in Table 7A in the Online Appendix. We also ran an OLS regression with region dummies<sup>14</sup> to check if our results are robust under this specification. For DV 1, all independent variables are in the same direction of influence, as in Table 1, and are statistically significant, except for the regional electoral system. For DV 2, all independent variables are in the same direction of influence, as in Table 1, and are statistically significant. Finally, we ran a three-level mixed effects logistic regression where we substituted DV 2 with a dummy variable accounting for the direction of the national–regional gap in the percentages of women elected. The value of '0' was assigned if the gap is negative, meaning that the percentage of women elected to the regional legislature is higher than the percentage of women elected to the national parliament; a value of '1' otherwise. The results are presented in Table 8A in the Online Appendix. All of the independent variables, except for the regional electoral system (PR), preserve their direction of influence and are statistically significant. Thus, the results are robust.

## Conclusion

In this article, we consider whether the impact of decentralization may be mitigated by a particular distribution of competences between the different levels of the political system. We argue that the effect of decentralization on women's legislative representation is dependent on the political power of the regional units in national political systems. We hypothesize that more powerful regions, in terms of the level of political authority they possess, have fewer women being elected to those regional legislatures. More powerful regions may be viewed as more appealing electoral arenas for political careers by still predominantly male political elites. This, in turn, increases the costs of electoral campaigns and the competitiveness of the elections, and can uncover gender biases among voters. As a result, a lower proportion of women win regional than national legislative elections. At the national level, which is more visible in many countries, parties may be under stronger pressure to nominate and promote female candidates. Thus, the gap in the percentages of women elected between the national and the regional level increases.

To test our hypothesis on the impact of the political power of regional units, we use an original dataset on women's legislative representation in 383 regional legislatures in 19 European countries from 1970 to 2018. The results of the three-level mixed-effects models confirm our expectation. They show that, despite the general increase in women's legislative representation over time in all



regions due to the general advancement of women's socio-economic status, it remains lower in the more politically powerful regional legislatures. Women's legislative representation at the national level, in turn, increases over time at higher rates. Therefore, the distribution of power between the national and regional levels of government in favour of the latter leads to a widening gap between the percentages of female MPs at the national and regional levels.

Of course, there are some alternative explanations for the differences in levels of women's legislative representation between the regions, such as the local strength of particular political parties. Left-wing parties usually promote gender-equality policies more than right-wing ones, so more women are recruited and nominated by left-leaning parties (Morgan & Hinojosa 2018). Hence, party-level analysis would be useful to control for the impact of parties' ideology and their candidate selection and nomination strategies on the percentage of women elected (Vandeleene et al. 2013). But the collection of party-level data across countries and especially over time at the regional level is difficult and time consuming, so we leave consideration of these issues for future analysis.

Given our findings, we can conclude that decentralization dynamics are not indisputably positive. Decentralization can complicate responsibility attribution (León et al. 2018) and pose particular problems for responsiveness in a multilevel political system (Däubler et al. 2018). Our analysis shows that far-reaching decentralization reforms allocating a considerable amount of political authority to the regional units can impede the electoral success of female candidates. To overcome this barrier and to enhance the achievement of gender parity in the regional political arena, therefore, measures such as legislated gender quotas at the regional level would need to be adopted. This, in turn, would lead to an increase in the pool of eligible female candidates from which parties can choose their candidates for future elections and enable female MPs to boost their further political career either at the national level or at the regional level itself (Stolz 2003).

The results of our study can also be generalized to other spheres of life. Similar patterns of women's underrepresentation in more prestigious, powerful and relevant positions are found in organizational studies and literature on the labour market. The well-known 'glass ceiling' phenomenon in corporations implies that, irrespective of their qualifications and experience, women are impeded in reaching senior managerial positions (Abidin et al. 2009; Dreher 2003; Goodman et al. 2003). Sanders and her co-authors (Sanders, Willemsen & Millar 2009), analogously, analyzed the labour market of professorial positions in the Netherlands, evaluating how women were or were not able to break the 'glass ceiling' and obtain full professorial status. Thus, the collaboration of researchers across different disciplines has the potential to produce useful insights into the issues of women's underrepresentation in the most powerful political and socio-economic positions and to create new avenues for future research.

## Acknowledgements

Earlier versions of this paper were presented at the 2019 Annual Meetings of the American Political Science Association, European Conference on Politics and Gender, European Political Science Association and Max-Planck Summer Conference on Economy and Society as well as the research seminar of the Cologne Center for Comparative Politics, University of Cologne. For comments and advice, we would like to thank all anonymous reviewers, Gail McElroy, Jonathan Homola, Jens

Wäckerle and Bruno Castanho Silva. André Kaiser thanks the Deutsche Forschungsgemeinschaft (DFG grants KA 1741/10-1 and KA 1741/10-2) for funding this work.

Open access funding enabled and organized by Projekt DEAL.

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## Online Appendix

Additional supporting information may be found in the Online Appendix section at the end of the article:

**Table 1A. Time period of regional elections.**

**Table 2A. Data sources.**

**Table 3A. Descriptive statistics of the variables (regional legislatures level, excluding Russia).**

**Table 4A. Multilevel governance and women's legislative representation (with control for female labor force participation) (Three-level linear mixed-effects model; standard errors in parentheses).**

**Table 5A. Multilevel governance and women's legislative representation (with country dummies; Austria as a baseline) (Two-level linear mixed-effects model; standard errors in parentheses).**

**Table 6A. Multilevel governance and women's legislative representation (with Russia) (Three-level linear mixed-effects model; standard errors in parentheses).**

**Table 7A. Multilevel governance and women's legislative representation under different specifications of variance-covariance matrix (Three-level linear mixed-effects model; standard errors in parentheses).**

**Table 8A. Multilevel governance and women's legislative representation (dummy variable as DV 2) (Three-level generalized linear mixed model; standard errors in parentheses).**

**Table 9A. Multilevel governance and women's legislative representation (with control for district magnitude) (Three-level linear mixed-effects model; standard errors in parentheses).**

**Figure 1A. Predicted probabilities of the share of women elected to the regional legislatures and of the national-regional gap in the share of women elected.**

## Notes

1. Note that we need to be cautious when interpreting our findings. Based on the currently available data, we cannot be sure that there is a definitive causal effect of regional political authority on women's legislative representation. Nevertheless, we are confident that, given our findings, we present more than mere empirical associations.
2. Throughout the article, we use the term 'regional' referring to the second or intermediate level of government in a country that exercises authority within its geographical boundaries. Regions are included in the sample when they fulfil two criteria: they have directly elected legislatures and are located between national and local governments. In several countries, some regions are missing due to the lack of data for them in the RAI database. For more information on the regions included in the RAI database, see <http://garymarks.web.unc.edu/data/regional-authority/>.
3. See also Kenny and Verge (2012) on decentralization and quota adoption by political parties.
4. See also a special issue on "Gendering Federalism" (2013), *Publius: The Journal of Federalism*, 43(1).
5. As of February 1, 2019. Women in National Parliaments (<http://archive.ipu.org/wmn-e/classif.htm>).

6. Austria, Belgium, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Russia, Slovakia, Spain, Sweden, Switzerland and United Kingdom.
7. Besides the data sources listed further in this section, we would like to thank all national and regional statistical offices, archives, ministries of interior, regional legislatures and other officials that helped us and provided us with the additional data requested. For more information on the data sources see Table 2A in the Online Appendix.
8. We also perform a robustness check where we use a dummy variable instead of a continuous DV 2 to account for the direction, rather than the size, of the national–regional gap in the percentages of women elected. The operationalization of the variable and the results of the robustness check are discussed in the analysis section.
9. ‘Self-rule is the authority that a subnational government exercises in its own territory. Shared rule is the authority that a subnational government co-exercises in the county as a whole’. (Hooghe et al., 2016: 23)
10. We do not use standard measures of the proportionality of electoral systems, for example the Gallagher index of disproportionality, because these are behavioural measures focusing on the outcome of elections and not on the institutional setting itself. For a subset of cases, we check whether our findings are robust when we use the district magnitude (see next section).
11. The female employment rate is measured as the percentage of women employed at ages 15–64 in the working age population at ages 15–64 in the region. For some regions, due to the lack of comparable data, data for the age cohorts 15–72 is used. The data is partially provided by the OECD Regional Database.
12. The collection of data on the district magnitude (DM) at the regional level over time is difficult and time consuming. However, we perform a robustness check of the main models with the data on DM for a selected group of countries and regions, kindly provided by Röth and Kaiser (2019). The results are presented in Table 9A in the Online Appendix. DM is not statistically significant, probably due to the high number of missing values. Our results regarding the impact of RAI and other control variables are robust.
13. For the types and details of gender quotas in these countries, see the gender quotas database (<https://www.idea.int/data-tools/data/gender-quotas/database>).
14. Not shown. Available from the authors upon request.
15. Unstandardized coefficients.

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