

## **Contextual Determinants of the Latin American Gender Gap in Political knowledge**

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### **Abstract**

Gender differences in political participation and knowledge have proven to be remarkably persistent across time. Notwithstanding the tremendous increase in the degree of gender equality in political power and resources in industrialized democracies, women appear to participate and to know about politics to a lesser extent than men. The study of knowledge inequalities, however, has mainly focused in the US, Commonwealth countries and Western Europe. In contrast, this paper examines the relationship between gender and political knowledge in 18 Latin American Countries with data from the 2008 AmericasBarometer's round of surveys. We find that sex differences in political knowledge are apparent in all Latin American Countries studied here. In addition, we test four theoretical expectations coming from theories hypothesizing a decrease in the gender gap in knowledge as a consequence of some contextual factors: (i) the impact of descriptive representation, (ii) the existence of power-sharing institutions, (iii) the degree of economic development, and (iv) the degree of gender equality in the labour market. Results suggest that the gender gap in knowledge is smaller in countries with higher levels of women in the elite political position, in countries with federal systems, and in countries where the level of income equality between men and women is higher.

## **1. Introduction**

Research on public opinion and voting behavior has often indicated that the overall level of information, knowledge and understanding of politics of the average citizen is relatively poor. In addition, political knowledge appears to be unevenly distributed. From all the many sources of knowledge inequalities identified in previous literature (such as resource-based, motivational-base, race-base) this paper deals with the one that can be considered as the most puzzling: the gender differences in political knowledge.

Gender differences in political knowledge have proven to be remarkably persistent across time. Notwithstanding the tremendous increase in the degree of gender equality in political power and resources in industrialized democracies, women appear to know about politics to a lesser extent than men (Burns 2007, Delli Carpini and Keeter 1996 and 2000; Norris 2002). Although some researchers have noted that the difference is often small in comparison to other inequalities such as education or social class (Burns 2007, Norris 2002), gender differences in knowledge appear to be the most enduring and strong. The study of knowledge inequalities however has mainly focused in the US, Commonwealth countries and Western Europe. In contrast, this paper examines the relationship between gender and political knowledge in 18 Latin American Countries with data from the 2008 Americas Barometer's round of surveys.

Common explanations of the gender inequality in political knowledge point to traditional social norms (that identify women as those responsible for parenting and other caring activities) as well as to the socioeconomic disadvantages that women suffer: higher levels of socioeconomic and cognitive resources for men than for women explain their knowledge differences (Delli Carpini and Keeter 1996, 2000; Verba, Burns and Scholzman 1997). However, these studies focus on explanations at the individual level. In contrast, recent

contributions to the field of political behaviour have also tested explanations about the gender gap in political participation at the contextual level. We use this same contextual approach to study the gender gap in knowledge in Latin American countries, a rarely studied area (for an exception see Desposato and Norrander 2009). We derive from previous theories studying the contextual determinants of the gender gap in political participation a set of four theoretical expectations hypothesizing a decrease in the gender gap in knowledge as a consequence of four contextual factors: (i) the impact of descriptive representation, (ii) the existence of power-sharing institutions, (iii) the degree of economic development, and (iv) the degree of gender equality in the labour market. Findings show that the gender gap in knowledge is smaller in countries with higher levels of women in the elite political position, in countries with federal systems, and in countries where the level of income equality between men and women is higher.

## **2. Contextual Factors explaining the gender gap in political knowledge**

Gender differences in political participation and knowledge have been explained on the grounds of both individual and contextual factors. As mentioned earlier, most individual-level explanations focus on the role of traditional social norms and the socioeconomic disadvantages of women. Allegedly, these factors lead to relatively more material and cognitive resources for men which, in turn, lead also to gender differences in political knowledge (Delli Carpini and Keeter 1996, 2000; Verba, Burns and Scholzman 1997). However differential resources in terms of time and income, as well as lower levels of psychological involvement in politics, are not enough when it comes to explaining cross national variations in men and women's political knowledge.

An alternative approach to explaining the enduring gender gap in knowledge is to take into account the contextual factors where citizens live. Previous studies have in fact developed

this strategy, albeit focusing on gender differences in political participation and attitudes rather than on political knowledge (see, for instance, Barnes and Burchard 2013; Desposato and Norrander 2009; Karp and Banducci 2008; Kittilson and Schwindt-Bayer 2010). When dealing with gender differences in political participation at the contextual level, explanations tend to rest upon a country's socioeconomic development (Inglehart and Norris 2003). The main idea is that economic development incentivizes changes in societal values. In short, the argument is that economic development promotes secularization, which in turn leads to a general shift in attitudes, including (among other things) increasing awareness of the need for more gender equality in the political arena. For the case of political knowledge, this hypothesis involves an expectation for gender equality in politics raise, which arguably fosters the interest and knowledge of women in comparison with men. Empirical evidence in this regard is, however, mixed. Whereas Inglehart and Norris (2003) find a negative relationship between economic development and gender differences in political participation, the only existing study that focuses on Latin American countries finds no support for this theory (Desposato and Norrander 2009).

Recent studies have argued that alternative contextual factors may impact on gender differences in political participation, and therefore might also be linked to differences in political knowledge. One line of argument claims that elected women constitute symbols of inclusion in the political system and, thus, their presence incentivizes the interest of women (especially young women) to get involved in politics and to be exposed to political information, thereby raising their knowledge of politics (Burns, Schlozman and Verba 2001). The logic behind this argument is linked to the idea of descriptive representation, which refers to the similarity (in terms of race, social class, in this case gender) between representatives and the citizens (Pitkin 1967). According to this, increases in the descriptive representation of particular groups become especially relevant when those groups (in this

case, women) have been historically excluded from politics (Phillips 1995). In addition, in the case of women descriptive representation may facilitate the defence of women's specific interests that are best defended by women themselves, therefore increasing substantive representation as well (Pitkin 1967). So, to put it short, increases in women's descriptive representation might produce a parallel increase in symbolic representation by signalling to citizens (and especially to women) that institutions are inclusive and represent all relevant social groups (including women).

In the literature, findings with regard to the effects of descriptive representation are mixed, and there is also a clear predominance of the study of the US case. Focusing on the US studies, some authors find that women (especially young women) living in states with women in charge of visible political offices are significantly more likely to be politically informed, interested, and involved (Atkenson 2003; Atkenson and Carrillo 2007; Burns, Scholzman and Verba 2001; Campbell and Wolbrecht 2006; Koch 1997; Reingold and Harrell 2010; Verba, Burns and Scholzman 1997; Wolbrecht and Campbell 2007). However, others have found little support for the role of women's descriptive representation in encouraging political engagement (Dolan 2006; Lawless 2004; Zetterbeg 2009). Studies seeking to explore the link between women's representation and political engagement (and /or attitudes) across countries have also offered mixed evidence. Whereas some scholars find support for the descriptive representation hypothesis in Latin America (Desposato and Norrander 2009), Europe (Wolbrecht and Campbell 2007), and Sub-Saharan Africa (Barnes and Burchard 2013), other studies analysing a wider geographical area<sup>1</sup> find little support in favour of the mentioned hypothesis (Karp and Banducci 2008; Kittilson and Schwindt-Bayer 2010)

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<sup>1</sup> Both Karp and Banducci 2008 and Kittilson and Schwindt-Bayer 2010 analyse a set of developing and developed democracies around the world (29 countries the former and 34 countries the later)

Departing from the inconclusive nature of this branch of literature, a recent study argues that additional contextual factors need to be taken into account, focusing instead on political institutions. In particular, Kittilson and Schwindt-Bayer (2010) defend that institutions influence citizens' political behaviour and opinions through a psychological mechanism. The argument is that institutions are symbols that represent ideals of the way in which democracy works, providing cues for citizens on such ideals. Thus, citizens learn more about political institutions every time they get involved in politics. And what they learn shapes in turn their political attitudes, opinion and behaviours (Kittilson and Schwindt-Bayer 2010: 992).

Drawing on Norris' ideas about power-sharing versus power-concentrating institutions (Norris 2008), these authors test the effect of three main institutions (the electoral system, the type of executive and whether a state is federal or unitary) on political participation.

Regarding the electoral system, the expectation is that citizens' degree of interest and information about politics will be higher in systems with proportional electoral rules, as these send signals to citizens that the political environment is open to the representation and inclusion of diverse social groups (for instance, women) that tend to be underrepresented in majoritarian systems. These signals might thus encourage women to perceive that politics is not only a men's game, and therefore foster their political interest and information.

Other two institutions refer to the distribution of power in the political system more broadly (Norris 2008): the type of executive and whether a state is federal or unitary. Parliamentary systems underline shared governance, sending positive signals to citizens, and especially certain groups of citizens such as women that have historically been marginalized from the political arena. Shared governance may have a special meaning for this kind of citizens, as it may facilitate the perception that politicians represent all citizens instead of only the more powerful majorities (Norris 2008).

Regarding federal systems, the argument is that, by diffusing power to subnational governments, they provide an alternative access point for citizens to interact with governments (Kittilson and Schwindt-Bayer 2010). In this regard, some studies have actually found that women are more likely than men to know the name of the person in charge of their local schools (Verba, Burns, and Schlozman 1997) and, what is more, that the gender gap in knowledge of national politics disappears when we look at local politics (Shaker, 2012). For all these reasons, women might perceive the power-sharing effects of federalism more strongly than men.

The sole study that has tested the role of power-sharing institutions in fostering political engagement among citizens, but especially among women, shows that from the three aforementioned institutions only one contributes to reduce the gender gap in political engagement: electoral rules. Gender differences in political engagement tend to be smaller in more proportional electoral systems (Kittilson and Schwindt-Bayer 2010).

Finally, another contextual factor that has been considered in studies dealing with a wide geographical area, including developing and developed democracies, is political rights and civic liberties. The potential effect of political freedom on citizens' political interest, engagement and knowledge is, however, not obvious. One might expect in principle higher levels of political engagement in countries with high levels of political freedom, since democratization makes voting a meaningful action and promotes interest in the political sphere. However, the role of political freedom in reducing or widening the gender gap in political knowledge is rather more complex in the case of Latin American countries. Women have often played a relevant part in organizing and developing protest movements under authoritarian rule (Desposato and Norreder, 2009), and some research has found that women are more often involved in politics in post-conflict countries such as, for example, Africa (Hughes 2009). Although it is possible that this effect persists after democratization, it might

also be the case that a return to democracy and greater political freedom contribute to decrease women's political activism. Thus, higher political rights might either increase or reduce the gender gap in knowledge. This needs to be empirically tested for the case of Latin America. The only study on this topic in Latin America concludes that the gender gap in unconventional political participation is higher in countries with higher political freedom. In contrast, it does not appear to be relevant to explaining the gender differences in conventional political participation in Latin America (see Desposato and Norreder 2009)

All these factors deal with the economic and political contexts where citizens live. However, we argue that it is also important to take account of the socioeconomic inequalities between men and women in each country. A common explanation for the differences in knowledge between males and females lays the fact that men and women are situated differently in the social structure and, therefore, have different burdens in terms of work and responsibilities. Thus, the gender gap in political knowledge should be higher in countries where the labor market is male dominated. As well as previous studies have controlled for the socioeconomic context (Barnes and Burchard 2013; Kittilson and Schwindt-Bayer 2010), it is also necessary to control for the characteristics of the labour market, especially in the case of Latin America where gender differences are remarkably high in this regard.

### **3. Latin American countries under study**

Whilst individual level factors have been redundantly used to explain gender differences in political knowledge, there is a lack of studies dealing with the effect of contextual factors, especially in geographical areas outside the US and Western Europe. We argue that the study of the gender gap in political knowledge is necessary in countries other than the ones that have been predominantly studied so far.



Testing the contextual factors that mediate the gender gap in political knowledge appears especially relevant for the case of Latin America. These countries have diverse experiences with gender politics, significant variances in their degree of economic development, and important variation in the degree of female political representation as well as with regard to the institutional design of their democratic systems. Moreover in the last decade the share of parliamentary seats held by women in Latin America and the Caribbean has gradually increased from an average 13% in 2000 to 21% in 2010. And yet, there are relevant differences across countries as well, as those with statutory gender quota laws show greater numbers of women in the political elite (data from Inter-Parliamentary Union in Htun and Piscopo 2010).

Progressive policy changes have also arisen in Latin America in some policy areas, but of course not in others. Change has been far more likely on two specific topics: gender quotas and violence against women. In contrast, policies on abortion have remained largely unchanged for half a century and laws have become more restricted over time in some countries such as Chile, El Salvador and Nicaragua (Htun and Piscopo 2010).

The advances made both in the adoption of gender quotas and in the protection of women against violence are said to be the product of the combined determination of women's organisational efforts in civil society, women politicians, and transnational advocacy networks. Once treaties such as the Inter-American Convention on Violence Against Women or the 1995 UN Conference on Women in Beijing were adopted, female activists and politicians in their own countries formed coalitions for change, convincing political elites to support their proposals. (Htun and Piscopo 2010).

In sum there is an important degree of variation in the political context where citizens live in Latin America that makes this study suitable for testing the extent to which different dimensions of the political context contribute to reduce the gender gap in knowledge

#### **4. Research Design: Data, Variables, and Empirical Strategy**

To test our hypothesis, we will employ data from the 2008 AmericasBarometer's round of surveys<sup>2</sup> corresponding to 18 Latin American democracies: Argentina, Bolivia, Brazil, Chile, Colombia<sup>3</sup>, Costa Rica, Dominican Republic, Ecuador, Guatemala, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela.<sup>4</sup> All of these are presidential democracies that, despite sharing similar cultural characteristics and similar histories of (de-)colonization, show variation in our main variables of interest.

In contrast with the reduced number of items of more recent surveys, the 2008 wave contains five questions that relate to various aspects of citizens' political knowledge. The exact wording of these questions is contained in the Appendix (Table A.2). After testing for the

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<sup>2</sup> We thank the Latin American Public Opinion Project (LAPOP) and its major supporters (the United States Agency for International Development, the United Nations Development Program, the Inter-American Development Bank, and Vanderbilt University) for making the data available on [www.lapopsurveys.org](http://www.lapopsurveys.org).

<sup>3</sup> In the case of Colombia, we replaced the 2008 survey by another conducted in 2009 by the LAPOP and containing exactly the same questions. We had done this in the first place because the coding of some variables in 2008 differed from that in other countries (for instance, incorrect, DK answers and rejection were all put together under the same category). Needless to say, Colombian aggregate variables also correspond to the year 2009.

<sup>4</sup> We were obliged to exclude Guyana from our analysis (where questions on exposure to media news were not asked). We have also excluded from the analysis other three small countries with very different colonial history and heritage, language, culture and institutions: Belize, Jamaica and Haiti.

internal consistency of these five items<sup>5</sup>, we constructed an index of factual political knowledge in the conventional way –that is, creating an additive measure of correct answers (coded as 1) against incorrect and DK responses (coded as 0). Thus, the index varies from 0 correct answers to 5 correct answers. The average number of correct answers across the 18 countries is 2.66, but there is plenty of variation, as Figure 1 shows. Uruguay, with 3.5 correct answers on average, ranks first in our index, very closely followed by Honduras (3.41) and Argentina (3.37), while Nicaragua, with 1.75 correct answers, is found at the other extreme.

To test our hypotheses, we will employ several indicators of the contextual dimensions that were discussed earlier. First, countries' economic development is measured by GDP per capita in US dollars, as provided by the World Bank's World Development Indicators. We expect the gender gap in knowledge to decrease as economic development increases. Second, to gauge gender differences in representative institutions, we use a measure of the percentage of women in the country's parliament (UNDP 2007; 2009). Our expectation is that the gender gap will decrease as the percentage of women in the parliament increase. Third, regarding institutions we use Gallagher's (1991) index to measure the proportionality of electoral outcomes<sup>6</sup>. The index ranges from 0 to 100, with higher values reflecting less proportionality. We expect the gender gap in knowledge to increase as disproportionality increases. In order

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<sup>5</sup> The average value of Chronbach's  $\alpha$  is 0.66, with only one country scoring below 0.60 (Uruguay = 0.56) and, therefore, no country scoring under the minimum benchmark of 0.50.

<sup>6</sup> We calculated these values for Colombia, Dominican Republic, Ecuador, Guatemala and Venezuela. The rest were retrieved from Gallagher's website ([http://www.tcd.ie/Political\\_Science/staff/michael\\_gallagher/ElSystems/](http://www.tcd.ie/Political_Science/staff/michael_gallagher/ElSystems/)). Note that aggregated figures for the 2007 parliamentary election in Argentina could not be calculated given that alliances between parties differed greatly across constituencies. Thus, we used the value from the 2005 parliamentary election instead.

to account for the effect of federalism, we employ a dichotomous variable that distinguishes between federal countries (Argentina, Brazil, Mexico and Venezuela) and non-federal countries. The gender gap in knowledge should be smaller in federal countries. Fourth, as an indicator of political freedom, we use the index of political rights provided by Freedom House (2009; 2010), which ranges from 1 (the most free) to 7 (least free). The gender gap in knowledge is expected to be higher as the index increases. Lastly, gender differences in the labour market are accounted for by the ratio of estimated female to men earned income (UNDP 2007; 2009), an estimate that ranges from 0 (complete inequality of earned income) to 1 (complete equality of earned income). The gender gap in knowledge is expected to decrease as the index increases.

[FIGURE 1 ABOUT HERE]

We also control for the standard antecedents of political knowledge, i.e. individual differences in motivation, resources and ability (Althaus 2003; Delli Carpini and Keeter 1996; Luskin 1990). Thus, apart from gender, we control for age, years of education, urbanization (size of place of residence), religiosity (religious services attendance), number of children at home, labour market position, subjective standard of living, age, political interest and self-reported exposure to radio, TV, newspaper and internet news. Descriptive statistics the aggregate- and individual-level variables employed can be found in the Appendix, Table A.2

Our empirical strategy is to estimate political knowledge as a function of all the standard antecedents at the individual level plus all the contextual variables. Since our theoretical expectations refer to the effect of each of the contextual variables on the gender gap in

political knowledge, we need to specify in the multilevel equations not only the main effect of each of the contextual variables but also an interactive term of each contextual variable with gender. While we do not have theoretical expectations regarding the effect of each of the contextual variables on political knowledge (the dependent variable), we expect the interaction term of gender and each of the contextual variables to be statistically significant (and with negative sign for all of the contextual variables except for the disproportionality and the political liberties indices, where we expect coefficients of a positive sign).

## **5. Findings**

We start out by presenting the size of the gender gap in political knowledge by country in Figure 2. This is measured as the average number of correct answers among men minus the average number of correct answers among women. Thus, positive values indicate political knowledge is, on average, higher among men, while negative values indicate the opposite. Results are shown in Figure 2. As expected, political knowledge is significantly higher among men in all 17 nations. There is also clear variation across countries. Argentina presents the smaller gender gap, with men answering correctly 0.28 more questions than women. At the other extreme, however, is the Dominican Republic, where men answered correctly almost one more question (0.92) than women. Not surprisingly, countries with high levels of political knowledge tend also to be those that present smaller gender differences, while differences are larger in countries with low levels of knowledge. Indeed, it is not strange that countries where half of the population systematically knows less about politics also tend to rank lower when overall levels of knowledge are looked at. All in all, the gender differences in political knowledge presented in Figure 2 are not at all small if we take into account that the index ranges from 0 to 5 and that the average number of correct answers

across Latin America is, as mentioned earlier, 2.66. Thus, the gender gap in political knowledge and its variation across countries do clearly deserve an explanation.

[FIGURE 2 ABOUT HERE]

To incorporate both individual and contextual information, we resort to a hierarchical model with two different levels: respondents and countries. By introducing a random intercept at the country level, we relax the assumption of independence of errors between respondents living in the same country and are able to introduce country-level variables with appropriate standard errors.

Our aim is to explore how different contextual variables can reduce the gender gap in political knowledge in Latin America. Thus, our strategy consists in introducing interactions between gender and our aggregate variables (what is usually referred to as cross-level interactions) in order to see whether the effect of gender is reduced or not. Before we turn to the findings, it is worth noting that, in a previous model, we checked that the effect of gender persists after introducing all our individual-level controls. This is important because it implies that, even when individual differences in motivation, resources and ability are taken account of, political knowledge continues to be significantly higher among men than it is among women.

We first introduce the interaction between disproportionality and gender. Remember that higher values of this index imply less proportionality in election outcomes. As we expect the gender gap to decrease in more proportional systems, the sign of the interaction coefficient should be positive and significant. Results are shown in Model 1 (Table 1). Contrary to our

expectations, we do not find evidence that gender differences in Latin America are smaller in countries with more proportional systems. Not only is the coefficient insignificant at standard levels, but also its sign goes in the wrong direction according to the theory.

[TABLE 1 ABOUT HERE]

Next, we introduce the interaction between federalism and gender. Results are shown in Model 2 (Table 1). Since our measure of federalism is a dichotomy (1 being federal countries, and 0 non-federal countries), this interaction is simple to interpret. The coefficient for gender corresponds to the gender gap in countries that do not have a federal system. As can be seen, in an average non-federal Latin American system, men tended to answer correctly almost half a question more than women. In order to calculate the effect for federal systems, we need to sum the coefficient of the two principal terms (gender and federal) and the interaction term (gender\*federal). Once this is done, we find that the average gender gap among federal countries is reduced to 0.217. Moreover, this difference turned out to be statistically significant.

The last one of this set of variables is an index that measures the extent to which political rights are guaranteed. The theory states that gender differences should be reduced in countries where political rights are better protected. Our index of political rights ranges from 1 (most free) to 7 (least free), which implies that, in order to match our expectations, the effect of the interaction between political rights and gender should be positive. Results are shown in Model 3 (Table 1) and, as can be seen, the coefficient is significant and goes in the expected direction. In countries where political rights are given maximum guarantees (ie. value 1), men

answered correctly 0.42 more questions than women, a difference that rose to 0.53 among countries with value 4 (the maximum value in our sample).

We had also hypothesized that gender differences in political knowledge should be lower in countries where the presence of women in representative political institutions is higher. In order to test this, we introduced an interaction between gender and the percentage of female members of the Congress in each country. Results (Model 4, Table 1) support our expectations. The interaction term is negative and significant, implying that the gender gap tends to be reduced in countries with more female legislators.

Lastly, we introduced the two economic factors: economic development (measured as GDP per capita) and income equality (measured as the female-to-male earned income ratio). Recall that we expect a larger gap in countries with lower per capita income as well as in those with less income equality between genders. Model 5 (Table 1) introduces the interaction between gender and GDP. As expected, the interaction term is negative and significant, implying that gender differences are reduced as economic development increases. Model 6, on the other hand, introduces an interaction between gender and income equality between genders. Also in this case, results support our theoretical expectations, gender differences being much smaller in countries where income is more evenly distributed between men and women.

After testing all the variables once at a time, we introduced those interactions that were significant in a single model (Table 2). This strategy is useful to test which variables appear more relevant in explaining the gender gap in knowledge in Latin America. Nevertheless, we are aware that, due to the limited number of observations at the country level, one should be



careful not to completely discard those variables that proved significant when introduced on their own but not in the full model.

Thus, we introduce interactions between gender and federalism, political rights, percentage of female legislators, GDP and income equality. Results are shown in Model 7 (Table 2). When all these variables are introduced at once, the effect of both GDP and political rights on the gender gap ceases to be significant, even though coefficients retain the right sign. Only three interactions are significant in the final model: a) federalism; b) percentage of female legislators; and c) income equality.

[TABLE 2 ABOUT HERE]

In order to more clearly assess the magnitude of the impact of these three variables, we have computed their marginal effects on gender differences in political knowledge (ie. the difference between the effect of each of this variables on men's political knowledge minus its effect on women's political knowledge) and the corresponding standard errors. Thus, Figure 3 shows how differences between men and women are clearly reduced in countries with higher numbers of women parliamentarians, even if the gap remains significant at  $p < 0.05$  across all the values of the independent variable (meaning that differences decrease but do not completely disappear). In our sample, the effect ranges from a difference of 0.51 points in our scale of political knowledge at the minimum level of women's representation in Congress (9.3%) to 0.38 at the maximum level (38.6%).

[FIGURE 3 ABOUT HERE]

Similarly, the effect of income equality on the gender gap in political knowledge is showed in Figure 4. Remember that, as the independent variable is an index of equality, higher values mean smaller differences between the earned income of men and women. As can be observed, differences are clearly reduced in more equal countries – even if they remain significant at  $p < 0.05$  at all levels of income equality. Thus, we find that the gender gap is 0.58 for the lowest level of equality in our sample (income difference index = 0.32), which then decreases until 0.33 for the maximum level of equality (income difference index = 0.72).

Lastly, the effect of federalism on the differences in political knowledge is shown in Table 3. In this case, differences are reduced from 0.49 in non-federal systems to 0.36 in federal systems, even if they remain statistically significant at  $p < 0.05$ .

[TABLE 3 ABOUT HERE]

## **Conclusions**

From all the many sources of knowledge inequalities identified in previous literature (such as resource-based, motivational-base, race-base) the gender differences in political knowledge can be considered as the most puzzling. A difference that can not be explained away by the usual socioeconomic inequalities.

## References

Althaus, Scott. 2003. *Collective Preferences in Democratic Politics*. Cambridge: Cambridge University Press

Alexander, Amy C. 2012. "Change in Women's Descriptive Representation and the Belief in Women's Ability to Govern: A Virtuous Cycle." *Politics & Gender* 8(4): 437–464.

Atkeson, Lonna Rae. 2003. "Not All Cues Are Created Equal: The Conditional Impact of Female Candidates on Political Engagement." *Journal of Politics* 65(4): 1040–1061.

Atkeson, Lonna Rae, and Nancy Carrillo. 2007. More Is Better: The Influence of Collective Female Descriptive Representation on External Efficacy. *Politics and Gender* 3(1): 79-101.

Barnes, Tiffany D and Stephanie M. Burchard. 2013. "Engendering Politics: The Impact of Descriptive Representation on Women's Political Engagement in Sub-Saharan Africa." *Comparative Political Studies*. doi: 10.1177/0010414012463884

Burns, Nancy. 2007. "Gender in the Aggregate, Gender in the Individual, Gender and Political Action." *Politics & Gender* 3(1): 104-124.

Burns, Nancy, Kay Lehman Schlozman, and Sidney Verba. 2001. *The Private Roots of Public Action*. Cambridge, MA: Harvard University Press

Campbell, David E and Christina Wolbrecht. 2006. "See Jane run: Women politicians as role models for adolescents." *Journal of Politics* 68(2): 233–247.

Delli Carpini, Michael X. and Scott Keeter. 1996. *What Americans Know about Politics and Why it Matters*. New Haven: Yale University Press.

Delli Carpini, Michael, and Scott Keeter. 2000. "Gender and Political Knowledge." In *Gender and American Politics: Women, Men, and the Political Process*, eds. Sue Tolleson Rinehart and Jyl Josephson. Armonk, NY: M.E. Sharpe: 21–52.

Desposato, Scott and Barbara Norrander. 2009. "The Gender Gap in Latin America: Contextual and Individual Influences on Gender and Political Participation." *British Journal of Political Science* 39(1): 141–162.

Dolan, Kathleen. 2006. Symbolic Mobilization? The Impact of Candidate Sex in American Elections. *American Politics Research*. 34(6): 687–704.

Fox, Richard L and Jennifer L Lawless. 2004. "Entering the arena? Gender and the decision to run for office." *American Journal of Political Science* 48(2): 264–280.

Fox, Richard L and Jennifer L Lawless. 2011. "Gendered Perceptions and Political Candidacies: A Central Barrier to Women's Equality in Electoral Politics." *American Journal of Political Science* 55(1): 59–73.

Freedom House. 2009. *Freedom in the World: Setbacks and Resilience*. Washington, DC: Freedom House.

Freedom House. 2010. *Freedom in the World: Global Erosion of Freedom*. Washington, DC: Freedom House.

Gallagher, Michael. 1991. "Proportionality, Disproportionality and Electoral Systems." *Electoral Studies* 10(1):33–51.

Hansen, Susan B. 1997. "Talking about politics: Gender and contextual effects on political proselytizing." *Journal of Politics* 59(1): 73–103.

Htun, Mala and Jennifer M. Piscopo. 2010. Presence Without Empowerment? Women in Politics in Latin America and the Caribbean. Paper presented at the Conflict Prevention and Peace Forum.

Hughes, Melani M. 2009. Armed conflict, international linkages, and women's parliamentary representation in developing nations. *Social Problems* 56(1): 174-204.

Inglehart, Ronald and Pippa Norris. 2003. *Rising Tide. Gender Equality and Cultural Change around the World*. Cambridge. Cambridge University Press.

Karp, Jeffrey A and Susan A Banducci. 2008. "When politics is not just a man's game: Women's representation and political engagement." *Electoral Studies* 27(1): 105–115.

Kittilson, Miki Caul and Leslie Schwindt-Bayer. "Engaging Citizens: The Role of Power-Sharing Institutions. *Journal of Politics* 72(4): 990-1002.

Koch, Jeffrey. 1997. "Candidate Gender and Women's Psychological Engagement in Politics." *American Politics Research* 25(1): 118–133.

Lawless, Jennifer. 2004. Politics of Presence? Congresswomen and Symbolic Representation. *Political Research Quarterly* 57(1): 81–99.

Luskin, Robert. 1990. "Explaining Political Sophistication." *Political Behaviour* 12(4): 331-361.

Norris, Pippa 2002. *Democratic Phoenix: Reinventing Political Activism*. Cambridge: Cambridge University Press.

Norris, Pippa. 2008. *Driving Democracy: Do Power-Sharing Institutions Work?* New York: Cambridge University Press.

Phillips, Anne. 1995. *The Politics of Presence: The Political Representation of Gender, Ethnicity, and Race*. Oxford: Clarendon Press.

Pitkin, Hanna. 1967. *The Concept of Representation*. Berkeley: University of California Press.

Reingold, Beth and Jessica Harrell. 2010. "The Impact of Descriptive Representation on Women's Political Engagement: Does Party Matter?" *Political Research Quarterly* 63(2): 280–294.

Shaker, Lee. 2012. "Local Political Knowledge and Assessment of Citizen Competence." *Public Opinion Quarterly* 76(3): 525-537.

United Nations Development Programme (UNDP). 2007. *Human Development Report 2007/2008*. New York: Palgrave Macmillan.

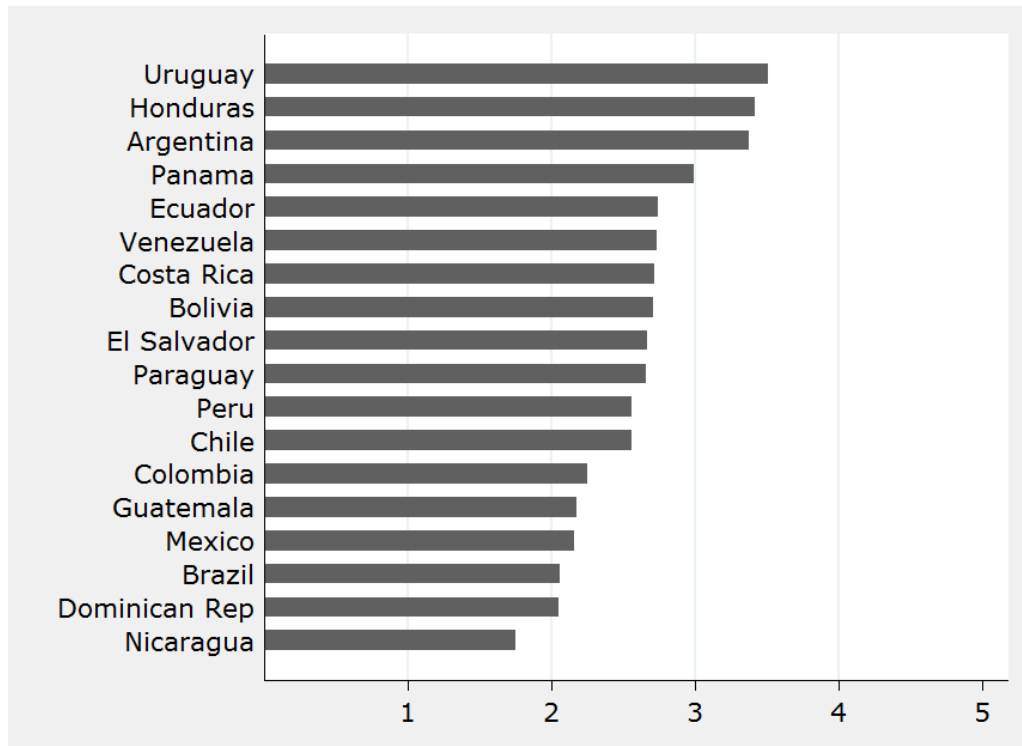
United Nations Development Programme (UNDP). 2009. *Human Development Report 2009*. New York: Palgrave Macmillan.

Verba, Sidney, Nancy Burns and Kay Lehman Schlozman. 1997. "Knowing and caring about politics: Gender and political engagement." *Journal of Politics* 59(4):1051–1072.

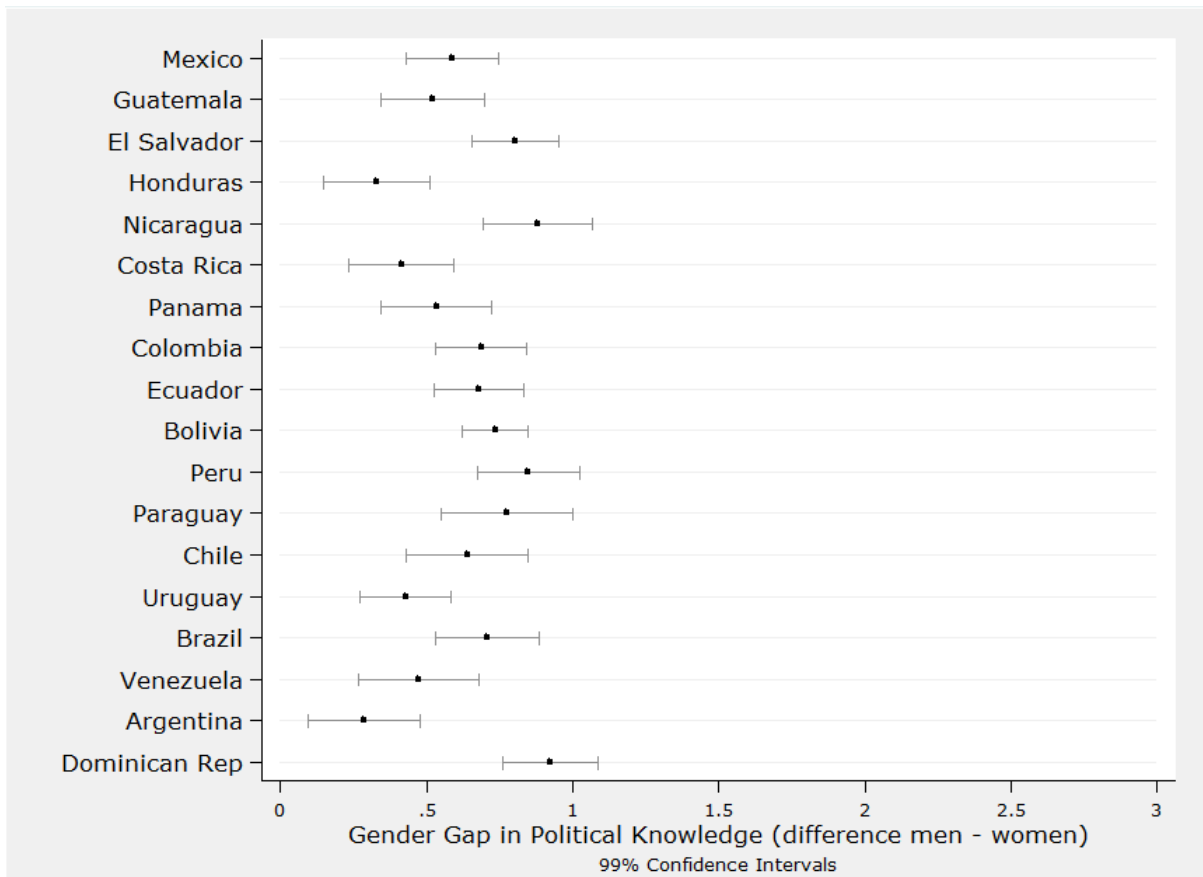
Wolbrecht, Christina and David E Campbell. 2007. "Leading by example: Female members of parliament as political role models." *American Journal of Political Science* 51(4): 921–939.

Zetterberg, Par. 2009. Do Gender Quotas Foster Women's Political Engagement? *Political Research Quarterly* 62(4): 715-730.

**Tables and figures.**



**Figure 1.** Index of political knowledge by country.



**Figure 2.** Political knowledge among men and women across Latin America.



**Table 1.** Contextual determinants of the gender gap in political knowledge.

	(Model 1) DISPROP	(Model 2) FEDERAL	(Model 3) POL RIGHTS	(Model 4) WOMEN IN PARL	(Model 5) GDP	(Model 6) INCOMI EQUALI Y
GENDER (1 = Male)	0.505*** (0.036)	0.487*** (0.022)	0.378*** (0.047)	0.583*** (0.043)	0.540*** (0.035)	0.799*** (0.088)
Disproportionality	-0.0298 (0.030)					
GENDER * Disp	-0.00628 (0.005)					
Federal		-0.155 (0.237)				
GENDER * Federal		-0.115*** (0.043)				
Political Rights			-0.106 (0.105)			
GENDER * Pol Rights			0.038** (0.018)			
Women in Parliament (%)				0.0135 (0.011)		
GENDER * Women in Parl				-0.006*** (0.002)		
GDPpc(x10000)					-0.114 (0.000)	
GENDER * GDP(x10000)					-0.134** (0.000)	
FMEIR <sup>a</sup>						0.572 (1.009)
GENDER * FMEIR						-0.658** (0.169)
Intercept	-0.0190 (0.221)	-0.160 (0.137)	0.0502 (0.276)	-0.455* (0.251)	-0.128 (0.222)	-0.486 (0.512)
$\sigma_u$	0.169*** (0.057)	0.173*** (0.058)	0.173*** (0.058)	0.172*** (0.058)	0.177*** (0.059)	0.179*** (0.060)
$\sigma_e$	1.292*** (0.013)	1.292*** (0.013)	1.292*** (0.013)	1.291*** (0.013)	1.292*** (0.013)	1.291*** (0.013)
N Level 1	19,942	19,942	19,942	19,942	19,942	19,942
N Level 2	18	18	18	18	18	18
-2LL	-30895.13	-30892.56	-30893.95	-30891.47	-30893.15	-30888.91

Standard errors in parentheses

\* p&lt;0.10, \* p&lt;0.05, \*\*\* p&lt;0.01

<sup>a</sup> FMEIR stands for female-to-male earned income ratio.

The following control variables are omitted: Education (years), Urbanization, Married/cohabiting (ref: Single), Religiosity (service attendance), Subjective standard of living, Number of children at home, Labour market position: Employed, Inactive (ref: homemaker), Age, Age squared, Political interest, Exposure to media news from radio, TV, newspapers and the internet.

**Table 2.** Contextual determinants of the gender gap in political knowledge. Full model

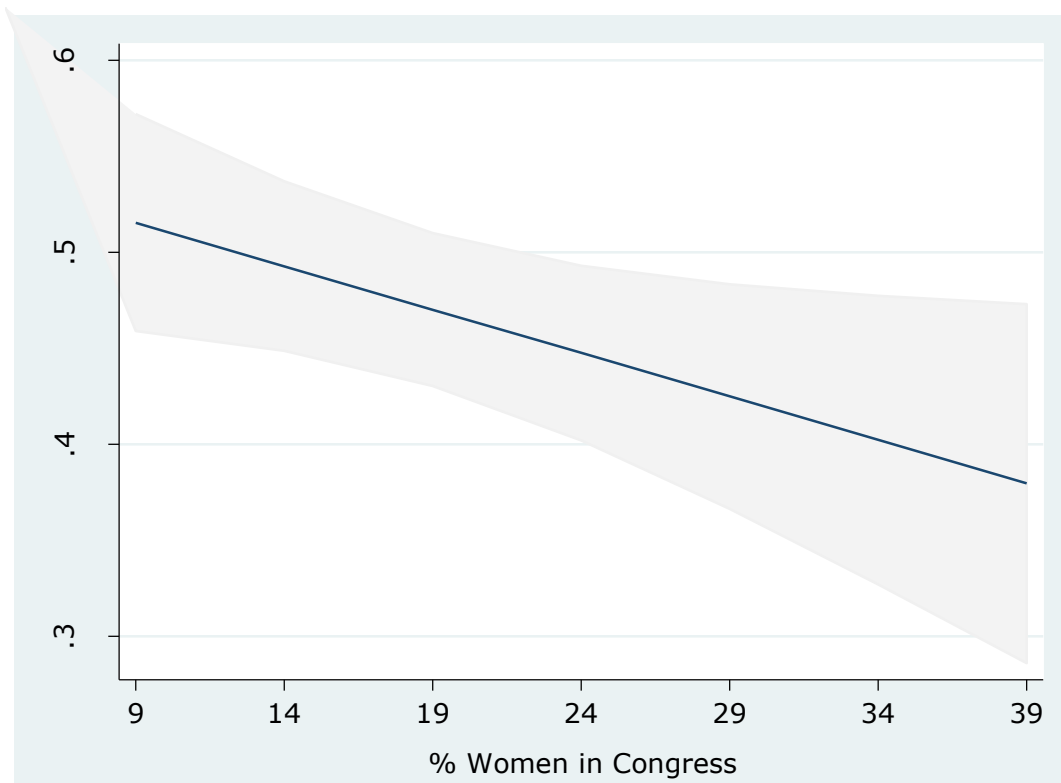
	(Model 7) FULL MODEL
GENDER ( Male = 1)	0.774*** (0.141)
<i>Contextual variables</i>	
Federal	-0.202 (0.351)
GDPp/c (x10000)	-0.141 (0.000)
Women in Parliament (%)	0.0179 (0.011)
Political Rights	-0.0965 (0.130)
FMEIR <sup>a</sup>	0.770 (0.893)
<i>Cross-level interactions</i>	
GENDER * Federal	-0.131* (0.068)
GENDER * GDP(x10000)	0.0452 (0.000)
GENDER * Women in Parl	-0.00453** (0.002)
GENDER * Pol Rights	0.0381 (0.027)
GENDER * FMEIR	-0.620*** (0.171)
Intercept	-0.239 (0.704)
$\sigma_u$	0.129*** (0.044)
$\sigma_e$	1.290*** (0.013)
N Level 1	19,942
N Level 2	18
-2LL	-30877.851

Standard errors in parentheses

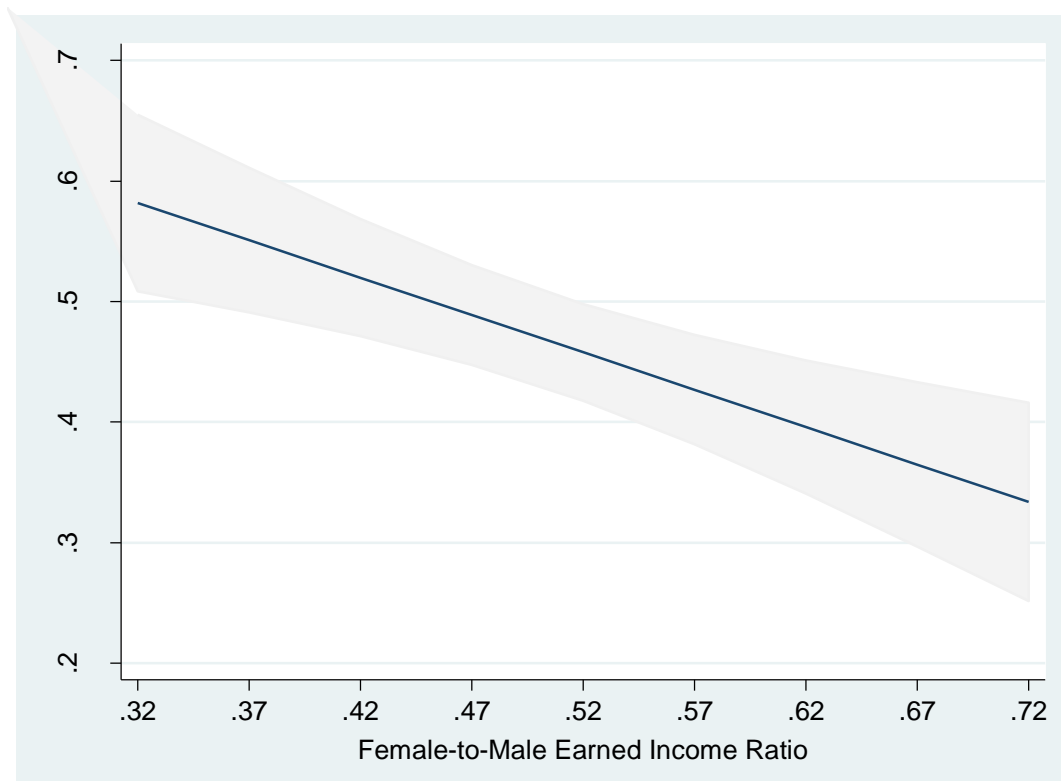
\* p<0.10, \* p<0.05, \*\*\* p<0.01

<sup>a</sup> FMEIR stands for female-to-male earned income ratio.

The following control variables are omitted: Disproportionality, Education (years), Urbanization, Married/cohabiting (ref: Single), Religiosity (service attendance), Subjective standard of living, Number of children at home, Labour market position: Employed, Inactive (ref: homemaker), Age, Age squared, Political interest, Exposure to media news from radio, TV, newspapers and the internet.



**Figure 3.** Effect of % of Women in Congress on the gender gap in political knowledge.



**Figure 3.** Effect of income equality on the gender gap in political knowledge.

**Table 3.** Effect of federalism on the gender gap in political knowledge.

<b>Political system</b>	<b>Gender gap</b>
Non-federal	0.49
Federal	0.36

Coefficients are significantly different from zero at  $p < .05$

## Appendix

Table A1. Descriptive statistics.

Variable	N	Mean	SD	Minimum	Maximum
<i>Individual-level variables</i>					
Index of political knowledge	29924	2.62	1.47	0	5
Male	29924	0.48	0.50	0	1
Education (years of)	29729	9.00	4.59	0	18
Urbanization	29924	1.89	1.54	0	4
Married/civil partnership	29628	0.59	0.49	0	1
Religiosity (service attendance)	28836	2.12	1.36	0	4
Subjective standard of living	29165	2.60	0.84	1	4
Number of children at home	21839	1.96	1.50	0	9
Employed	29845	0.54	0.50	0	1
Inactive	29845	0.20	0.40	0	1
Housemaker	29845	0.27	0.44	0	1
Age	29847	38.88	15.95	16	99
Political interest	29655	1.02	0.96	0	3
Radio news exposure	29868	1.75	1.14	0	3
TV news exposure	29874	2.42	0.92	0	3
Newspaper news exposure	29819	1.26	1.08	0	3
Internet news exposure	29498	0.36	0.79	0	3
<i>Contextual variables</i>					
Federal	18	0.22	0.43	0	1
GDP per capita	18	5751.93	3240.75	1458.89	11297.7
% Women in Parliament	18	18.94	8.82	9.3	38.6
Political Rights	18	2.33	0.97	1	4
Female-to-male Earned Income Ratio	18	0.49	0.10	0.32	0.71
Disproportionality	18	6.17	3.39	1.32	14.15

Table A.2. Wording of the questions used to create the index of political knowledge.

<b>Item 1.</b> What is the name of the current president of the United States?
<b>Item 2.</b> What is the name of the president of [Congress] in [country]?
<b>Item 3.</b> How many [provinces/regions/states] does [the country] have?
<b>Item 4.</b> How long is the presidential term of office in [country]?
<b>Item 5.</b> What is the name of the current president of Brazil [ <i>in Brazil: Venezuela</i> ]?

Table A.3. Replication of Table 1 with all independent variables shown

	(Model 1) DISPROP	(Model 2) FEDERAL	(Model 3) GDP	(Model 4) WOMEN IN PARL	(Model 5) POL RIGHTS	(Model 6) INCOME EQU'LIT
GENDER (1 = Male)	0.505*** (0.036)	0.487*** (0.022)	0.540*** (0.035)	0.583*** (0.043)	0.378*** (0.047)	0.79 (0.088)
Disproportionality	-0.0298 (0.030)					
GENDER * Disp	-0.00628 (0.005)					
Federal		-0.155 (0.237)				
GENDER * Federal		-0.115*** (0.043)				
GDPpc(x10000)			-0.114 (0.000)			
GENDER * GDP(x10000)			-0.134** (0.000)			
Women in Parliament (%)				0.0135 (0.011)		
GENDER * Women in Parl				-0.006*** (0.002)		
Political Rights					-0.106 (0.105)	
GENDER * Pol Rights					0.038** (0.018)	
FMEIR <sup>a</sup>						0.572 (1.009)
GENDER * FMEIR						-0.658** (0.169)
Education	0.110*** (0.002)	0.110*** (0.002)	0.110*** (0.002)	0.110*** (0.002)	0.110*** (0.002)	0.110*** (0.002)
Urbanization	0.0335*** (0.006)	0.0336*** (0.006)	0.0337*** (0.006)	0.0335*** (0.006)	0.0336*** (0.006)	0.0337*** (0.006)
Married/cohabiting	0.155*** (0.020)	0.155*** (0.020)	0.155*** (0.020)	0.155*** (0.020)	0.155*** (0.020)	0.154*** (0.020)
Religiosity	-0.00911 (0.007)	-0.00926 (0.007)	-0.00938 (0.007)	-0.00931 (0.007)	-0.00934 (0.007)	-0.00882 (0.007)
Subjec. standard of living	-0.117*** (0.011)	-0.117*** (0.011)	-0.118*** (0.011)	-0.118*** (0.011)	-0.117*** (0.011)	-0.118*** (0.011)
Children at home	-0.0213*** (0.006)	-0.0215*** (0.006)	-0.0215*** (0.006)	-0.0211*** (0.006)	-0.0213*** (0.006)	-0.0213*** (0.006)
Employed	0.0957*** (0.022)	0.0944*** (0.022)	0.0939*** (0.022)	0.0958*** (0.022)	0.0942*** (0.022)	0.0878** (0.022)
Inactive	0.122*** (0.030)	0.121*** (0.030)	0.122*** (0.030)	0.123*** (0.030)	0.121*** (0.030)	0.114*** (0.030)
Age	0.0402*** (0.003)	0.0401*** (0.003)	0.0401*** (0.003)	0.0401*** (0.003)	0.0401*** (0.003)	0.0403** (0.003)

Age <sup>2</sup>	-0.0003*** (0.000)	-0.0003*** (0.000)	-0.0003*** (0.000)	-0.0003*** (0.000)	-0.0003*** (0.000)	-0.0003*** (0.000)
Political Interest	0.128*** (0.009)	0.128*** (0.009)	0.128*** (0.009)	0.128*** (0.009)	0.128*** (0.009)	0.128*** (0.009)
Radio news	0.0289*** (0.008)	0.0287*** (0.008)	0.0287*** (0.008)	0.0288*** (0.008)	0.0289*** (0.008)	0.0290*** (0.008)
TV news	0.146*** (0.010)	0.146*** (0.010)	0.146*** (0.010)	0.146*** (0.010)	0.146*** (0.010)	0.147*** (0.010)
Newspaper news	0.121*** (0.009)	0.121*** (0.009)	0.121*** (0.009)	0.121*** (0.009)	0.121*** (0.009)	0.120*** (0.009)
Internet news	0.0779*** (0.013)	0.0782*** (0.013)	0.0785*** (0.013)	0.0781*** (0.013)	0.0784*** (0.013)	0.0790*** (0.013)
Intercept	-0.0190 (0.221)	-0.160 (0.137)	-0.128 (0.222)	-0.455* (0.251)	0.0502 (0.276)	-0.486 (0.512)
$\sigma_u$	0.169*** (0.057)	0.173*** (0.058)	0.177*** (0.059)	0.172*** (0.058)	0.173*** (0.058)	0.179*** (0.060)
$\sigma_e$	1.292*** (0.013)	1.292*** (0.013)	1.292*** (0.013)	1.291*** (0.013)	1.292*** (0.013)	1.291*** (0.013)
N Level 1	19,942	19,942	19,942	19,942	19,942	19,942
N Level 2	18	18	18	18	18	18
-2LL	-30895.13	-30892.56	-30893.15	-30891.47	-30893.95	-30888.91

Standard errors in parentheses

\* p<0.10, \* p<0.05, \*\*\* p<0.01

<sup>a</sup> FMEIR stands for female-to-male earned income ratio.

Dependent variable: Index of political knowledge (from 0 to 7). Individual-level independent variables include: Gender (Male = 1; Female = 0); Education (years); Urbanization (size of place of residence, ranges from 0 = rural area to 4 = capital/metropolitan area); Married/cohabiting (dummy variable, ref: single/widow); Religiosity (religious attendance, from 0 = never/almost never to 4 = more than once a week); Subjective standard of living (“The salary you receive and total family income...”; ranges from 1 = “...is enough for you, you can save from it” to 4 = “...is not enough for you, you are having a hard time”); Children at home (number of children currently living with respondent); Labour market position: Employed and Inactive (dummies; ref: homemaker); Political interest (ranges from 0 = not interested at all; 3 = very interested); Exposure to media news: radio, TV, newspapers and internet (self-reported frequency; from 0 = never to 3 = every day).

Table A.4. Replication of Table 2 with all independent variables shown.

	(Model 7) FULL MODEL
Male	0.774*** (0.141)
<i>Contextual variables</i>	
Federal	-0.202 (0.351)
GDPp/c (x10000)	-0.141 (0.000)
Women in Parliament (%)	0.0179 (0.011)
Political Rights	-0.0965 (0.130)
Income equality <sup>a</sup>	0.770 (0.893)
Disproportionality	-0.0519* (0.028)
<i>Cross-level interactions</i>	
Male X Federal	-0.131* (0.068)
Male X GDP(x10000)	0.0452 (0.000)
Male X Women in Parl	-0.00453** (0.002)
Male X Pol Rights	0.0381 (0.027)
Male X Income Equality	-0.620*** (0.171)
<i>Individual-level controls</i>	
Education	0.110*** (0.002)
Urbanization	0.0335*** (0.006)
Married/cohabiting	0.155*** (0.020)
Religiosity	-0.00913 (0.007)
Subjective standard of living	-0.119*** (0.011)
Children at home	-0.0211*** (0.006)
Employed	0.0867*** (0.022)
Inactive	0.114*** (0.030)



Age	0.0401*** (0.003)
Age <sup>2</sup>	-0.000328*** (0.000)
Political Interest	0.128*** (0.009)
Radio news	0.0287*** (0.008)
TV news	0.146*** (0.010)
Newspaper news	0.121*** (0.009)
Internet news	0.0792*** (0.013)
Intercept	-0.239 (0.704)
$\sigma_u$	0.129*** (0.044)
$\sigma_e$	1.290*** (0.013)
<hr/>	
N Level 1	19,942
N Level 2	18
-2LL	-30877.851
<hr/>	

Standard errors in parentheses

\* p<0.10, \* p<0.05, \*\*\* p<0.01

<sup>a</sup> “Income equality” stands for the female-to-male earned income ratio.

See previous table for description of dependent and individual-level independent variables.