

# Gender and Lawmaking in Times of Quotas

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## Abstract

This article investigates whether female legislators defend the interests of women more than their male counterparts in a context of gender quotas. I combine quasi-experimental variations to randomize the gender of legislators with text analysis to identify women-related policies among more than 300,000 amendments discussed in the French Parliament over the period 2001-2017. I show that (i) female legislators are twice as likely to initiate women-related amendments, (ii) women's issues constitute the key topic where women are more active, followed by child and health issues, while men are more likely to initiate amendments related to electoral and military issues, (iii) these differences partly stem from legislators' individual interests, and (iv) these findings are consistent in both the Lower and Upper Houses when mixed-gender close races and a natural experiment are exploited. From a public policy perspective, the results suggest that gender quotas lead to a shift in policymaking and a greater prevalence of women's issues in Parliament.

**JEL codes:** D72, J16, J71

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# 1 Introduction

Over a hundred countries have introduced gender quotas in politics (Krook, 2010). In support for such quotas, it is often argued that politicians tend to advocate on behalf of groups that share a component of their identity. According to this argument, female legislators would defend the interests of women more than their male counterparts and gender quotas would lead to a legislation more favorable to women’s rights and interests.

Yet, despite important policy implications, whether female legislators act on behalf of other women remains questionable. First, the existing literature has faced external validity issues. Studies showing that female politicians deliver different types of policies mostly focus on developing countries.<sup>1</sup> Results are less conclusive in developed countries and scarce in contexts of gender quotas.<sup>2</sup> Second, most studies rely on data on spending or public goods, which rarely include women-related categories. Because of these data limitations, it is difficult to relate the policies adopted to women’s interests.

This paper attempts to overcome these two limitations. Its main innovation is to combine text data to identify women-related policies with quasi-experimental variations to randomize the gender of legislators in a context of gender quotas. The text analysis is performed on web-scraped data from more than 300,000 amendments discussed within the French Parliament over the period 2001-2017. Amendments are the main way for parliamentarians to change policies. Based on the assumption that an amendment related to women’s issues will effectively mention women, I classify an amendment as women-related if it contains one of the words "women", "gender" or "sex". Although simple, this measure proves to be highly relevant. As an illustration, the most frequent trigram is "equality women men". For quasi-experimental variations, I use two different empirical strategies for the two Houses of the French Parliament. In the Lower House, I use a regression discontinuity approach exploiting mixed-gender close races. In the Upper House, I use a difference-in-differences strategy exploiting the introduction of a gender quota.

The first part of this paper focuses on the Lower House. A gender quota was introduced in 2002 requiring political parties to nominate 50% of women nationally. All the female candidates endorsed by a political party potentially benefited from it. To identify the effect of the legislator’s identity, I use a regression discontinuity approach exploiting

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<sup>1</sup>See Chattopadhyay and Duflo (2004), Clots-Figueras (2011), Bhalotra and Clots-Figueras (2014) or Brollo and Troiano (2016).

<sup>2</sup>See Ferreira and Gyourko (2014) or Bagues and Campa (2017).

mixed-gender close election results (close races). I find that unambiguously and largely, female parliamentarians contribute more to women's issues. As compared to their male counterparts, they are twice as likely to author at least one women-related amendment. This holds both for accepted and rejected amendments and the magnitude remains relatively stable across age, political inclination and incumbency status of legislators.

Second, I extend the analysis to the study of other topics. I manually classify the 10,000 most recurring words into 27 non-mutually exclusive topics corresponding to the permanent French government ministries and use this dictionary to retrieve the topics of each amendment. I find that, among the 27 topics, women's issues are the one with the largest differences in involvement between male and female legislators. As for other topics, female legislators are more active on child and health issues where they are respectively about 50% and 25% more likely to initiate at least one amendment. At the other extreme, men are respectively 40% and 25% more likely to initiate at least one amendment on military and electoral issues. Surprisingly, there is only weak or no evidence of gender differences on topics traditionally considered as more feminine such as education or more masculine such as business.

Third, I investigate the mechanisms behind these differences by focusing on the main result related to women's issues. The mixed-gender close races provide information relevant to the debate on the impact of constituents' preferences and legislators' identity on policy-making. In such races, whether a man or a woman wins, constituencies have similar characteristics. Yet, female legislators contribute far more to women's issues. This suggests that constituents' preferences do not fully determine legislators' actions and provides empirical support for identity-based policymaking. But what lies behind identity? It could be that women are intrinsically more interested in women's issues but it could also be that political parties strategically force female legislators to produce women-related amendments. To disentangle individual interest from party strategy, I first restrict the sample to cases where the amendment cannot stem from the will of political parties. It can be observed that, as we move to cases where the political party influence declines, female legislators are increasingly more likely to author women-related amendments than their male counterparts. This suggests that the greater contribution of female legislators to women's issues partly stems from their individual interest. To consolidate this interpretation, I exploit an institutional feature of the 2012-2017 term where all the legislators were granted discretionary funds. I show that female legislators are about two to three

times more likely to fund associations or projects related to women's issues.

Finally, there are two shortcomings of the Lower House setting. Although the share of female legislators increased from 10 to 27% from 2002 to 2012 following the introduction of a gender quota, the design of this quota does not allow a distinction to be drawn between women who have benefited from it and those that would have been elected either way. Additionally, since the analysis is done at the individual level, it is questionable whether the micro findings translate into a macro effect where more women in politics would lead to more amendments on women's issues. There could exist a substitution effect where amendments initiated by newly elected women would otherwise have been defended by male legislators. To provide evidence on these questions, the last part of this article uses a gender quota introduced in the Upper House. The work of senators is the same as that of legislators from the Lower House, but the election system for the Upper House is different as it relies on proportional representation in multi-member constituencies. From 2001 onwards, candidate lists in constituencies that elect more than 4 senators were forced to nominate 50% of women.

Using a difference-in-differences strategy comparing the parliamentary activity of constituencies targeted by the quota to those that are not, I obtain results consistent with the Lower House findings. The election of one additional woman per constituency increased the likelihood of women-related amendments being initiated, as well as their number and share. This suggests that women who enter into politics with a quota do contribute more to women's issues and that this increase leads to a greater prevalence of women-related amendments at the macro level. The Upper House setting also allows me to quantify the prevalence of women's issues in a hypothetical Parliament with 50% of female politicians. A simple back-of-the-envelope calculation suggests that the share of women-related amendments would be 8%. Because this exercise implicitly assumes that constituencies work independently from each other, this figure would tend to be an upper-bound of the prevalence of women's issues in a Parliament where men and women would be equally represented.

These results make three contributions to the literature. First, they contribute to the debate on the impact of women as policymakers. An early literature in political science studied whether female legislators have the same priorities as their male counterparts in the Parliament, mostly in the US (see for instance [Thomas, 1991](#), [Thomas and Welch, 1991](#) or [Bratton and Haynie, 1999](#)). While this literature often finds that gender matters, the

results are difficult to interpret as they do not disentangle constituents' preferences from politicians' identity. Since women are more likely to be elected in more gender-friendly places which are also more demanding on women's issues, the results could be driven by constituents' demands. Therefore, starting from [Chattopadhyay and Duflo \(2004\)](#), the economic literature focused on delivering causal evidence by disentangling the impact of politicians' gender from constituents' preferences. To my knowledge, this paper is the first to combine the use of text analysis and quasi-experimental variations to investigate the causal effect of legislators' gender. This approach brings new results and it has two important elements that overcome existing limits of the literature: it serves to identify the topics of interest, and it is easily replicable in many settings.

Second, beyond gender, this paper contributes to the wider debate on the impact of politicians' identity. Understanding the extent to which identity determines policymaking is fundamental to understanding how democracy works. In the classical median voter model ([Downs, 1957](#)), politicians' identity does not matter as policies should converge towards the preferences of the median voter. But in later-developed frameworks enriching the Downsian model ([Alesina, 1988](#), [Osborne and Slivinski, 1996](#) or [Besley and Coate, 1997](#)), policymakers' identity can play a role and influence which policies are implemented. The findings of this paper bring empirical support to these political economy models. Moreover, the methods used in this paper could easily be extended in order to understand the influence of alternative dimensions of identity. Examples of these dimensions studied in the literature include caste ([Pande, 2003](#)), family ([Washington, 2008](#)), ethnicity ([Broockman, 2013](#)), religion ([Meyersson, 2014](#), [Bhalotra \*et al.\*, 2014](#) or [Chaudhary and Rubin, 2016](#)) and their interaction ([Cassan and Vandewalle, 2017](#)).

Finally, methodologically, this paper contributes to the growing literature using text analysis methods (see [Grimmer and Steward, 2013](#) or [Gentzkow \*et al.\*, 2017](#)). Examples of recent studies include the analysis of economic uncertainty ([Baker \*et al.\*, 2016](#)), the deliberations of central banks, ([Hansen \*et al.\*, 2018](#)) or political discourse ([Gentzkow \*et al.\*, 2016](#)). This study presents an application of these tools combined with quasi-experimental variations.

This paper is organized as follows. Section 2 describes the institutional setting. The data is introduced in Section 3. The empirical strategy is explained in Section 4. The main results are displayed in Section 5 along with robustness checks. Section 6 dives into the mechanisms underlying the results. Section 7 investigates the impact of a gender quota in

the Upper House. Finally, Section 8 concludes.

## 2 Institutional Context: Legislative Work in the French Parliament

### 2.1 Parliamentary Procedure

The work of parliamentarians mainly consists in producing and voting in laws. Before becoming effective, a law takes the following path. First, a bill can be initiated either by the government or parliamentarians. Once initiated, a bill is examined by one of the Houses. Representatives then have the possibility to modify the bill by producing amendments. Once all the amendments have been examined, parliamentarians have to vote for the bill. If the bill is accepted, it is then passed to the other House which performs the same exercise. This procedure stops when a text is accepted in identical terms in the two Houses.

### 2.2 Public Policy Impact: Bills, Amendments and Vote

Parliamentarians have three ways to directly impact public policy: draft bills, amendments and vote.

**Bills.** Bills can be introduced by the government or by parliamentarians. Since the government sets the agenda of the Houses for two weeks per month (and has various means to set the agenda during the remaining two weeks), the introduction of a bill by parliamentarians does not necessarily lead to its examination. Moreover, when introduced by parliamentarians, bills often result from a collective initiative originating from the political party to which parliamentarians belong.

**Amendments.** Amendments consist of the deletion, modification or addition of articles included in an existing bill. Amendments can be both sole-authored or co-sponsored by other parliamentarians. Importantly, there is no limit on the number of amendments to a bill that can be submitted, nor is there a limit on the number of co-sponsors an amendment can have or the number of amendments a parliamentarian can produce. Unlike draft bills, all amendments must be examined and discussed.

**Votes.** To be adopted, amendments and bills need to obtain a majority of votes. In the vast majority of the cases, the voting system is done with a show of hands. This is

the regular procedure and has been adopted because it is much faster than alternative methods. For important bills, the vote can be recorded. In this case, parliamentarians vote from their seat with an electronic device. In the event of an absence, it is possible to delegate votes to another representative.

## 2.3 Amendments as the Main Form of Parliamentary Initiative

In the French Parliament, there is no doubt that amendments are the main form of parliamentary initiative.<sup>3</sup> Quantitatively, it is well-established that the government remains the primary source of bills ultimately adopted while amendments mainly originate from parliamentarians. Tables A1 and A2 display descriptive statistics respectively on the origins of bills and amendments ultimately adopted. In the past 50 years, more than 70% of bills originated from the government while the picture is completely reversed with amendments. During the period 2002-2017, more than 80% of them were initiated by parliamentarians. As for votes, there is a strong party discipline in the French Parliament which leaves little room for individual initiative. This is because parliamentarians risk being excluded from their party if they vote against bills from their own side.

Qualitatively, scholars have acknowledged amendments as the main form of parliamentary initiative (Knapp and Wright, 2006, Avril and Gicquel, 2014). They often argue that this situation stems from the possibility for the government to set a large part of the agenda of both Houses (Rasch and Tsebelis, 2013). As such, bills are not necessarily discussed whereas all amendments must be examined.

# 3 Data

## 3.1 Sources

**Parliamentarian activity.** Starting from 2002, the activity of legislators is accessible on the official website of the Lower House.<sup>4</sup> I web scraped this data to build an analyzable

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<sup>3</sup>As illustration, the Lower House website states that "*The right to amend is today the main form of expression of the parliamentary initiative*" (<http://www2.assemblee-nationale.fr/decouvrir-l-assemblee/role-et-pouvoirs-de-l-assemblee-nationale/les-fonctions-de-l-assemblee-nationale/les-fonctions-legislatives/l-exercice-du-droit-d-amendement-et-annexe>).

<sup>4</sup>In its raw format, the data can be found from 2002 at <http://www2.assemblee-nationale.fr/recherche/amendements> or from 2007 onwards via an API at <https://www.nosdeputes.fr>

data set containing all the amendments from 2002. It offers the possibility to analyze activity during the 2002-2007, 2007-2012 and 2012-2017 terms.

For every amendment, this data set includes three elements used for the analysis. First, it indicates which bill is targeted. Second, it includes the content as well as the oral presentation accompanying it (as they are defended publicly). Third, it specifies the identity of the amendment’s initiator and of all the legislators who co-sponsored it.<sup>5</sup>

**Election Results.** The data on the election results come from the 2002, 2007 and 2012 parliamentary elections. These elections are held in 577 constituencies and the resulting data set is produced by the French Ministry of Interior.

## 3.2 Identifying Women-Related Amendments

### 3.2.1 Dictionary-Based Approach

The main challenge is to identify whether the topic of an amendment is related to women’s issues. While the topics are not explicitly stated, it is possible to use the information associated with each amendment to retrieve them. In a nutshell, the procedure used in this article applies a dictionary-based method to the bills’ titles and texts justifying amendments to identify those which are related to women’s issues.

**Sources of Information.** Each amendment is characterized by three elements: its content, a short text outlining its purpose and the bill that the amendment attempts to modify. Reading the content, it is almost impossible to understand what the topic of an amendment is. The content is very short and standardized, stating that a set of words should be removed, replaced or added.<sup>6</sup>

Conversely, bills’ titles and texts justifying amendments are informative on the topic. For instance, the title ”*Draft bill related to pay equality between men and women*” leaves no doubt that the topic of the bill is to reduce the wage gap between men and women. As such, an amendment targeting this text would be directly related to women’s issues. Additionally, parliamentarians can disseminate and provide provisions related to women’s issues in bills whose primary purpose is unrelated to these issues. In this case, we would find a reference to women in the text justifying the amendment. To encompass these two

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<sup>5</sup>See Figure B1 for an example of amendment on the Lower House website

<sup>6</sup>Standardized formulations can be found on the Lower House website (in French) at <http://www2.assemblee-nationale.fr/decouvrir-l-assemblee/role-et-pouvoirs-de-l-assemblee-nationale/les-fonctions-de-l-assemblee-nationale/les-fonctions-legislatives/l-exercice-du-droit-d-amendement-et-annexe>

dimensions, I exploit both the titles of the bills and the texts justifying the amendments to develop a definition of an amendment related to women’s issues.

**Classifying Amendments.** To identify amendments related to women’s issues, I built two dictionaries containing words related to women. I classified an amendment as women-related if it contained one of the words included in the dictionaries. The assumption is that if the topic of an amendment is related to women, the term ”women” or a synonym will appear.

The first dictionary provides a *restrictive* definition of women’s issues. It contains only the word ”wom” which is the stem of words such as women.

The second dictionary provides an *exhaustive* definition of women’s issues. It contains the word ”wom”, ”gender” and ”sex”.<sup>7</sup> The rationale behind this definition is that amendments may refer to women’s issues without explicitly using the word ”women”. For instance, they may only contain the expression ”gender equality” or ”equality between the sexes”. Therefore, introducing the words ”gender” and ”sex” produces an *exhaustive* dictionary of women’s issues. To reduce potential measurement errors from such a definition, I removed false matches associated with the keywords ”gender” and ”sex”. These false matches refer to the use of the word gender as a synonym for ”genre” or ”kind of” in French and to the use of sex to refer to the same-sex marriage bill passed in the 2012-2017 term (see Table F3 for the list).<sup>8</sup>

The restrictive and exhaustive definitions classify respectively 3,291 and 3,905 amendments as women-related. The sample sizes are similar because the word ”wom” is much more frequent than ”sex” or ”gender”. ”Wom” occurs 5,554 times in the sample of amendments while ”sex” and ”gender” respectively occur 815 and 560 times. Accordingly, the two definitions provide essentially similar results. Therefore, unless otherwise specified, the dictionary used in the paper is the *exhaustive* definition because it allows consistency with the analysis on the other topics introduced in Section 5.3.

This methodology is suited to my analysis for three reasons. First, the topic of an amendment is unknown and a training data set containing pre-defined categories for topics does not exist. Second, the main interest of this paper is clearly defined, i.e. primarily about topics related to women’s issues. Third, it is very unlikely that unsupervised methods

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<sup>7</sup>In French, these keywords are respectively ”*femme*”, ”*genre*” and ”*sexe*”. These keywords are stemmed such that the word ”women” becomes ”wom” to capture the singular and plural forms but also words such as womanly.

<sup>8</sup>This procedure is similar to the topic analysis in [Gentzkow et al., 2016](#).

would pick the topic related to women’s issues because its prevalence is low (about 2%) but also because the total number of topics is unknown.<sup>9</sup>

### 3.2.2 Validity of the Dictionary

**Most Frequent Expressions.** Using the exhaustive definition, the dictionary-based method selected 3,905 amendments in the Lower House (1.82%). Table I displays the 5 most frequent bigrams and trigrams used in these amendments. Looking at Panel A, the most frequent trigram is ”equality wom men” which appears 292 times in the sample of amendments and the most frequent bigram is ”wom men” which appears 1092 times. Most of the expressions are directly related to women’s issues containing the word ”women” associated with ”equality”, ”professional” or ”violence”. It strongly suggests that these amendments are used to improve gender equality. The only exception concerns part-time work which is associated with women’s issues, because legislators tend to regulate the use of part-time work for women since they are significantly more likely to be in this position than men.

**Manual Screening.** While the most frequent expressions are informative on the relevance of the topic, we cannot conclude on the relevance of the measure. I thus manually screened all the 3,905 amendments in order to determine the share of amendments falsely classified as related to women’s issues. I found that 86% of amendments are unambiguously women-related. This rate is high and in line with other studies using dictionary-based approaches (see for instance [Baker \*et al.\*, 2016](#)). The wrongly classified amendments often refer to jobs mainly occupied by women (such as prostitution). A small share also includes false matches that are difficult to identify. For instance, some amendments refer to citizens as ”men and women” in a general statement.

## 3.3 Main Outcome: Authorship

The main outcome is related to the authorship of an amendment. In the French Parliament, legislators who initiate an amendment are identified as the first author of an

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<sup>9</sup>In Section F.4, I discuss the main advantages and disadvantages of unsupervised methods to perform topic analysis and display the 30 topics found by a Latent Dirichlet allocation model. In summary, these methods would be more adequate if the research question was ”as compared to male legislators, are female legislators working on different topics?” without being interested in the topics involved. But since there exists clearly identified topics on which we wish to test gender differences, dictionary-based methods are more relevant.

amendment. They must defend it orally and are clearly categorized as the largest contributor to an amendment.

Since almost 60% of legislators have never initiated an amendment related to women's issues, the main outcome is a dummy which equals 1 if a legislator has initiated at least one amendment related to women's issues. It stands for the extensive margin of authorship.

### 3.4 Descriptive Statistics

Table C1 provides descriptive statistics on the Lower House legislators. Since the quota only applied to candidates endorsed by a political party, the main sample is restricted to legislators who were endorsed by a political party and effectively served as legislators.<sup>10</sup> The sample contains 1,557 legislators over the 2002-2017 period. About 19% of the legislators are women. They are about 55 years old. They co-sponsor about 208 amendments per year and initiate 25, out of which women's issues represent respectively 3% and 2%.

Regarding the sample of close races used to identify the effect of gender, we see in Figure C5 that they are scattered throughout the territory with a larger concentration in the region surrounding Paris, because this area contains the largest number of representatives. Additionally, preferences for women exhibit substantial variations in the sample of close race elections. Figure C6 shows that the female vote share ranges from 20 to about 70%. The extent of these variations is similar to other studies exploiting mixed-gender close races (see for instance Bhalotra *et al.*, 2017 in India).

## 4 Empirical Setting

### 4.1 Election System and Gender Quota for the Lower House

**Electoral System.** The elections for the Lower House (legislative elections) occur every 5 years in France and aim at electing 577 representatives (*Députés* in French) in 577 constituencies.<sup>11</sup> Parliamentarians are elected by direct universal suffrage.

The election system follows a two-round plurality voting round system. To be elected in the first round, an individual must obtain more than 50% of the votes and 25% of the

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<sup>10</sup>After each election, about 20 legislators out of 577 are nominated at high-ranked positions such as minister. Therefore, they never occupy the position of legislator in the Parliament.

<sup>11</sup>In 2012, a redistricting to reflect France's changing demographics. 33 constituencies were replaced by new ones. Therefore, the number of constituencies in the sample is higher than 577.

registered citizens. If these conditions are not met, a second round is organized a week later and the two first-ranked candidates are automatically qualified for it. To be elected in the second round, a relative majority is sufficient and the candidate who receives the highest vote share is the winner.

**Gender Quotas.** Starting in 2002, financial incentives were introduced to force political parties to nominate women. If a political party does not nominate 50% of women, its public funding will be reduced proportionally to the gender gap in nomination.<sup>12</sup> As a consequence, the share of female legislators increased from 10 to 27% between the 2002 and 2012 elections.

## 4.2 Methods

The aim of this article is to provide novel evidence on the role of female parliamentarians in policy decisions in a context of gender quotas. To identify the impact of female legislators on policy decisions, I use three complementary specifications. The objective is both to obtain a comprehensive view of what happens in the Lower House and to disentangle the interests of legislators from those of constituents. The first empirical specification is the following:

$$Y_{ict} = \beta Woman_{ict} + \gamma X_{ict} + \epsilon_{ict} \quad (1)$$

Where  $i$  is the subscript for the individual level,  $c$  for the constituency level and  $t$  for the term. Since constituencies elect only one parliamentarian, the observation level is at the legislator-term level.  $Y_{ict}$  is the outcome variable which is a dummy equal to 1 if the legislator has initiated at least one amendment on the topic of interest.  $Woman_{ict}$  is the main variable of interest. It is a dummy that equals 1 if the parliamentarian is a woman.  $X_{ict}$  includes other control variables, namely the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female labor force participation rate in the constituency and term fixed-effects.

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<sup>12</sup>This proportion was gradually increased from 50% in 2002 to 75% in 2007 and reached 150% in 2017. For instance in 2002, if a political party nominated 100 candidates, composed of 60 men and 40 women, the public financial aid would be reduced by  $\frac{(60-40)*0.5}{100} = 10\%$

While this specification is useful to obtain a comprehensive view of gender specialization in the Lower House, it does not disentangle what stems from constituents' demands from the parliamentarians' interests. Since women could be expected to be elected in more gender-friendly places which also demand more gender equality, estimates of  $\beta$  from Equation 1 could capture both the effect of the legislator's gender and the effect of constituents' preferences, unobservable in the data.

To disentangle these two effects, I use two different specifications. First, I add fixed-effects at the constituency level to control for unobservable time-invariant characteristics. However, factors simultaneously determining the election of a woman and the policy decisions taken by the legislator, such as attitudes towards women's issues, could vary over time at the level of the constituency and undermine the causal interpretation of the fixed-effect estimates.

To alleviate this concern, I use a regression discontinuity approach design exploiting mixed-gender close races.<sup>13</sup> During these elections, women run against men and there are cases where a candidate of either sex wins by a narrow margin. In such cases, victory can be considered as random since unpredictable random events affect the electoral outcomes (Lee, 2008) and therefore provide exogenous variations for the sex of legislators. Empirically, the running variable is the vote margin between the first woman and the first man.<sup>14</sup> Providing that confounders behave continuously around the victory threshold and that candidates cannot manipulate their score, this strategy causally identifies the impact of female legislators. Formally, the third empirical specification is:

$$Y_{ict} = \alpha + \beta \mathbb{1}\{X_{ict} > 0\} + \gamma f(X_{ict}) + \epsilon_{ict} \quad (2)$$

Where  $i$  is the subscript for the individual level and  $c$  for the constituency.  $X_{ict}$  is the running variable.  $\mathbb{1}\{X_{ict} > 0\}$  is a dummy that equals 1 if the running variable is positive, i.e. if a woman won the seat.  $f(X_{ict})$  is a polynomial interacted with  $\mathbb{1}\{X_{ict} > 0\}$ .

This equation is estimated on a narrow margin around the elimination threshold. The

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<sup>13</sup>This method is regularly used in the literature investigating the impact of female politicians. Examples of studies using this method include Ferreira and Gyourko (2014), Bhalotra and Clots-Figueras (2014), Brolo and Troiano (2016) or Bhalotra *et al.* (2017).

<sup>14</sup>If the woman wins, this variable is thus positive and if the man wins, this variable is negative. For example, if the first woman obtains 55% of the votes and the first man 45%. Then, the running variable would be equal to 10 percentage points.

reference bandwidth is selected following the approach of [Calonico \*et al.\* \(2014\)](#) depending on the vote margin. To probe the robustness of the results, I also estimate the equation using the IK bandwidth ([Imbens and Kalyanaraman, 2012](#)) which is often larger than the reference bandwidth.<sup>15</sup> In both specifications, observations are weighted with a rectangular kernel (following [Imbens and Lemieux, 2008](#)). I also estimate an additional specification on the entire sample which fits a second order polynomial in the running variable  $X_{ict}$ .

### 4.3 Internal Validity Tests

The validity of the regression discontinuity design hinges on two assumptions: absence of manipulation of the vote margin and continuity of potential confounders at the cutoff. In this section, I provide evidence supporting these two assumptions.

Figure I provides evidence on the absence of manipulation in the running variable around the elimination threshold. Visually, we observe that male candidates win more often against female candidates but, importantly for the identification strategy, there is no evidence of a discontinuity in the density of the vote margin. The McCrary test ([McCrary, 2008](#)) does not reject the null hypothesis of no manipulation.<sup>16</sup> This was expectable as manipulation would require either electoral fraud, which is extremely rare in France, or the prediction of election results with extreme accuracy, which is unlikely because in these constituencies there are no polls, and because unpredictable events (such as weather conditions) on election day could still happen and change the results.

To test the continuity assumption of potential confounders, I estimate Equation 2 using a set of covariates as outcome variables. If the setting is valid, there should not be any discontinuity in these covariates and the coefficient  $\beta$  related to the election of a woman should not be significant. Three sets of covariates are considered: one representing election characteristics (number of candidates, number of registered voters, abstention rate and invalid vote rate, political inclination of the constituency), one representing demographic characteristics (total population size, total male population, total female population, share of women in the population, share of working women, share of working age people, unemployment rate), and one representing preferences for women (female vote share in T and T-1). As shown in Table II, the continuity assumption seems verified as there is no sig-

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<sup>15</sup>The bandwidths were selected with the Stata packages *rdrobust* and *rdob*

<sup>16</sup>I also ran an additional manipulation test based on [Cattaneo \*et al.\* \(2018\)](#) which confirmed that the drop is not significant (p-value = 0.8208)

nificant jump at the cutoff for each of these covariates (the relevant graphs are in Figures C2, C3, and C4). Therefore, there is no evidence that the results are driven by any other characteristic than the gender of the legislator elected.

## 5 Main Results

### 5.1 No Gender Differences in Parliamentary Activity

The analysis starts with a study of potential gender differences in parliamentary activity overall. This is necessary to interpret the results of the following sections, since if women are as active as men, any differential in topic involvement should be interpreted as specialization and, by extension, comes at the cost of working on other topics.

Table III provides an answer to this question (the relevant graphs are in Figure D1). The outcome is the number of amendments initiated (first author) in Panel A and a dummy equal to 1 if the legislator has initiated at least one amendment in Panel B. Each column corresponds to a different specification, from the least (column 1) to the most restrictive (column 6). There is no clear pattern that emerges except that women seem to be roughly as active as men. In Panel A, column 1, we see that women initiate 4 fewer amendments than men but this estimate is not statistically different from zero and remains nonsignificant in all the specifications. The point estimate decreases to -8 when constituency fixed-effects are added (column 2), and becomes slightly positive in the RDD specifications (columns 3,4, 5 and 6). In Panel B, looking at the extensive margin of amendments' initiation, we see that women seem to be slightly more likely to initiate at least one amendment, but here again, the estimates are again not significant except in the polynomial specification of column 3. This suggests that there are very limited gender differences, if not none, in the initiation of amendments.

### 5.2 Female Legislators are Twice as Active on Women's Issues

We now turn to the main outcome which is the initiation of women-related amendments. Figure II displays the main discontinuity graph examining the extensive margin of amendments' initiation. On the right-hand side of the vertical dashed line, a woman is elected and on the left-hand side, a man. We see that when a female legislator is elected

by a narrow margin, the probability that she will introduce at least one women-related amendment jumps by about 20 percentage points, from 20% to more than 40%.

Table IV confirms the visual impression. The five specifications all point towards the fact that women are more likely to initiate an amendment related to women’s issues. Looking at column 1, in the pooled OLS specification, women are about 16 percentage points more likely to initiate an amendment. This effect is robust to the inclusion of fixed-effects at the constituency level (column 2). Similarly, in columns 3, 4, 5 and 6, we see that women elected in mixed-gender close races are about 20 to 33 p.p. more likely to initiate such an amendment as compared to their male counterparts. Scaling this effect to the average probability of men to introduce at least one women-related amendment, we find that women are about 74% (column 1) to 100-170% (columns 3,4, 5 and 6) more likely to initiate such amendments.

Besides authoring, legislators can contribute to an amendment by co-sponsoring it. Arguably, this requires less effort than authoring but it is still an indicator of interest. Therefore, I replicate the same analysis for co-sponsorship in Figure D2 and Table D1. Consistent with the analysis of authorship, the RDD, fixed-effects and pooled OLS specifications point towards the fact that female legislators co-sponsor about twice as many amendments as their male counterparts.

Additionally, in Section D, I investigate the heterogeneity of these results. The greater involvement of female legislators in women’s issues holds for amendments that are ultimately accepted and rejected. It also remains relatively stable across age, incumbency status and political inclination. For the latter, it is interesting to observe that whether they are right or left-wing, women are roughly as likely to author women-related amendments, while this is not true for men. Left-wing men show a greater involvement in these issues, leading to narrower gender differences in the authoring of women-related amendments among left-wing parliamentarians.

To probe the robustness of these findings, I use a *restrictive* dictionary of women’s issues containing only the word ”wom”. I replicate the main results on authorship in Table E1. They are essentially similar to those found using the *exhaustive* dictionary. Second, I implement a placebo test that consists in taking a set of random samples of amendments of equal size to the sample used in the main regression. Using this random sample, I show in Section E.2 that there is no sample of amendments that delivers similar and consistent findings across all the specifications. Third, I check the robustness of the

regression discontinuity specification using the lagged outcome as dependent variable and alternative bandwidths in respectively Sections E.3 and E.5. Finally, I implement the so-called local randomization strategy (Cattaneo *et al.*, 2014) for the regression discontinuity in Section E.6 and obtain similar results.

### 5.3 Extension to Other Topics

This section extends the analysis to the study of other topics besides women’s issues. The purpose is twofold: first, to question whether women’s issues are the topic on which female legislators are the most active; and second, to investigate potential gender differences on other topics.

I define a list of 27 non-mutually exclusive topics stemming from the permanent government ministries that existed over the period 2002-2017. To assign each amendment to a topic, I classify the most frequent 10,000 words into each of the 27 categories and remove false matches. The methodological details are discussed in greater details in Section F.1 and descriptive statistics on the prevalence of each topic are displayed in Figure F1.

Figure III displays the relative contribution of female legislators to each topic. Each row corresponds to a topic and each dot to the scaled probability that a woman will initiate at least one amendment on the given topic as compared to a man. The results are displayed for the least (Pooled OLS, graph a) and the most restrictive specifications (RDD with the CCT bandwidth, graph b).

First, looking at the first row of both graphs, we see that women’s issues constitute the key topic on which gender differences in terms of contribution are the most striking. Women are about twice as likely to initiate an amendment on women’s issues and there is no other topic where differences are as large.

Second, besides women’s issues, two topics seem to emerge as significantly more associated with female legislators: child and health issues, which are displayed in the second and third rows. Female legislators are respectively about 50% and 25% more likely to initiate at least one amendment related to child and health issues in the RDD sample. Coefficients are nonetheless more robust when it comes to child issues (significant at the 5% and 1% level) than health issues (1% and 10%).<sup>17</sup> The robustness of women’s contributions to health issues is consistent with recent findings in the literature obtained in India (Bhalotra

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<sup>17</sup>When using the fixed-effects specification, the results are very similar to the pooled OLS specification. They are displayed in Figure F3.

and Clots-Figueras, 2014). It is also surprising to note that women seem to be slightly more involved in migration issues, although the OLS estimates are less precise than those obtained on the RDD sample.

At the other end of the spectrum, we see that women are respectively almost 40% and 25% less likely to initiate at least one amendment related to military and electoral issues . There is also suggestive evidence that female legislators are less involved in the governance of overseas territories and in European matters, although the estimations are less precise.

For the rest of the topics, where the estimates are less precise, it is interesting to look at the magnitude of the scaled effect which informs us on the general ranking of issues. Family and education issues, often associated with female legislators (see respectively Thomas, 1991 and Clots-Figueras, 2012), come respectively in 5th and 11th position for women. Conversely, agriculture and fiscal issues, sometimes associated with men ( Schwindt-Bayer (2005)) come in 12th and 14th position, and exhibit very few differences. It is difficult to develop a rationale for these differences with the existing findings of the literature, although an obvious driver could be socio-demographic differences across all these different settings.

While the between-topic analysis provides evidence of the absence of gender differences in terms of involvement on the majority of topics, this finding could hide significant heterogeneity stemming from joint-topic involvement. For instance, female legislators may not work more on security issues as a whole but significantly more on the ones related to women's issues. This joint-topic analysis is all the more important in understanding where the greater involvement of female legislators in women's issues comes from. Figure F4 provides an answer to this question (descriptive statistics on the prevalence of each topic can be found in Figure F2). We observe that the greater involvement of female legislators in women's issues comes from an increase in amendments related to issues concerning not only women but also international affairs, security, Europe, civil, business, transports, finance, taxes and local issues. This strongly suggests that female legislators disseminate women's issues across a wide range of topics including those where they are less active in general.

## 6 Mechanisms: Why Are Female Legislators More Involved in Women’s Issues?

Female legislators are more likely to initiate women-related amendments. The effects are large and women’s issues constitute the topic on which gender differences are the most striking. This section attempts to explore the mechanisms behind these facts and considers the influence of constituents’ preferences, the strategies of political parties and individual interest.

### 6.1 Accounting for Constituents’ Preferences

The first potential mechanism is the influence of constituents’ preferences. In a standard median voter model (Downs, 1957), politicians’ policies should converge towards the preferences of the median voter. Therefore, if women are elected in constituencies which are more gender-equal and more demanding on women’s issues, female legislators should produce more amendments on these topics. This would be explained by voters’ preferences and not by parliamentarians’ own identity and preferences.

While this mechanism is certainly present when the full division of roles in Parliament is taken into consideration, it is much less influential when the analysis is restricted to constituencies with variations over time in the identity of the legislator and, even less so, when the focus is on mixed-gender close races. In this case, Section 4.3 provides evidence that constituents’ preferences for women and demographic characteristics are similar whether a man or a woman is ultimately elected and yet, we observe large differences in terms of involvement in women’s issues depending on the legislator’s gender.<sup>18</sup> This suggests that constituents’ preferences cannot fully explain the results and paves the way for identity-based policymaking.

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<sup>18</sup>Arguably, the narrower the close races, the more alike are constituents’ preferences. While in the main regression tables, we report the results using relatively large bandwidths following the CCT approach, one could wonder how the results vary when we move towards the threshold. To answer this interrogation, two strategies are implemented. First, Figure E2 shows that the impact of the sex of legislators is stable as we restrict the sample to narrower close races. Only the precision of the estimates seems to diminish, alleviating concerns on the potential effects of the bandwidth size. Second, Section E.6 implements the so-called randomization strategy and narrows the sample to bandwidths where observables are balanced on both sides of the threshold. This leads to a window within 3 points in which women are still significantly more likely to initiate women-related amendments. The effect is of similar magnitude as the ones found previously.

## 6.2 What Lies Behind Identity: Individual Interest or the Strategies of Political Parties?

Since constituents' preferences cannot fully explain the results, the election of a female legislator leads to a greater contribution to women's issues because of her sex. Two mechanisms could explain this fact. On the one hand, female legislators could be intrinsically more interested in women's issues and eager to contribute to this topic. On the other hand, political parties or groups of legislators may behave strategically and anticipate that women-related policies led by women appear to be more credible and are therefore more likely to pass. To disentangle individual interest from political strategy, I restrict the analysis to cases where the amendment cannot stem from the will of political parties.

**First Case: Sole-Authored Amendments.** The first case exploits the existence of sole-authored amendments. By definition, the involvement of legislators in such amendments cannot be explained by a desire to add political weight and increase the success rate of an amendment since there is only one author and no co-sponsors. Sole-authored amendments are also unlikely to originate from the will of political parties. Three elements provide supporting evidence for this claim. First, if this assertion is true, we should observe relatively more sole-authored amendments from legislators whose political party is in the majority in Parliament. This is because bills would reflect the views of the party and not those of individual legislators (especially since most bills originate from the government, which comprises higher-ranking party officials). Quantitative evidence supports this claim. During the period 2002-2017, the share of sole-authored amendments was about 60% for legislators from majority parties, falling to 35% in periods of minority. Second, the guidelines indicating how to write an amendment in Parliament clearly state that the more co-sponsors an amendment has, the more likely it is to pass.<sup>19</sup> Therefore, the existence of sole-authored amendments cannot be explained by positive expectations regarding the success rate. Third, qualitative evidence from interviews with several parliamentary assistants working in the Lower House also confirms this classification.<sup>20</sup>

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<sup>19</sup>They state that "In the case of the co-sponsorship of an amendment [...] by members of the same political group, the political weight of the amendment will be precisely evaluated by the Lower House and by the government. Sometimes, the amendment will mention that the author carries the amendment in the name of that political group, which obviously add political weight to the amendment". Source: Rédiger la Loi. Guide de rédaction des propositions de loi et des amendements.

<sup>20</sup>I interrogated 6 parliamentary assistants who all pointed towards sole-authored amendments as a way to proxy the individual interest of legislators. They also agreed on the fact that amendments backed by the entire group often originate directly from the political party.

**Second Case: Rejected Amendments from the Majority.** To investigate further the possibility that women are intrinsically more interested in women’s issues, the second case exploits the outcome of amendments along with the political compositions of Parliament. Over the period 2002-2017, two parties have successively had a majority: the right-wing from 2002 to 2012 (*UMP*) and the left-wing from 2012 to 2017 (*PS*). In practical terms, a majority in Parliament means that the party can pass any bill and amendment. It also means that legislators have less incentives to amend existing bills since these bills should already reflect parties’ interests. Quantitative evidence support this claim as about 27% of majority legislators’ amendments are accepted, against 7% for those in the minority. Legislators in the majority also initiate 50% fewer amendments on average. Given this low incentive to amend and the high probability of an amendment passing, rejected amendments from majority legislators cannot but stem from their individual interest. Ruling out the possibility of cognitive biases from political parties, it is difficult to conceive of cases where a party would both ask a legislator to produce an amendment and at the same time ask them to vote against it.

Therefore, I investigate gender differences in the samples of women-related amendments that are (i) sole-authored, (ii) from a majority legislator and rejected by the majority, and (iii) both sole-authored and from a majority legislator and rejected by the majority. Figure IV displays the results. The vertical axis represents the scaled effect and the horizontal axis the three cases described above plus the initial case without restriction on the origin or the outcome of the amendment. Looking at the Pooled OLS specification, it can be observed that as we move from the initial case to the sole-authored amendments from a majority legislator ultimately rejected by the majority, female legislators are increasingly likely to initiate women-related amendments when the influence of the party declines from about 100% for all amendments to 300% for sole-authored amendments originating from majority legislators and ultimately rejected by the majority. Turning to the fixed-effects and the RDD specifications, we observe a similar pattern: point estimates increase but, because of the reduced sample sizes, the standard errors also increase and it is more difficult to conclude on the relative size of the effects. Nevertheless, it seems clear that the effects do not decrease in the three specifications, suggesting that the results cannot be entirely explained by political party influence but must stem from individual interest.

Female legislators seem to be intrinsically interested in women’s issues. But it could be that their true interest lies in a related topic which is often associated with women’s

issues. To alleviate this concern, I first analyze whether the greater contribution of female legislators is driven by their choice of committees. In Figure G1, I show that in all the committees, female legislators seem to contribute more to women’s issues. Additionally, I consider the role of their immediate team. Female legislators may hire more female assistants who would push for more women-related amendments. In Table G1, I show that this mechanism is unlikely to be at play.

### 6.3 Additional Evidence from Legislators’ Discretionary Funds

To complement the previous results, I exploit an institutional feature of the 2012-2017 term. During this term, all legislators were granted a discretionary fund of 130,000 euros per year.<sup>21</sup> Legislators were free to use the funds as they wished (except for private gain). In practice, they were used to fund associations and local projects. Therefore, an analysis of the destination of these funds is likely to portray the individual interests of legislators. Another important feature of these data for the analysis is that every expenditure had to be classified according to a pre-defined nomenclature. This nomenclature included, among others, one category entitled equality between men and women, which is likely to be the closest to women’s issues.

I exploit these data to build a dummy variable equal to 1 if the legislator has funded associations or projects related to women’s issues. Using this outcome, I replicate the same analysis as before. The results are displayed in Table V (the relevant graph is in Figure G2). We observe that, when a female legislator is elected by a narrow margin, the probability of her spending money on women’s issues jumps by about 29-44 p.p.. This jump is significant at the 1% or 5% level. It holds across the entire sample of legislators, controlling for individual and constituency characteristics (column 1) and in the four usual specifications used for the RDD (columns 2,3, 4 and 5). Scaling this jump to the average for male legislators, it represents an increase in the probability of spending money on women’s issues that ranges from 150 to more than 300%.

It is interesting to compare this scaled effect to the one obtained using amendments. Indeed, with data on expenditures from personal funds, we are likely to observe the in-

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<sup>21</sup>During the previous terms, these funds were only available to a subset of legislators and were unknown to most of them and to the public. Following a legal action in 2011, it was decided that clear rules would be defined to regulate the use and the attribution of these funds. In 2017, because the use of these funds was widely criticized, it was decided to end this practice.

dividual interests of legislators. Female legislators seem to be at least 150% more likely than men to spend money on women’s issues. This effect is larger than that obtained on the entire sample of amendments and close to that obtained on rejected amendments. Therefore, this bolsters the interpretation of rejected amendments in terms of individual interest.

## 7 Extension - Exploiting a Natural Experiment from the Upper House

The Lower House setting provides strong evidence that female legislators contribute more to women’s issues because of their sex. This finding raises two questions: does it hold when only women who would have entered into politics with the quota are considered? Does a higher share of female politicians lead to a larger prevalence of women’s issues at the macro level? This section provides answers to these two questions by exploiting a natural experiment caused by the introduction of a gender quota in the French Upper House.

### 7.1 Data and Empirical Design

#### 7.1.1 Election System and Gender Quota for the Upper House

**Electoral System.** Since 2008, elections to the Upper House (Senate) occur every 6 years and aim at electing 348 representatives in 103 constituencies. Half of the Senate is renewed every 3 years. Senators are elected by indirect universal suffrage where only locally elected politicians can vote.<sup>22</sup>

Most members of the Upper House are elected from multi-member constituencies and depending on the number of representatives elected, two election systems coexist. In constituencies where strictly fewer than 4 candidates are elected (48% of constituencies), the election system follows a two-round plurality voting round system. It is similar to the election system of the Lower House except that for some constituencies 2 or 3 representatives are elected. In constituencies where strictly more than 3 candidates are elected (52% of

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<sup>22</sup>Before 2008, two main changes to the election system occurred: senators were elected for 9 years and the Upper House was renewed every 3 years. Therefore, the 2001 elections were the last ones to elect all the senators for 9 years. In 2004, half of the elected senators were elected for 9 years and the other half for 6 years. The divide was assumed to be random. Finally, starting in 2008, all the senators were elected for 6 years. Figure [H1](#) schematizes this election schedule.

constituencies), the election system is one of proportional representation where votes are counted at the level of a list. Seats are attributed following a proportional rule where each candidate has a pre-determined election rank on a list and when the number of votes for a list increases, so does the number of elected candidates.

**Gender Quotas.** In 2000, a law was voted requiring constituencies where the election system was proportional representation, i.e. constituencies which elect strictly more than 3 candidates, to comply with a gender quota. It stipulated that, for each list, there had to be a strict alternation between men and women. If the first on a list was a man, the second had to be a woman and the third a man, and so on. For constituencies which elect strictly fewer than 4 candidates, this law made no difference. Furthermore, due to the staggered schedule of the election system of the Upper House, a third of the constituencies had to comply with the quota for the first time in 2001, another third in 2004 and the last third in 2008.

### 7.1.2 Data

**Parliamentarian activity.** The data on the amendments for the Upper House from 2001 onwards can be downloaded from the official website of the Senate.<sup>23</sup> Similarly to the Lower House, for each amendment it contains the bill targeted, the content as well as the oral presentation justifying its adoption and the identity of the initiator and of all the co-sponsors.

**Election Results.** I supplemented these data with the election results for the years 1995, 1998, 2001, 2004, 2008, 2011 and 2014. These supplementary data are used to identify parliamentarians that entered the Senate through elections (and not by replacement).

### 7.1.3 Methods: Difference-In-Differences

I use a gender quota introduced in the first election after 2000. As a third of the Upper House is renewed every 3 years, three series are treated at different years: 2001, 2004 and 2008. Since the data start in 2001, I focus on the two series renewed in 2004 and 2008, for which it is possible to have information prior to the introduction of gender quotas.

Using these two series, I use a difference-in-differences strategy comparing authorship of women-related amendments before and after the implementation of policy between con-

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<sup>23</sup><http://data.senat.fr/donnees/>

stituencies targeted by the quota and those that are not. I directly relate the introduction of women due to the quota to the production of amendments using an instrumental variable strategy. Formally, the first stage is:

$$NWomen_{ct} = \alpha_0 + \alpha_1 Treatment_c + \alpha_2 Post_t + \delta Treatment_c * Post_t + \epsilon_{ct} \quad (3)$$

The second-stage is:

$$Y_{ct} = \gamma_0 + \beta NWomen_{ct} + \gamma_1 Treatment_c + \gamma_2 Post_t + \epsilon_{ct} \quad (4)$$

where  $c$  is the subscript for the constituency level and  $t$  for time.  $NWomen_{ct}$  corresponds to the number of women elected in a constituency.  $Treatment_c$  is a dummy that equals 1 if a constituency has to comply with the quota, i.e. elects strictly more than 3 individuals after 2000.  $Post_t$  is a dummy that equals 1 if the election year is after the introduction of the quota.  $\beta$  is the key coefficient representing the Wald estimates. It measures the change in prevalence of women's issues due to the election of one additional woman in the constituency.

Over the period 2001-2017, Upper House parliamentarians produced 109,497 amendments, about half as many as their counterparts in the Lower House. Table H1 provides descriptive statistics at the constituency level. On average, constituencies elect 3 candidates, out of which 0.53 are women (12%). Regarding the prevalence of women's issues, the dictionary-based method classified 2,064 Upper House amendments as related to women's issues (1.88%). At the constituency level, roughly 21 amendments are initiated per year, out of which about 0.3 are related to gender. Therefore, about 60% of constituencies have initiated an amendment related to women, and, across all topics, they have all initiated at least one amendment.

## 7.2 Results

### 7.2.1 First Stage - Impact of the Quota on the Election of Women

I begin by analyzing the impact of the gender quota, voted in 2000 and introduced in the first election after this year. Table VI displays the results related to the impact of

the quota on the number of women per constituency (the relevant graph is in Figure H2). The three columns use different specifications pooling the period after the introduction of the quota, according to the presence of time and constituency fixed-effects. Looking at the coefficient related to  $Quota * Post$ , we see that the quota has increased the number of women elected per constituency by about 1.25. In column 2 and 3, we see that this increase remained stable when constituency and time fixed-effects are added.<sup>24</sup> The F-statistics are respectively 35.7 and 20 and 13.4 for the specifications used in columns 1, 2 and 3, leaving aside concerns about a potential weak instrument.

### 7.2.2 Gender Quotas Lead to an Increase in the Prevalence of Women’s Issues

I now turn to the analysis of authorship of women-related amendments. To facilitate interpretation and comparability with the findings obtained in the Lower House, the main explanatory variable is the number of women in a constituency. It can be used to interpret the coefficients as the consequence of one additional elected woman.

The impact of the quota is clearly consistent with the findings from the Lower House. In Table VII, looking at Panel A, we see that constituencies with one additional elected woman unambiguously produce more amendments related to women’s issues. One additional woman leads to an increase of 0.17 amendments per year (column 1), a 1 p.p. increase in the share of women-related amendments (column 2), and a 12 p.p. jump of the probability to produce at least one amendment on this topic (column 3). As opposed to the Lower House results, estimations are more precise when using the share of amendments instead of studying the extensive margin. This is because the Upper House constituencies are held by multiple members. For each of these members individually, it is more relevant to study the extensive margin but for a group, or in this case a constituency, it is preferable to use a continuous measure such as the count or the share of amendments.

Although OLS estimates are informative, they suffer from endogeneity biases which undermine the causal interpretation. For this reason, Panel B displays Wald estimates where the number of women in a constituency is instrumented by the variation in the number of women due to the gender quota introduced in constituencies with more than 4 elected representatives. Results remain similar and slightly larger in terms of magnitude.

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<sup>24</sup>Alternatively, in the Appendix Table H5, alternative measures of the political representation of women are considered (share of women and at least one woman per constituency). The quota had an unambiguous positive impact on all these measures.

One can observe that a constituency with one additional woman produces 0.39 additional amendments (column 1), increases by 2 p.p. the share of amendments initiated (column 2) and is 28 p.p. more likely to initiate at least one amendment (column 3), the coefficients being significant at the 5% level. Looking at the extensive margin studied in column 3, it is striking that the magnitude is very similar to what was found in the Lower House. Women were on average 23 p.p. more likely to initiate at least one amendment related to women’s issues in the Lower House and this figure is about 28 p.p., i.e. indistinguishable from that found in the Upper House.

Using this setting, it is also possible to extrapolate and obtain an upper bound for the prevalence of women’s issues if there were 50% of women in the Upper House. To do so, I estimate equation 4 instrumenting the share of women in the constituency by the variation due to the quota. The results are displayed in Table H7. The point estimates suggest that a 10 p.p. increase in the share of women leads to a 1.59 p.p. increase in the share of amendments related to women’s issues. Therefore, in a Parliament with 50% of women, women-related amendments would account for up to 8% of all amendments. This estimate tends to be an upper bound effect, as the calculation implicitly assumes complete independence of parliamentary work between constituencies. This assumption could be violated in practice if there were some substitution effects between constituencies where a certain share of amendments originated from external sources and were initiated independently of who is present in Parliament.

To probe the robustness of the results, I implemented the same robustness tests as for the Lower House findings, namely restricting the dictionary of women-related terms to the word "wom" and using random samples of amendments. Results are discussed in Section H.4. The restricted definition of women-related amendments yields essentially similar findings (see Table H8). As for the placebo tests, results are displayed in Figures H4. In a nutshell, from 1000 random samples of amendments, none delivers similar findings (see H4).

## 8 Conclusion

This article has combined quasi-experimental variations with text analysis to investigate the causal impact of female legislators on lawmaking in a context of gender quotas. In the Lower House, using a regression discontinuity approach exploiting mixed-gender close races,

I found that women are twice as likely to initiate amendments related to women's issues as their male counterparts. Classifying amendments into 27 topics, I established that women's issues constitute the topic with the largest gender differences in terms of contribution. Female legislators are also more active on health and child issues whereas men contribute more to military issues. Investigating the mechanisms behind these findings, I showed that female legislators seem to be intrinsically more interested in contributing to women's issues. Finally, I used a difference-in-differences strategy exploiting the introduction of a quota in the Upper House only in constituencies that elect more than 4 senators. I found that constituencies which had to comply with the quota doubled the share of amendments related to women's issues that they initiated.

Methodologically, the main contribution of this paper is to exploit text data from Parliament to identify women-related policies, along with quasi-experimental variations to randomize the gender of legislators. Exploiting text data overcomes limitations stemming from data on spending or public goods, which rarely include women-related categories. It is worth noting that data from parliaments are often publicly and freely accessible and, as such, further research could extend this methodology to other countries and settings. Text analysis methods could also be used to go beyond the question of gender to test the relevance of different dimensions of politicians' identity.

From a public policy perspective, these results have two consequences. First, they directly contribute to the discussion on the policy relevance and consequences of gender quotas. They imply that the introduction of gender quotas is likely to lead to a shift in policymaking, with the interests of women in the population increasingly taken into account. Second, going beyond gender, these findings question more generally the consequences of imbalances between the characteristics of politicians and those of the people they represent. More research is needed to understand whether these imbalances matter for policymaking and whether correcting them would lead to public policies that better encompass the interests of groups of people who are underrepresented in politics.

## References

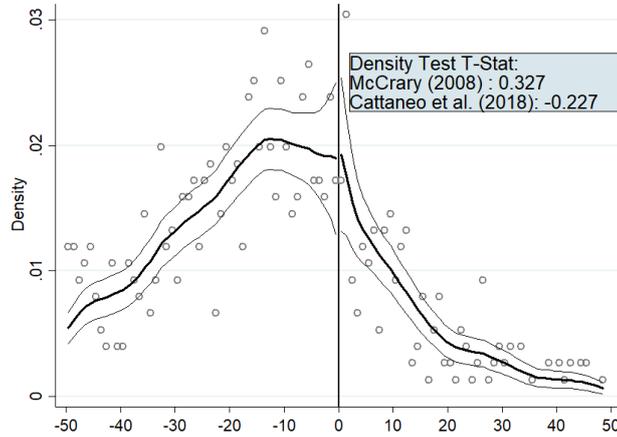
- Alesina, A. (1988). ‘Credibility and policy convergence in a two-party system with rational voters’, *The American Economic Review*, vol. 78(4), pp. 796–805.
- Avril, P. and Gicquel, J. (2014). *Droit parlementaire*, Domat droit public, LGDJ.
- Bagues, M.F. and Campa, P. (2017). ‘Can Gender Quotas in Candidate Lists Empower Women? Evidence from a Regression Discontinuity Design’, Institute for the Study of Labor (IZA).
- Baker, S.R., Bloom, N. and Davis, S.J. (2016). ‘Measuring economic policy uncertainty\*’, *The Quarterly Journal of Economics*, vol. 131(4), pp. 1593–1636.
- Besley, T. and Coate, S. (1997). ‘An economic model of representative democracy’, *The Quarterly Journal of Economics*, vol. 112(1), pp. 85–114.
- Bhalotra, S. and Clots-Figueras, I. (2014). ‘Health and the political agency of women’, *American Economic Journal: Economic Policy*, vol. 6(2), pp. 164–197.
- Bhalotra, S., Clots-Figueras, I., Cassan, G. and Iyer, L. (2014). ‘Religion, politician identity and development outcomes: Evidence from india’, *Journal of Economic Behavior And Organization*, vol. 104, pp. 4–17.
- Bhalotra, S., Clots-Figueras, I. and Iyer, L. (2017). ‘Pathbreakers? women’s electoral success and future political participation’, *The Economic Journal*.
- Bratton, K.A. and Haynie, K.L. (1999). ‘Agenda setting and legislative success in state legislatures: The effects of gender and race’, *The Journal of Politics*, vol. 61(3), pp. 658–679.
- Brollo, F. and Troiano, U. (2016). ‘What happens when a woman wins an election? evidence from close races in brazil’, *Journal of Development Economics*, vol. 122(C), pp. 28–45.
- Broockman, D.E. (2013). ‘Black politicians are more intrinsically motivated to advance blacks’ interests: A field experiment manipulating political incentives’, *American Journal of Political Science*, vol. 57(3), pp. 521–536.
- Calonico, S., Cattaneo, M.D. and Titiunik, R. (2014). ‘Robust Nonparametric Confidence Intervals for Regression Discontinuity Designs’, *Econometrica*, vol. 82, pp. 2295–2326.
- Cassan, G. and Vandewalle, L. (2017). ‘Identities and Public Policies: Unintended Effects of Political Reservations for Women in India’, Economics Section, The Graduate Institute of International Studies.

- Cattaneo, M., Frandsen, B. and Titiunik, R. (2014). ‘Randomization inference in the regression discontinuity design: An application to party advantages in the u.s. senate’, *Journal of Causal Inference*, vol. 3(1), pp. 1–24.
- Cattaneo, M.D., Jansson, M. and Ma, X. (2018). ‘Manipulation testing based on density discontinuity’, *Stata Journal*, vol. 18(1), pp. 234–261(28).
- Chattopadhyay, R. and Duflo, E. (2004). ‘Women as Policy Makers: Evidence from a Randomized Policy Experiment in India’, *Econometrica*, vol. 72(5), pp. 1409–1443.
- Chaudhary, L. and Rubin, J. (2016). ‘Religious identity and the provision of public goods: Evidence from the indian princely states’, *Journal of Comparative Economics*, vol. 44(3), pp. 461 – 483.
- Clots-Figueras, I. (2011). ‘Women in politics: Evidence from the indian states’, *Journal of Public Economics*, vol. 95(7), pp. 664 – 690.
- Clots-Figueras, I. (2012). ‘Are female leaders good for education? evidence from india’, *American Economic Journal: Applied Economics*, vol. 4(1), pp. 212–244.
- Downs, A. (1957). ‘An economic theory of political action in a democracy’, *Journal of Political Economy*, vol. 65(2), pp. 135–150.
- Ferreira, F. and Gyourko, J. (2014). ‘Does Gender Matter for Political Leadership? The Case of U.S. Mayors’, *Journal of Public Economics*, vol. 112(C), pp. 24–39.
- Gentzkow, M., Kelly, B.T. and Taddy, M. (2017). ‘Text as data’, National Bureau of Economic Research.
- Gentzkow, M., Shapiro, J.M. and Taddy, M. (2016). ‘Measuring group differences in high-dimensional choices: Method and application to congressional speech’, National Bureau of Economic Research.
- Grimmer, J. and Steward, B.M. (2013). ‘Text as data: The promise and pitfalls of automatic content analysis methods for political texts’, *Political Analysis*, vol. 21(3), pp. 267–297.
- Hansen, S., McMahon, M. and Prat, A. (2018). ‘Transparency and deliberation within the fmc: A computational linguistics approach\*’, *The Quarterly Journal of Economics*, vol. 133(2), pp. 801–870.
- Imbens, G. and Kalyanaraman, K. (2012). ‘Optimal Bandwidth Choice for the Regression Discontinuity Estimator’, *Review of Economic Studies*, vol. 79(3), pp. 933–959.
- Imbens, G.W. and Lemieux, T. (2008). ‘Regression Discontinuity Designs: A Guide to Practice’, *Journal of Econometrics*, vol. 142(2), pp. 615–635.

- Knapp, A. and Wright, V. (2006). *The Government and Politics of France*, Routledge.
- Krook, M. (2010). *Quotas for Women in Politics: Gender and Candidate Selection Reform Worldwide*, Oxford University Press.
- Lee, D.S. (2008). ‘Randomized experiments from non-random selection in u.s. house elections’, *Journal of Econometrics*, vol. 142(2), pp. 675–697.
- McCrary, J. (2008). ‘Manipulation of the running variable in the regression discontinuity design: A density test’, *Journal of Econometrics*, vol. 142(2), pp. 698–714.
- Meyersson, E. (2014). ‘Islamic rule and the empowerment of the poor and pious’, *Economica*, vol. 82(1), pp. 229–269.
- Osborne, M.J. and Slivinski, A. (1996). ‘A model of political competition with citizen-candidates’, *The Quarterly Journal of Economics*, vol. 111(1), pp. 65–96.
- Pande, R. (2003). ‘Can mandated political representation increase policy influence for disadvantaged minorities? theory and evidence from india’, *The American Economic Review*, vol. 93(4), pp. 1132–1151.
- Rasch, B. and Tsebelis, G. (2013). *The Role of Governments in Legislative Agenda Setting*, Routledge, Taylor & Francis.
- Schwindt-Bayer, L.A. (2005). ‘The incumbency disadvantage and women’s election to legislative office’, *Electoral Studies*, vol. 24(2), pp. 227 – 244.
- Thomas, S. (1991). ‘The impact of women on state legislative policies’, *The Journal of Politics*, vol. 53(4), pp. 958–976.
- Thomas, S. and Welch, S. (1991). ‘The impact of gender on activities and priorities of state legislators’, *The Western Political Quarterly*, vol. 44(2), pp. 445–456.
- Washington, E.L. (2008). ‘Female socialization: How daughters affect their legislator fathers’, *American Economic Review*, vol. 98(1), pp. 311–32.

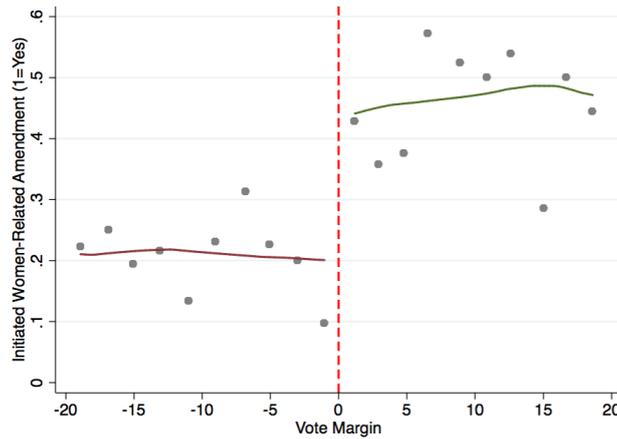
# Figures

Figure I: Manipulation Test



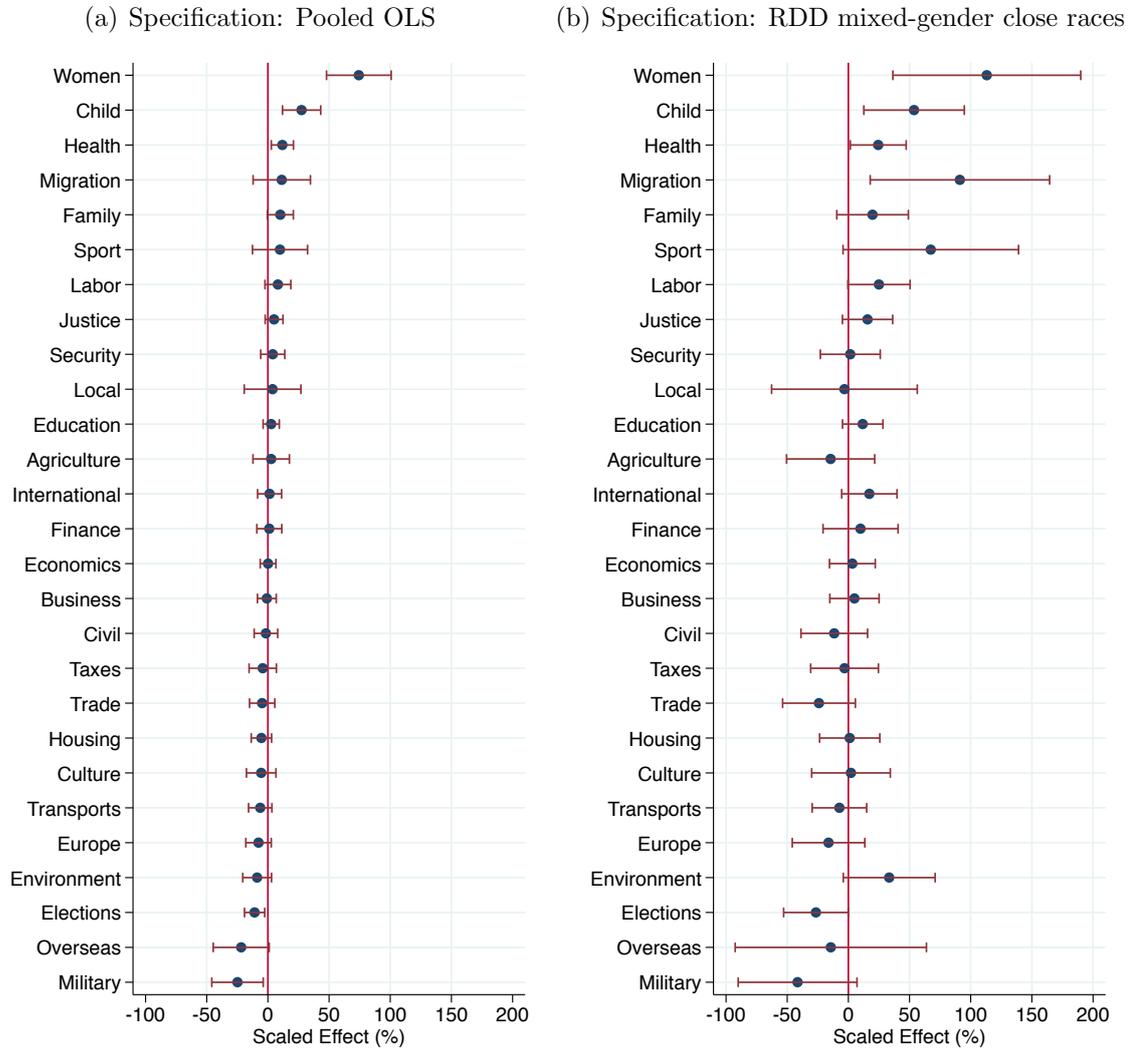
*Notes:* the data come from the 2002, 2007 and 2012 election results for the French Lower House. The sample contains all the legislators endorsed by a political party. The x-axis represents the vote margin between the first woman and the first man in a mixed-gender election. On the right-hand side of the vertical dashed line, a woman is elected and on the left-hand side, a man

Figure II: Legislator's Gender and Authorship of Women-related Amendments



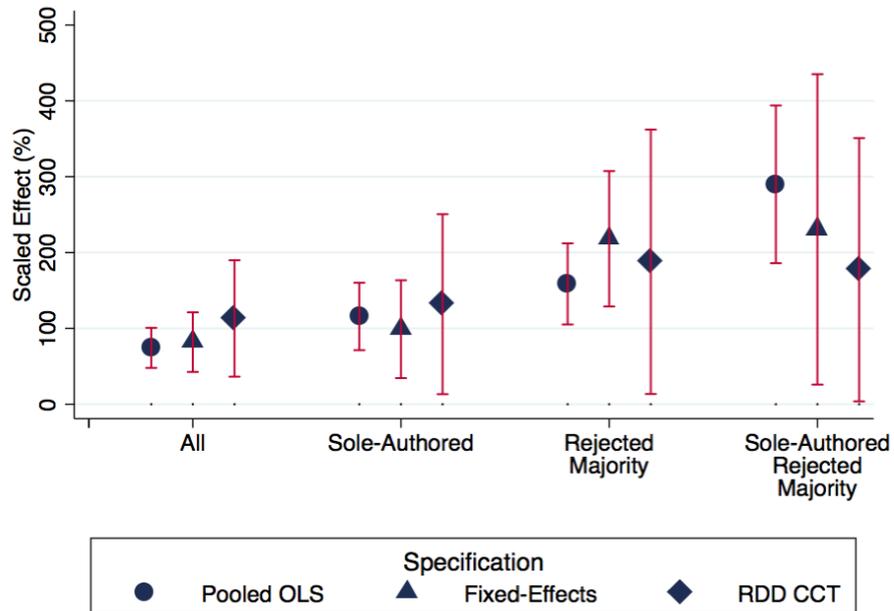
*Notes:* the data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The outcome is a dummy that equals 1 if the legislator initiates at least one women-related amendment. The x-axis represents the vote margin between the first woman and the first man in a mixed-gender election. On the right-hand side of the vertical dashed line, a woman is elected and on the left-hand side, a man. The solid lines correspond to a lowess fit of the bin-averages. There are 10 bins on each side of the cutoff.

Figure III: Extension to Other Topics: Authorship Analysis



Notes: the data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Each row corresponds to a topic. The outcome is a dummy that equals 1 if the legislator initiates at least one amendment on the topic considered. Each dot represents the coefficient associated to the variable *Woman* divided by the average of male legislators (scaled effect). Confidence intervals are represented at the 90% level. Graph (a) and (b) respectively represent estimates from the pooled OLS specification and the RDD mixed-gender close race with the CCT bandwidth.

Figure IV: Investigating the Individual Interest Channel



*Notes:* the data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The y-axis represents the coefficient associated to the variable *Woman* divided by the average of male legislators (scaled effect) in a regression where the outcome is a dummy that equals 1 if the legislator initiates at least one women-related amendment. Confidence intervals are represented at the 90% level. Sole-authored designates the sample of sole-authored amendments (without co-sponsors). Rejected majority designates the sample of amendments ultimately rejected whose author is from the majority. Sole-authored Rejected Majority designates the sample of sole-authored amendments ultimately rejected whose author is from the majority.

## Tables

Table I: Most Frequent Trigrams and Bigrams in the Sample of Amendments Related to Women’s Issues

(1)	(2)	(3)	(4)	(5)	(6)
<i>Trigrams</i>			<i>Bigrams</i>		
Rank	N	Keywords	N	Keywords	
1	292	equalit wom men	1092	wom men	
2	142	violenc done wom	664	part time	
3	125	worker part time	573	men wom	
4	100	professional wom men	341	fight against	
5	97	access wom men	293	equalit wom	

*Notes:* the data come from all the amendments produced in the French Lower House over the period 2002-2017. It is restricted to amendments identified as related to women’s issues with a dictionary-based method. These amendments contain at least one of the following words: ”wom”, ”sex” or ”gender”. The word ”wom” is the stem of words such as women or woman.

Table II: Testing the Continuity Assumption

	(1) Discontinuity Estimate	(2) Bandwidth Restriction	(3) N Observations
N Registered Voters	-11.855 (3417.295)	12.91	315
Abstention Rate	-.425 (1.172)	12	292
Invalid Vote Rate	-.082 (.132)	14.61	352
Total Population	230.221 (4800.727)	18.13	414
Population Male	-332.875 (2217.747)	19.13	434
Population Female	33.832 (2534.476)	16.6	393
Share Women Population	.002 (.002)	13.28	319
Share Working Women	-.008 (.013)	20.5	459
Share Working Age Population	.004 (.008)	12.43	299
Unemployment Rate	.004 (.006)	13.54	325
Female Vote Share	1.171 (1.297)	8.61	212
Female Vote Share T-1	-2.258 (7.974)	9.46	230
Left Wing Constituency	-.046 (.114)	9.82	239

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Each line corresponds to one dependent variable. Column 1 displays the discontinuity estimates, column 2 the bandwidth restrictions and column 3 the number of observations. The model fits a local linear regression around the cutoff that allows for a break in the slope at the cutoff. The bandwidth is computed following the CCT approach.

Table III: Are there Gender Differences in Overall Parliamentary Activity - Lower House

Specification	(1)	(2)	(3)	(4)	(5)	(6)
	Pooled OLS	Fixed Effects		<i>Regression Discontinuity</i>		
			Poly	LLR IK	LLR CCT	LLR CCT/2
<i>Panel A - Dep. Var. : N Amendments Authored</i>						
Woman (1=Yes)	-4.35 (3.32)	-8.09 (6.07)	4.08 (5.53)	-2.76 (6.68)	1.61 (8.13)	11.13 (10.09)
Bandwidth Restriction			None	22.8	11.9	5.9
Observations	1557	1557	802	491	289	150
Constituencies	592	592	473	332	219	132
<i>Panel B - Dep. Var. : At Least One Amendment Authored (1=Yes)</i>						
Woman (1=Yes)	0.01 (0.02)	0.04 (0.04)	0.07* (0.04)	0.03 (0.06)	0.05 (0.07)	0.09 (0.10)
Bandwidth Restriction			None	16.8	12.2	6.1
Observations	1557	1557	802	404	295	159
Constituencies	592	592	473	283	222	141

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. The dependent variable in Panel A is the number of amendments authored and a dummy equals to 1 if the legislator authors at least one amendment in Panel B. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 2 also include constituency fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4, 5 and 6 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff using respectively the IK, the CCT and half the CCT bandwidth. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

Table IV: Authorship of Women-Related Amendments - Lower House

<i>Dep. Var.: At Least one Amendment Initiated (1=Yes)</i>						
Specification	(1) Pooled OLS	(2) Fixed Effects	(3)  Poly	(4)  LLR IK	(5)  LLR CCT	(6)  LLR CCT/2
Woman (1=Yes)	0.16*** (0.03)	0.18*** (0.05)	0.21*** (0.06)	0.20** (0.08)	0.24** (0.09)	0.33*** (0.12)
Control Mean	0.22	0.22	0.20	0.21	0.20	0.19
Scaled Effect	74.3	81.9	107.1	92.4	115.0	175.1
Bandwidth Restriction			None	20.1	13.9	6.9
Observations	1557	1557	802	459	338	180
Constituencies	592	592	473	311	248	155

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data come from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 2 also include constituency fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4, 5 and 6 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff using respectively the IK, the CCT and half the CCT bandwidth. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

Table V: Spending on Women's Issues - Lower House

<i>Dep. Var.: Legislator Has Funded Women's Issues (1=Yes)</i>					
Specification	(1)	(2)	(3)	(4)	(5)
	Pooled OLS		<i>Regression Discontinuity</i>		
		Poly	LLR IK	LLR CCT	LLR CCT/2
Woman (1=Yes)	0.29*** (0.05)	0.29*** (0.09)	0.47*** (0.13)	0.34** (0.14)	0.44** (0.17)
Control Mean	0.19	0.17	0.12	0.13	0.13
Scaled Effect	152.3	175.7	375.4	261.9	342.4
Bandwidth Restriction		None	16.5	18.0	9.0
Observations	499	251	132	141	83
Constituencies	499	251	132	141	83

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data come from the French Lower House over the period 2012-2017. The sample contains all the legislators endorsed by a political party. Controls in specifications of column 1 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency. Controls in column 2 include a second order polynomial in the running variable. Specifications of columns 3, 4 and 5 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff using respectively the IK, the CCT and half the CCT bandwidth. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

Table VI: First Stage Results: Impact of Gender Quotas on the Number of Female Senators  
- Upper House

<i>Dep. Var.: N Women Per Constituency</i>			
	(1)	(2)	(3)
Quota*Post	1.23*** (0.24)	1.23*** (0.30)	1.13*** (0.30)
Post	0.22*** (0.05)	0.22*** (0.06)	0.22*** (0.06)
Quota	0.48*** (0.15)	0.85*** (0.20)	0.85*** (0.20)
F-Statistic	35.7	20.0	13.4
Time Fixed-Effects	No	No	Yes
Constituency Fixed-Effects	No	Yes	Yes
Observations	216	216	216
Constituencies	72	72	72

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses. The dependent variable is the number of women per constituency.

Table VII: Impact of Gender Quotas on Initiation of Women-Related Amendments - OLS and Wald Estimates in the Upper House

Dependent Variable	(1) N	(2) Share	(3) At Least One (1=Yes)
<i>Panel A: OLS Estimates</i>			
N Women	0.17* (0.08)	0.01*** (0.00)	0.12*** (0.04)
Observations	216	216	216
Constituencies	72	72	72
<i>Panel B: Wald Estimates</i>			
N Women	0.39** (0.16)	0.02** (0.01)	0.28** (0.13)
Observations	216	216	216
Constituencies	72	72	72

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data come from the French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses. Panel A displays OLS estimates and Panel B Wald estimates. The dependent variables are the number of women-related amendments initiated (column 1), the share of women-related amendments initiated (column 2) and a dummy equal to 1 if the constituency has initiated at least one women-related amendment (column 3).

# Appendix For Online Publication

## A Institutional Setting

Table A1: Share of Bills Adopted by Origin

Term	Government	Representatives
1973 - 1978	86.47%	13.53%
1978 - 1981	88.41%	11.59%
1981 - 1986	95.22%	4.78%
1986 - 1988	81.03%	18.97%
1988 - 1993	92.26%	7.04%
1993 - 1997	87.5%	12.5%
1997 - 2002	81.25%	18.75%
2002 - 2007	73.1%	26.9%
2007 - 2012	81.2%	18.8%
2012 - 2017	75.5%	24.5%

*Notes:* the data comes from the Lower House during the period 1973-2017. In the 2012-2017 term, 75.5% of the adopted bills originated from the government.

Table A2: Share of Amendments Adopted by Origin

Term	Government	Representatives
2002 - 2007	13.1%	86.9%
2007 - 2012	19.9%	80.1%
2012 - 2017	6.7%	93.3%

*Notes:* the data comes from the Lower House during the period 2002-2017. In the 2012-2017 term, 6.7% of the adopted amendments originated from the government.

## B Data

### B.1 An Example of Amendment

Figure B1 shows how an amendment is displayed on the Lower House website. The page contains several information such as the title of the bill on the top, the identity of the author and co-sponsors in the middle and the content along with the oral presentation motivating the adoption of the amendment at the bottom.

Figure B1: Example of Amendment on the Lower House website

The screenshot shows a page from the French National Assembly website. At the top, it reads 'ART. 18 BIS' on the left and 'N°58' on the right. The main header is 'ASSEMBLÉE NATIONALE' with the date '23 juin 2014' below it. A horizontal line separates this from the content. Below the line, the title of the bill is 'ÉGALITÉ ENTRE LES FEMMES ET LES HOMMES - (N° 2043)'. To the left of this title is a small table with two rows: 'Commission' and 'Gouvernement'. Below the table, the word 'REJETÉ' is displayed. The main heading for the amendment is 'AMENDEMENT N°58'. Below this, it says 'présenté par' followed by the names 'Mme Nachury, Mme Guégot et Mme Zimmermann'. Below the names is a dashed line. The content of the amendment is 'ARTICLE 18 BIS'. Below this, there is a section titled 'EXPOSÉ SOMMAIRE'. The text of the amendment is: 'Après l'alinéa 4, insérer les deux alinéas suivants : < 4° Le deuxième alinéa de l'article L. 5211-10 est complété par une phrase ainsi rédigée : « L'écart entre le nombre des vice-présidents de chaque sexe des établissements publics de coopération intercommunale à fiscalité propre et des métropoles ne peut être supérieur à un. ».' The text of the summary is: 'L'égalité de représentation entre les femmes et les hommes doit être envisagée pour l'intercommunalité également. C'est aussi un amendement de cohérence avec l'obligation de parité des exécutifs départementaux introduite par la loi du 17 mai 2013. Si l'objectif du présent projet de loi est bien de mettre en oeuvre une politique pour l'égalité entre les femmes et les hommes, il est nécessaire de ne pas « rester au milieu du gué » et de prévoir le respect de ce principe dans et par l'État, les collectivités territoriales, ainsi que leurs établissements publics.'

Red arrows point to the following elements:

- Bill's title**: Points to 'ÉGALITÉ ENTRE LES FEMMES ET LES HOMMES - (N° 2043)'
- Author and Co-sponsors**: Points to 'Mme Nachury, Mme Guégot et Mme Zimmermann'
- Content**: Points to 'ARTICLE 18 BIS'
- Presentation**: Points to 'EXPOSÉ SOMMAIRE'

Notes: this figure comes from the Lower House website at <http://www.assemblee-nationale.fr/14/amendements/2043/AN/58.asp>.

This amendment is related to the bill entitled *Equality between Women and Men*. Its content consists in adding the following sentence to the bill: "the gap between the number of vice-presidents of each sex in a Public Institution of Intercommunal Cooperation<sup>25</sup> cannot be higher than one".

The motivation is that: *The equality of representation between women and men should be considered at the intercommunal level. This is also an amendment of coherence with the obligation of parity among departmental executives introduced by the law of 17th may 2013. If the objective of the present bill is really to set a public policy in favor of equality between*

<sup>25</sup>These institutions consist of gathering of small municipalities which coordinate their public policies and set similar level of tax.

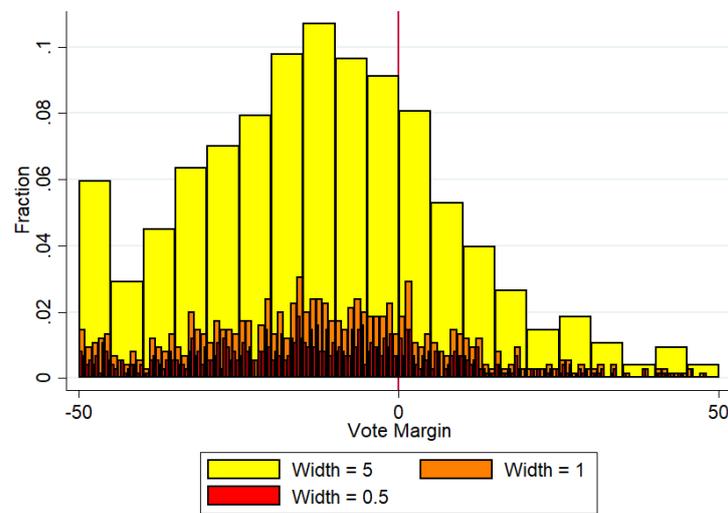
*women and men, it is necessary to finish what was started and to provide the respect of this principle in and by the State, the local authorities as well as the public organisms.*

## C Empirical Strategy

### C.1 Internal Validity Tests for the Regression Discontinuity Design

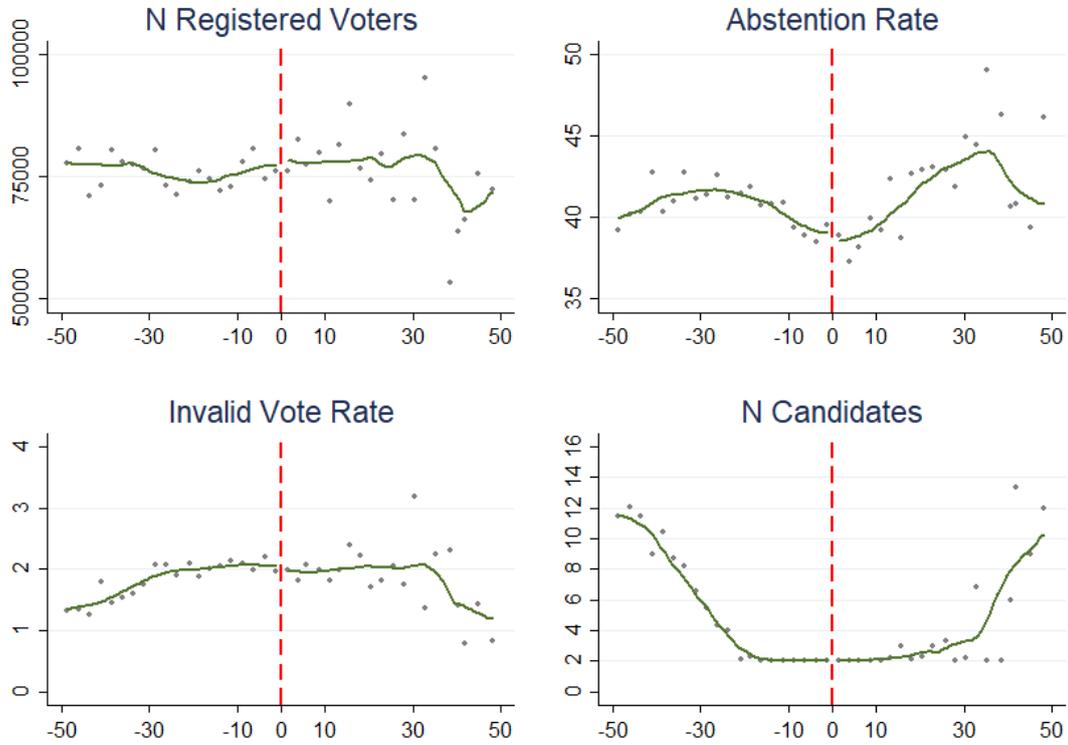
This section provides further internal validity tests for the regression discontinuity design. Figure C1 displays the histogram of the running variable density. Figure C2, C3 and C4 display the graph showing the relationship between potential confounders and the running variable.

Figure C1: Histogram Density



*Notes:* The data comes from the 2002, 2007 and 2012 elections for the Lower House. The sample contains all the legislators endorsed by a political party and is restricted to mixed-gender close races.

Figure C2: Continuity Assumption - Election Characteristics



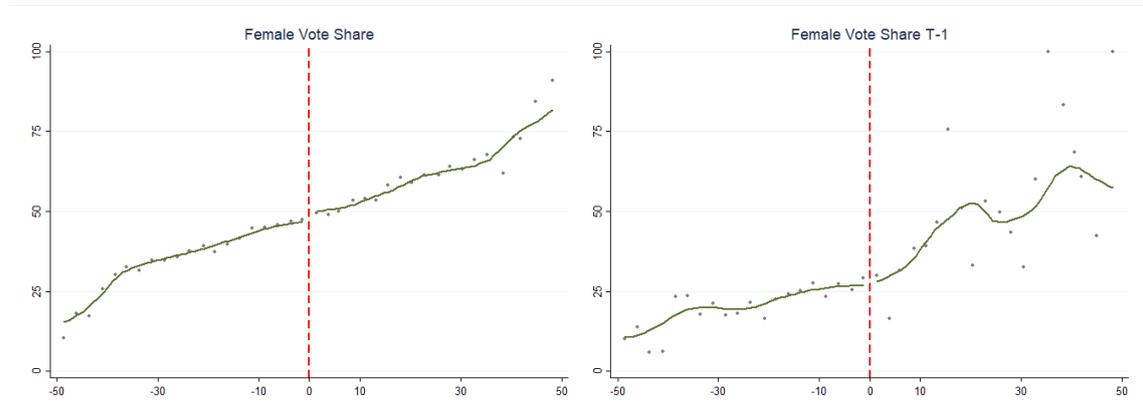
*Notes:* The data comes from the 2002, 2007 and 2012 elections for the Lower House. The sample contains all the legislators endorsed by a political party.

Figure C3: Continuity Assumption - Demographics Characteristics



*Notes:* The data comes from the 2002, 2007 and 2012 elections for the Lower House. The sample contains all the legislators endorsed by a political party.

Figure C4: Continuity Assumption - Preferences for Women



*Notes:* The data comes from the 2002, 2007 and 2012 elections for the Lower House. The sample contains all the legislators endorsed by a political party.

## C.2 Descriptive Statistics

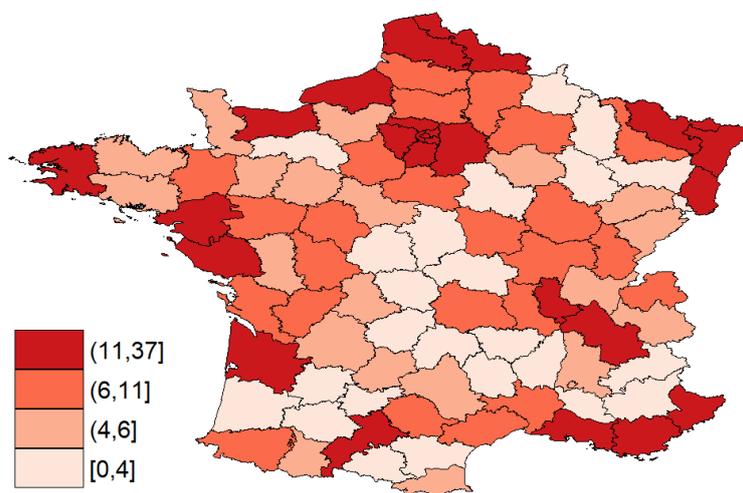
Table C1: Descriptive Statistics on Legislators' Characteristics and their Activity Related to Amendments

	(1)	(2)	(3)	(4)
	Mean	S.D.	Min	Max
Woman (1=Yes)	0.19	0.39	0	1
Age	54.73	8.90	27	81
Left-Wing (1=Yes)	0.44	0.50	0	1
Incumbent (1=Yes)	0.59	0.49	0	1
Victory Margin	16.64	14.79	0	100
N Co-Sponsored Per Year	208.07	294.06	0	2228
N Authored Per Year	25.12	54.00	0	622
Dummy Authored (1=Yes)	0.87	0.34	0	1
N Authored Per Year Women-Related	0.38	1.97	0	49
Share Authored Women-Related	0.02	0.07	0	1
Dummy Authored Women-Related (1=Yes)	0.26	0.44	0	1
Observations	1557			

*Notes:* the data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. *Women - Related* indicates that the amendment is identified as related to women's issues with a dictionary-based method. *Dummy Authored Women-Related* is a variable that is equal to 1 if the legislator has authored at least one amendment related to women's issues.

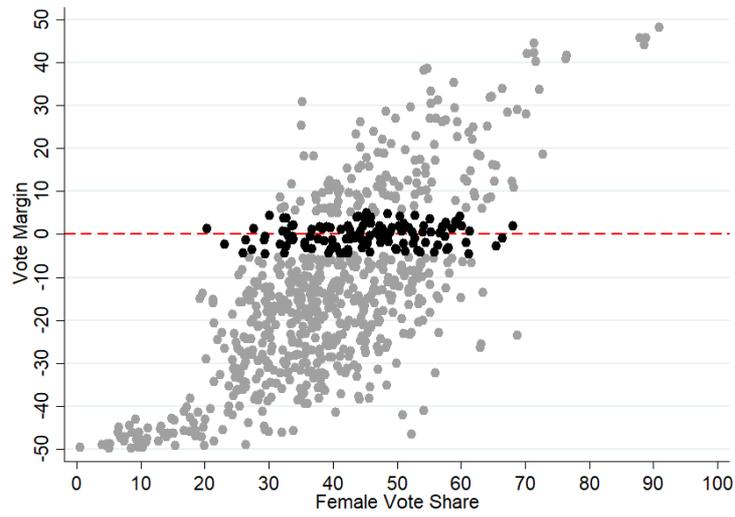
Figure C5 depicts the distribution of the observations on the French territory. Importantly, we see that they are scattered throughout the territory with a larger concentration in the north and east of France.

Figure C5: Where Are the Close-Races?



*Notes:* the data comes from the 2002, 2007 and 2012 Lower House elections. Each class represents a quantile of the distribution of observations.

Figure C6: Preferences for Women in Close Race Elections



*Notes:* the data comes from the 2002, 2007 and 2012 Lower House elections. The graph represents the total vote share of women on the x-axis and vote margin (forcing variable) on the y-axis. The black dots are located in a 5 points interval around the elimination threshold.

Table C2: Comparison between the samples of mixed gender races and single gender races

	(1) Single-Gender	(2) Mixed-Gender	(3) Difference (1) - (2)
N Registered Voters	75536.470	76080.607	-544.137 (782.886)
Abstention Rate	39.794	40.536	-0.742* (0.404)
Invalid Vote Rate	2.645	1.885	0.760*** (0.066)
Total Population	111483.881	113010.836	-1526.955 (1232.104)
Population Male	54056.679	54730.280	-673.601 (602.027)
Population Female	57427.270	58280.568	-853.299 (633.959)
Share Women Population	0.515	0.516	-0.000 (0.000)
Share Working Women	0.615	0.638	-0.022*** (0.004)
Share Working Age Population	0.642	0.645	-0.003* (0.002)
Unemployment Rate	0.099	0.092	0.007*** (0.002)
Female Vote Share	21.027	39.320	-18.293*** (1.007)
Left Wing Constituency	0.430	0.373	0.057** (0.025)
Observations	755	802	1557

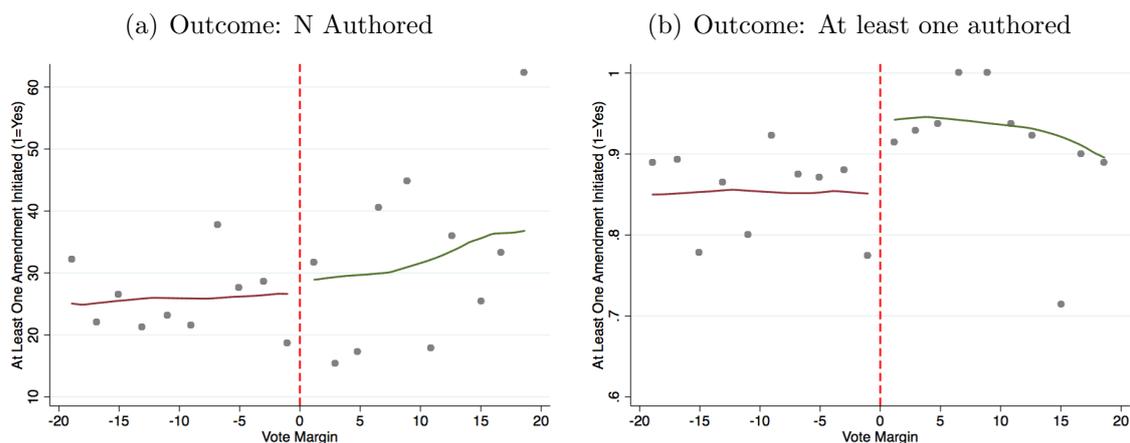
*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Each line corresponds to one variable. Column 1 displays the mean for the sample of single gender races, column 2 the mean for the sample of mixed-gender races and column 3 the difference between column 1 and 2.

## D Additional Results

### D.1 Overall Activities

Figure D1 displays the relationship between the vote margin and two indicators of parliamentary activities (number of amendments authored for graph a and the probability to author at least one amendment for graph b). Looking at graph a, we observe that female and male legislators initiate as many amendments. In graph b, we observe a small discontinuity where female legislators seem to be slightly more likely to initiate at least one amendment. Nevertheless, a closer look at the graph reveals that this discontinuity is driven by the first dot on the left-side of the cutoff. Removing this set of observations, it is difficult to conclude on the existence of a discontinuity. This suggests that there are very limited gender differences in overall parliamentary activities.

Figure D1: Gender Differences in Overall Parliamentary Activities



*Notes:* the data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The outcomes are the number of amendments authored (graph a) and a dummy equal to one if the legislator has authored at least one amendment (graph b). The x-axis represents the vote margin between the first woman and the first man in a mixed-gender election. On the right side of the vertical dashed line, a woman is elected whereas on the left it is a man. The solid lines correspond to a lowess fit of the bin-averages. There are 10 bins on each side of the cutoff.

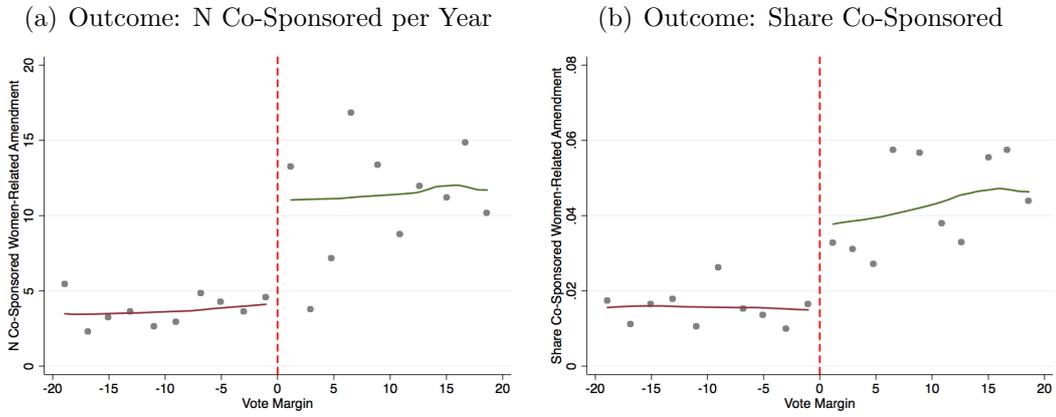
### D.2 Co-Sponsorship Activities

In addition to authoring, legislators can contribute to an amendment by co-sponsoring it. Arguably co-sponsoring amendments requires less effort than authoring but it adds political weight to the amendment and increases its chances to pass. In the French Parlia-

ment, there is no limit on the number of co-sponsors an amendment can have. I build two outcomes related to co-sponsorship. The first is the total number of co-sponsorship a legislator makes to women-related amendments. Since some parliamentarians may co-sponsor a large number of amendments on every topic, total numbers may not be informative of a specific interest for women's issues. Therefore, the second outcome is the number of co-sponsors for women-related amendments divided by the total number of co-sponsored amendments. This second outcome informs us on the relative interest a legislator attributes to the topic.

Figure D2 displays the main discontinuity graphs. We observe a sizeable jump in the number (graph a) and the share of co-sponsored women-related amendments (graph b). Table D1 confirms the visual impression. Panel A and Panel B respectively display results using the number and the share of co-sponsored women-related amendments as outcomes. In Panel A, we see that female legislators tend to co-sponsor 5 additional women-related amendments per year. Using the share of amendments as outcome, in Panel B, we see that the larger number of co-sponsored amendments translates into a jump in the share of about 1 to 2 percentage points. Scaling these effects to the average outcome of male legislators, we see that women co-sponsor about 140% (Column 3 Panel A) to 250% (column 5 panel A) additional women-related amendments which translates in an increase of about 100% of the share (from 185% in column 1 to 87% in column 5 of Panel B).

Figure D2: RDD Graph Co-Sponsorship



*Notes:* the data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The outcomes are respectively the number (a) and the share (b) of women-related amendments co-sponsored by the legislator. The x-axis represents the vote margin between the first woman and the first man in a mixed-gender election. On the right side of the vertical dashed line, a woman is elected whereas on the left it is a man. The solid lines correspond to a lowest fit of the bin-averages. There are 10 bins on each side of the cutoff.

Table D1: Co-Sponsorship of Women-Related Amendments - Lower House

Specification	(1) Pooled OLS	(2) Fixed Ef- fects	(3)  Polynomial	(4) <i>Regression Discontinuity</i> LLR IK	(5)  LLR CCT
<i>Panel A: N Co-Sponsored</i>					
Woman (1=Yes)	5.26*** (0.77)	6.75*** (1.07)	7.19*** (1.42)	5.49*** (1.78)	5.64** (2.35)
Control Mean	3.37	3.23	3.23	3.89	3.89
Scaled Effect	156.0	208.7	222.7	141.2	145.1
Bandwidth Restriction			None	27.3	12.5
Observations	1557	1557	802	561	307
Constituencies	592	592	473	374	229
<i>Panel B: Share Co-Sponsored</i>					
Woman (1=Yes)	0.03*** (0.01)	0.02** (0.01)	0.02*** (0.01)	0.02** (0.01)	0.01 (0.01)
Control Mean	0.02	0.02	0.02	0.02	0.02
Scaled Effect	177.9	106.2	100.7	97.3	81.3
Bandwidth Restriction			None	14.1	12.2
Observations	1557	1557	802	342	295
Constituencies	592	592	473	250	222

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 2 also include constituency fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4 and 5 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

### D.3 Heterogeneity Depending on the Outcome of the Amendment

This section investigates the heterogeneity of the main result depending on the outcome of the amendment. Table D2 displays the results. In Panel A, the dependent variable is defined only on the sample of rejected amendments whereas, in Panel B, it is defined only

on the sample of accepted amendments. We see that in both cases, female legislators are significantly more likely to initiate women-related amendments. The scaled-effects are larger for the sample of accepted amendments.

Table D2: Authorship of Women-Related Amendments Depending on the Outcome - Lower House

<i>Dep. Var.: At Least one Amendment Initiated (1=Yes)</i>						
Specification	(1) Pooled OLS	(2) Fixed Ef- fects	(3) Polynomial	(4) LLR IK	(5) LLR CCT	(6) LLR CCT/2
			<i>Regression Discontinuity</i>			
<i>Panel A: Rejected Amendments</i>						
Woman (1=Yes)	0.17*** (0.03)	0.19*** (0.05)	0.20*** (0.06)	0.18** (0.08)	0.21** (0.09)	0.25** (0.12)
Control Mean	0.19	0.19	0.17	0.21	0.20	0.19
Scaled Effect	90.9	101.4	116.5	87.7	108.7	128.7
Bandwidth Restriction			None	21.5	15.8	7.9
Observations	1557	1557	802	484	382	197
Constituencies	592	592	473	329	271	167
<i>Panel B: Accepted Amendments</i>						
Woman (1=Yes)	0.10*** (0.03)	0.09** (0.04)	0.11** (0.05)	0.11** (0.06)	0.15** (0.07)	0.27*** (0.10)
Control Mean	0.07	0.07	0.06	0.06	0.04	0.04
Scaled Effect	146.4	136.7	181.4	191.3	372.2	636.8
Bandwidth Restriction			None	15.3	10.1	5.1
Observations	1557	1557	802	729	249	130
Constituencies	592	592	473	439	197	116

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Panel A is restricted to rejected amendments. Panel B is restricted to accepted amendments. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4 and 5 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

#### D.4 Heterogeneity Depending on Legislators' Characteristics

This section investigates the heterogeneity of the main result depending on the legislators' characteristics. Three characteristics are considered: the political inclination (left or right-wing), the incumbency status and the age at the beginning of the term. The results are displayed in Tables [D3](#), [D4](#) and [D5](#) for the pooled ols and the fixed-effects specifications.

We observe little heterogeneity depending on these characteristics. Female legislators, whether they are left or right-wing, incumbent or inexperienced or young, are significantly more likely to initiate women-related amendments than their male counterparts. It seems that the gender gap is larger among right-wing legislators than among the leftist ones. This is because the leftist male legislators contribute significantly more to this topic than their male counterparts from the right-wing. Regarding the role of incumbency, the gender gap seems higher among incumbents than among inexperienced legislators.

Table D3: Authorship of Women-related Amendments - Heterogeneity Depending On Political Inclination

Specification	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Fixed- Effects	(5) Fixed- Effects	(6) Fixed- Effects
Woman (1=Yes)	0.24*** (0.05)	0.10** (0.04)	0.25*** (0.05)	0.19* (0.11)	0.19** (0.09)	0.24*** (0.09)
Left-Wing (1=Yes)			0.05* (0.03)			0.04 (0.05)
Woman*Left-Wing			-0.15** (0.07)			-0.10 (0.10)
Sample Restriction	Right- Wing	Left- Wing	All	Right- Wing	Left- Wing	All
Control Mean	0.18	0.27		0.18	0.27	
Scaled Effect	134.3	38.4		102.9	68.9	
Observations	876	681	1557	876	681	1557
Constituencies	409	350	592	409	350	592

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls include the age at the beginning of the term, the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in columns 4, 5 and 6 also include constituency fixed-effects. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

Table D4: Authorship of Women-related Amendments - Heterogeneity Depending On Incumbency Status

Specification	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Fixed- Effects	(5) Fixed- Effects	(6) Fixed- Effects
Woman (1=Yes)	0.12*** (0.04)	0.21*** (0.05)	0.12*** (0.04)	0.17*** (0.07)	0.47*** (0.12)	0.14** (0.05)
Incumbent (1=Yes)			-0.01 (0.03)			-0.01 (0.03)
Woman*Incumbent			0.10 (0.06)			0.14** (0.07)
Sample Restriction	New	Incumbent	All	New	Incumbent	All
Control Mean	0.24	0.20		0.24	0.20	
Scaled Effect	51.2	103.7		72.4	230.5	
Observations	646	911	1557	646	911	1557
Constituencies	443	513	592	443	513	592

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls include the age at the beginning of the term, the political inclination (left or right-wing), the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in columns 4, 5 and 6 also include constituency fixed-effects. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

Table D5: Authorship of Women-related Amendments - Heterogeneity Depending On Age

Specification	(1) Pooled OLS	(2) Pooled OLS	(3) Pooled OLS	(4) Fixed- Effects	(5) Fixed- Effects	(6) Fixed- Effects
Woman (1=Yes)	0.16*** (0.04)	0.16*** (0.05)	0.16*** (0.04)	0.14* (0.08)	0.19 (0.12)	0.17*** (0.06)
AgeAboveMedian (54)			-0.07*** (0.02)			-0.06* (0.03)
Woman*AgeAbMedian			0.00 (0.06)			0.05 (0.08)
Age Above Median	No	Yes	All	No	All	All
Control Mean	0.24	0.19		0.24	0.19	
Scaled Effect	66.3	82.8		60.5	100.4	
Observations	861	696	1557	861	696	1557
Constituencies	489	417	592	489	417	592

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls include the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in columns 4, 5 and 6 also include constituency fixed-effects. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

## E Robustness

### E.1 Alternative Dictionary of Women's Issues

To identify amendments on women's issues, the main dictionary contained words whose stemmed version was "wom", "sex" and "gender". This constituted the "exhaustive" definition of women's issues as it contained different words referring to women. Yet, in French language, it is much more common to refer to women's issues by using words starting with "wom" such as woman.<sup>26</sup> In the sample, "wom" occurs 5,554 times while "sex" and "gender" respectively occur 815 and 560 times.

I thus build a restrictive definition of women's issues by restricting the dictionary to only one word: "wom". This alternative procedure selects 3,291 amendments. Using this measure, I replicate the main results on authorship and co-sponsorship. Table E1 displays the results. They are essentially similar to the ones obtained with the exhaustive definition. We see that female legislators are about twice as likely to initiate at least one amendment on the topic.

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<sup>26</sup>For instance the minister responsible for women's issues is officially in charge of *Equality between women and men*. Similarly the public organism working on these issues is the *High Council for Equality between women and men*

Table E1: Authorship of Women-Related Amendments - Restrictive Definition

<i>Dep. Var.: At Least one Amendment Authored (1=Yes)</i>						
Specification	(1)	(2)	(3)	(4)	(5)	(6)
	Pooled OLS	Fixed Effects		<i>Regression Discontinuity</i>		
			Poly	LLR IK	LLR CCT	LLR CCT/2
Woman (1=Yes)	0.15*** (0.03)	0.15*** (0.05)	0.21*** (0.06)	0.20*** (0.08)	0.24** (0.10)	0.31** (0.12)
Control Mean	0.19	0.19	0.18	0.20	0.19	0.17
Scaled Effect	81.1	81.9	118.8	97.8	127.6	180.9
Bandwidth Restriction			10.6	13.7	13.7	6.9
Observations	1557	1557	802	480	337	179
Constituencies	592	592	473	326	247	154

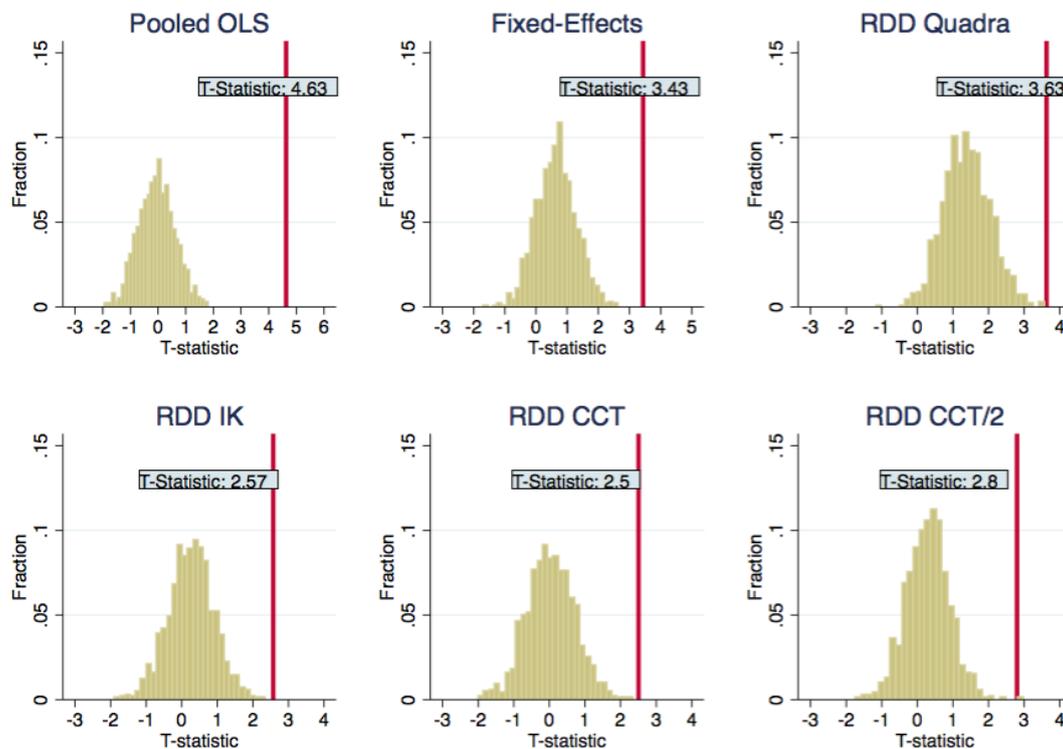
*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. The dependent variable is a dummy that equals 1 if the legislator authored at least one amendment. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 2 also include constituency fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4, 5 and 6 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

## E.2 Placebo - Random Samples

This section designs a placebo test assessing the uniqueness of the results obtained with the sample of women-related amendments. This test attempts to determine the probability to obtain similar findings with random sample of amendments. Specifically, I drew 1,000 samples of 3,905 amendments. I then built a dummy equal to one if a woman initiated one of these amendments. Using this outcome, I used the usual five specifications (pooled ols with and without constituency fixed-effects and three regression discontinuity specifications) and plotted the obtained T-statistics. The results are displayed in Figure E1 for the authorship outcome. In a nutshell, out of the 1,000 random samples of amendments, none delivers consistent findings across the five specifications as the ones observed with the sample of

women-related amendments.

Figure E1: Placebo Test - Random Sample of Amendments Authorship Outcome



*Notes:* The data comes from the French Lower House over the period 2002-2017. The histograms represent the T-statistic associated to the coefficient *Woman* in the five different specifications used in the paper (pooled ols without constituency fixed-effects, with constituency fixed-effects, mixed-gender close races using a quadratic specification, the IK and the CCT bandwidth). The outcome is a dummy equals to 1 if the legislator has initiated at least one amendment related to the random sample of amendment drawn. There are 1000 samples constituted of 3,905 randomly drawn amendments. The T-statistic box included in each graph displays the t-stat obtained with the sample of amendments classified as women-related..

### E.3 Outcome Previous Election

Restricting the sample to narrow mixed-gender close races should provide exogenous variations in the sex of the legislator. Therefore, we should not observe similar results when using lagged outcomes, otherwise this would mean that the activity of legislators persists. Table E2 displays the results using as outcome variable a dummy equals to one if the previous legislator initiated at least one women-related amendment. Reassuringly, coefficients are not significant anymore and largely shrink in magnitude. This suggests

that persistence in the outcome cannot explain the results.

Table E2: Placebo Authorship of Women-Related Amendments

<i>Dep. Var.: At Least one Amendment Initiated in T-1 (1=Yes)</i>			
	(1)	(2)	(3)
	Polynomial	LLR IK	LLR CCT
Woman in T (1=Yes)	0.06 (0.06)	0.07 (0.08)	0.01 (0.09)
Bandwidth Restriction	None	21.8	13.5
Observations	528	318	222
Constituencies	401	266	195

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. The outcome is a dummy that equals 1 if the legislator in T-1 from the same constituency authored at least one women-related amendment. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

#### E.4 Alternative Samples

While legislators are elected for 5 years, about 11% serve less than the entire term. They can be nominated at the government for a short period of time but also resign or run for another position (in the upper house for instance) before the end of their term. In such cases, their actual term is shorter than 5 years. Table E3 shows that the results hold within the sample of legislators who serve during the entire term, i.e. 5 consecutive years.

Table E3: Authorship of Women-Related Amendments - Sample of Legislators who served during the entire Term

<i>Dep. Var.: At Least one Amendment Initiated (1=Yes)</i>						
Specification	(1)	(2)	(3)	(4)	(5)	(6)
	Pooled OLS	Fixed Effects		<i>Regression Discontinuity</i>		
			Poly	LLR IK	LLR CCT	LLR CCT/2
Woman (1=Yes)	0.17*** (0.04)	0.18*** (0.06)	0.25*** (0.06)	0.25*** (0.09)	0.24** (0.10)	0.35*** (0.13)
Control Mean	0.22	0.22	0.20	0.21	0.20	0.19
Scaled Effect	73.5	80.5	128.3	118.1	118.7	183.6
Bandwidth Restriction			None	20.1	13.9	6.9
Observations	1484	1484	713	414	315	168
Constituencies	589	589	435	283	232	143

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Standard errors clustered at the constituency level are given in parentheses. Controls in specifications of column 1 and 2 include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects. Controls in column 2 also include constituency fixed-effects. Controls in column 3 include a second order polynomial in the running variable. Specifications of columns 4, 5 and 6 fit a local linear regression around the cutoff that allows for a break in the slope at the cutoff using respectively the IK, the CCT and half the CCT bandwidth. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean).

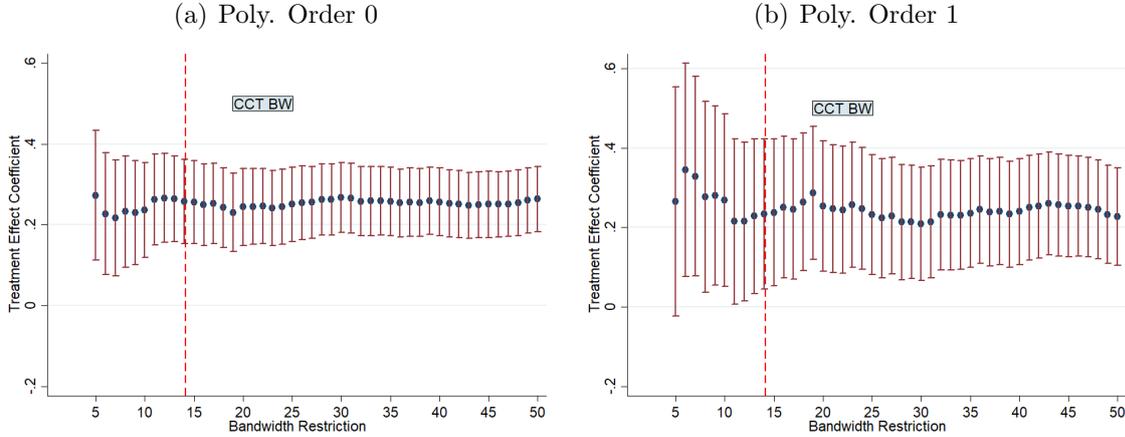
## E.5 Alternative Bandwidths

The choice of the bandwidth is crucial and while two methods are used (CCT and IK), one could wonder how sensitive the results are to the size of the bandwidth, especially to smaller ones. Figure E2 provides an answer to this question for the main outcome, i.e. a dummy equals to 1 if the legislator has initiated at least one women-related amendment. I replicate the estimation for all the possible windows bounded by two integers including at least 50 observations (the smallest window is [-5;5]).

The coefficient is always positive and quite stable across the different bandwidths. Only the precision seems to diminish as the bandwidth is narrowed, which is expected since the number of observations also goes down. This is especially true when using the share of

co-sponsored amendments as outcome along with a polynomial of degree 1.

Figure E2: RDD Alternative Bandwidth Outcome: At Least One Amendment Initiated



*Notes:* The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The vertical axis represents the probability that a woman initiates at least one amendment related to women’s issues relatively to a male legislator. Confidence intervals are represented at the 95% level. The vertical red dashed line represents the CCT bandwidth.

## E.6 Local Randomization Strategy

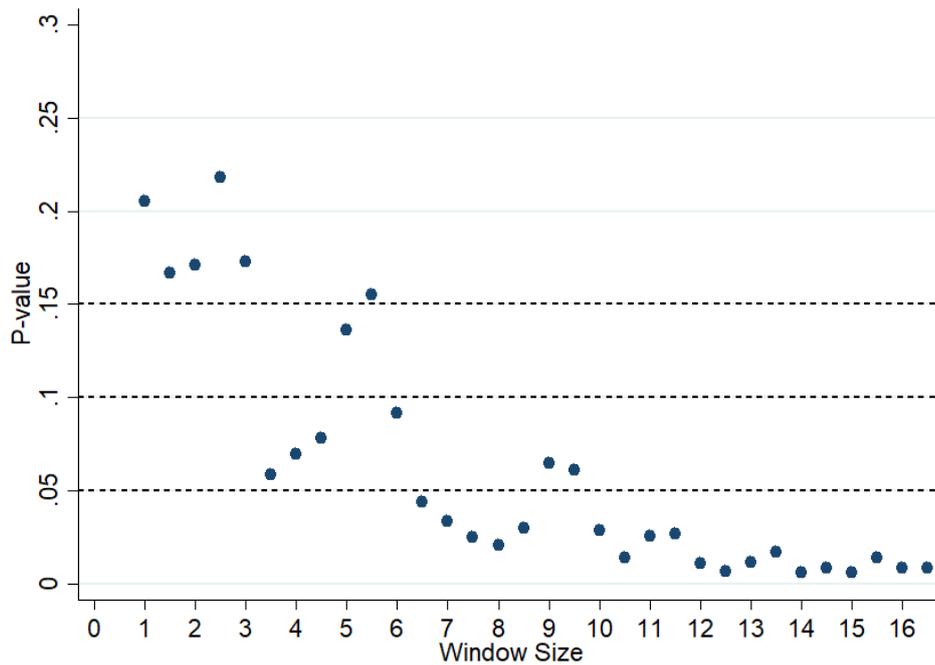
This section implements the so-called local randomization strategy. While the usual regression discontinuity design relies on the continuity of potential confounders around the threshold, this strategy is more stringent. It selects the largest window for which all the covariates are balanced on both sides of the threshold. Using this window, it tests for the difference in the outcome between the two sides of the threshold.

Figure E3 displays the smallest p-value for all the covariates on a wide range of windows. The covariates are the number of candidates, the number of registered voters, the abstention rate, the invalid vote rate, the total population in the constituency, the total male population, the total female population, the share of women, the share of working women, the share of working age individuals, the unemployment rate, the female vote share during the last election, a dummy indicating that the constituency was won by the left-wing during the last election, the share of female and left-wing candidates. We see that the smallest p-value is below 0.15 (and 0.1) for nearly all the windows larger than  $[-3;3]$ . Using a threshold of 0.05, the selected window is  $[-6;6]$ .

Table E4 displays the results for the difference in means of the outcome between the

two sides of the cutoff. We see that when the p-value threshold for the balance test is 0.15 or 0.1, the selected window is  $[-3;3]$ . Using this window, the difference in means is 0.256, which is significant at the 5% level (the related p-value is 0.008 as shown in column 4). The 95% level confidence interval is  $[0.093;0.465]$ . The inference is done on a sample including 43 legislators on each side of the cutoff.

Figure E3: P-values from Balance Tests over a Set of Windows



*Notes:* The data comes from the French Lower House over the 2002-2017 period. The sample contains all the legislators endorsed by a political party. Each dot corresponds to the smallest p-value of all the covariates included in a balance test over a given window. The y-axis represents the value of the p-values. The x-axis represents the window sizes. The covariates are the number of candidates, the number of registered voters, the abstention rate, the invalid vote rate, the total population in the constituency, the total male population, the total female population, the share of women, the share of working women, the share of working age individuals, the unemployment rate, the female vote share during the last election, a dummy indicating that the constituency was won by the left-wing during the last election, the share of female and left-wing candidates. The horizontal dashed-lines represent the 0.15, 0.1 and 0.05 significance levels.

Table E4: Randomization Inference: Difference in Means Test

Balance Test P-value Threshold	Window	Diff. in Means Stat	P-value	95% Confidence Interval	N Left Cutoff	N Right Cutoff
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.15	[-3;3]	0.256	0.008	[0.093;0.465]	43	43
0.1	[-3;3]	0.256	0.008	[0.093;0.465]	43	43
0.05	[-6;6]	0.231	0.000	[0.08;0.373]	89	65

*Notes:* the data comes from the Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The dependent variable is a dummy that equals 1 if the parliamentarian initiated at least one women-related amendment. Column 1 displays the p-value threshold regarding the balance test for all the covariates to determine the window. Column 2 displays the selected window. Column 3 displays the value of the Difference in Means statistics between the two sides of the cutoff. Column 5 displays the p-value related to the diff. in means statistics. Column 6 displays the confidence interval at the 95% level. Column 7 and 8 respectively show the number of observations used on the left and the right side of the cutoff.

## F Details on Topic Classification

### F.1 Procedure

This section brings further details on the topic classification. The procedure used is the following:

1. Create a list of topics of interest. This was done by using the permanent government ministries that existed during the 2002-2017 period. This leads to 27 non-mutually exclusive topics.
2. Remove stop words and stem all the words in the amendments and the bills' title. Then, return the 10,000 most recurring words in the amendments. Practically, I selected the closest threshold to the 10,000th word which is 49 and above which are 9,967 words. I thus obtain a sample of 9,967 words which occur at least 49 times in the amendments. The bills' title contain 1712 words. I pooled the two samples of words and obtained a final sample of 10,030 unique words.
3. Manually classify the words in the 27 categories.
4. Classify the amendments into each of the 27 non-mutually exclusive categories. The rule is that if an amendment contains one of the keywords included in a category, it is classified as belonging to the category.
5. Using the sample of amendments, return the 10,000 most recurring bigrams for each category and select only those that contain one of the classified keywords. Using this narrower sample of bigrams, I tagged obvious false matches. I then cleaned the classification of amendments by excluding these false matches from the classification.

Table F1: Details on Topic Classification - Part 1

Topic	Top 10 Keywords	5 Most Frequent Bigrams	5 Most Frequent Trigrams	Excluded Matches	False	Notes
Agriculture	agricul, agricultur, alimentar, farmer, fishing, hunt, breeding, food, fruit, methanised (58)	agricul exploit, local authorit, sea fish, plant protection, alimentary product	rural sea fish, greenhouse gas, natural agricul forest, space natural agricul, emiss greenhouse gas	duplicate hunt, will be aliment, aliment font, aliment height		aliment is used as a verb in other meanings.
Business	business, sme, capit, bank, banking, shareholder, employer, entrepreneur, dividend, multinational (4)	works council, million euro, turnover, entrepreneur, social security	organis professional employer, level nation interprofessional, solidarity social economy, employer social contribution, professional employer applic	work undertaken		the french word for business is "entreprise" which may also mean undertaken
Child	child, kindergarten, infant, baby, child pornography, child psychiatrist, pedophilia	family allowanc, parental autorit, child right, franc televis, child protection	best interest child, television channel advertis, suppress advertis televis, social action family, international child right	None		
Civil	civil servant	right oblig civil servant, territorial public service, deontology right oblig, cumulative employment retirement, magistrate judiciary order	public service, delegation management, compulsory scheme, employee private, court audit	None		in french, civil servant is a one-word expression. There is always a ministry for this topic.
Culture	cultur, cultural, audiovisual, televis, art, radio, spectacl, artistic, artist, cinema (26)	franc televis, public audiovisual, local authorit, public servic, million euro	high council audiovisual, television channel advertis, suspend acc internet, public service audiovisual, commiss protect right	scientific cultur, cultur mathematics, farmer culture, gmo cultur, cultur diversit (17)		cultur is a word used in other contexts, especially agriculture.
Economics	economic, economy, growth, gdp, inflat, conjunctur, cyclical, dollar, inflationnist, economist (3)	million euro, public servic, economic develop, local authorit, economic social	solidarity social economy, greenhouse gas, emiss greenhouse gas, environment social economic, court auctionneer	growth aliment, demographic growth, justic economi, energy saving, substantial saving, budgetary saving		The French verb "economiser" means saving.
Education	teach, academic, educ, study, middle school, school, degree, universit, educativ, university (25)	public servic, educ national, health instit, higher educ, million euro	private health instit, higher educ instit, higher educ research, mission public servic, hospital public servic	study possibilit, study article, free license, equal license, open license (19)		the french word for bachelor also means license.
Elections	elected, elect, ballot, constituenc, elector, voter, eligibility, senate elections, ineligible, mandatur (10)	local authorit, local elected, council communautar, new municipalit, municipal council	tax overtime, EPCI own tax, direct universal suffrag, local authorit gener, intermunicipal public cooper	None		EPCI is a conglomerate of municipalities.
Environment	energy, environment, energetic, water, electricity, biodiversit, gas, mountain, environmental, ecologic (138)	local authorit, renewable energy, transit energetic, sustainabl develop, public servic	greenhouse gas, emiss greenhouse gas, biodiversit french agenc, rural sea fish, economic social environment	work environment, institutional landscap, economic landscap, concurrential environment, administrativ environment (2)		
Europe	european, europ, ESF	european union, state member, direct european, commiss european, european parliament	council european parliament, member european union, state member union, european human right, other state member	None		ESF is the European Social Fund.

*Notes:* the data comes from all the amendments produced produced in the Lower House over the period 2002-2017.

Table F2: Details on Topic Classification - Part 2

Topic	Top 10 Keywords	5 Most Frequent Bigrams	5 Most Frequent Trigrams	Excluded Matches	False	Notes
Family	family, parent, familial, spouse, couple, mother, parenthood, mariage, famili, divorc (11)	famil allowanc, social securit, handicap person, million euro, parent authorit	social action famil, best interest child, person situat handicap, solidarit civil pact, reduced rate vat	famil neonicotinoid, herbicid famil, parent company, parent rock, joint exclus (10)		the french word for spouse can also mean joint
Finance	financ, financial, financi, budget, budgetar, deficit, PLF, PLFSS, LFSS, refinanc	million euro, social security, health institut, local authorit, public servic	financ social securit, intermunicipalit public cooper, mission public servic, private health instit, public health cooper	deficit care, deficit competitiv, deficit attract, deficit housing		plf, plfss, lfss are acronym for finance bills.
Health	health, care, doctor, diseas, patient, sanitar, medical, medica, handicap, medico (130)	health instit, public health, social securit, professional health, insuranc diseas	financ social securit, health private instit, person situat handicap, public servic hospital, care follow readapt	care examin, care delimit, care rule, leav care, animal health (20)		as in english care may also be used as take care of.
Housing	housing, hous, rent, building, tenant, lessor, habitat, locativ, HLM, ALUR (13)	social housing, social housing (singular), public instit, local authorit, build hous	rent social housing, intermunicipalit public cooper, institut public cooper, EPCI own fiscalit, build social housing	wild habitat, habitat species, natural habitat, rent movie, rent car (18)		HLM are social housing and ALUR is a bill on housing.
International	international, international (singular), AFD, internationaliz, humanitar, unesco, diplomatic, diplomat, genocid	million euro, child right, illegal trade, economic develop, international convent	schem region develop, international right convent, region develop economic, economic develop innov, economic innov internationaliz	None		AFD is the French Development Agency.
Justice	justic, judiciar, lawyer, notary, juridict, inmat, tribunal, magistrat, jail, court (34)	penal procedur, constitutional council, state council, court appeal, european union	court auctioneer, account personal prevent, personal prevent penibilit, jail euro fine, court justic union	social justic, fiscal justic, economic justic, share held, fish held		the french word for inmate also means held
Labor	work, salaried, job, employer, syndicate, worker, dismiss, labor, wage, unemploy (14)	social securit, million euro, employment contract, overtime work, professional format	organis professional employer, solidarity social economy, financ social securit, account personal format, level national interprofessional	syndicate energy, mixt syndicate, transport syndicate, parliamentary work, governmental work (9)		
Local	authorit, region, metropolit, regional, EPCI, regional (singular), intermunicipalit, department, department (singular), metropolitan (77)	local authorit, public instit, intermunicipalit cooper, own tax, public servic	intermunicipalit public cooper, public institut cooper, gener local authorit, EPCI own tax, cooper intermunicipalit tax	float authorit, ultramarine authorit		Authorit is translated by "collectivités" in French which is specific to this theme and narrows the number of false matches.
Migration	asylum, immigr, border, OFPRA, refugee, stateless, migrant, naturalize, migr, migrator	asylum seeker, right asylum, ask asylum, waiting area, residence permit	stay foreign right, stay residence foreign, foreign right asylum, temporary residence permit, country origin safe	fish migrator, bird migrator, river migrator, migr fish, migr wildlife (5)		OFPRA is a public organism protecting refugees.

Notes: the data comes from all the amendments produced produced in the Lower House over the period 2002-2017.

Table F3: Details on Topic Classification - Part 3

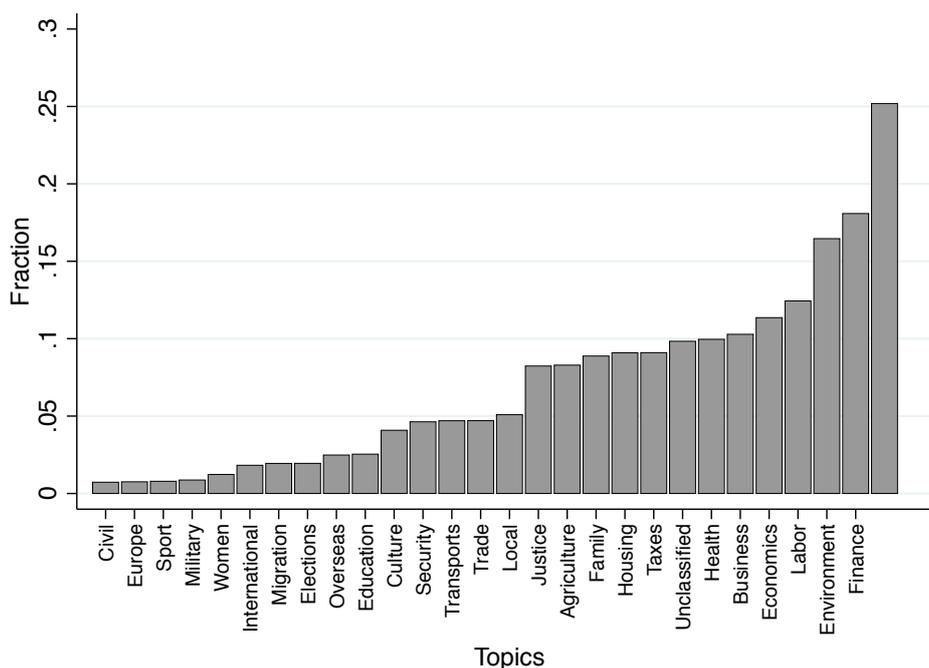
Topic	Top 10 Keywords	5 Most Frequent Bigrams	5 Most Frequent Trigrams	Excluded Matches	False	Notes
Military	militar, war, army, combat, weapon, soldier, armament, ONAC	veteran, armed force, penal constraint, civil right, civil statute	civil right statute, local civil right, day defense citizenship, armed force, action day defense	declaration war family, obstacle course, price war, collector weapon, truth armed (1)		In french obstacle course is translated as combat race. Onac is an organism helping veterans.
Overseas	corsica, guian, caledoni, polynesi, mayott, martiniqu, guadeloup, miquelon, futuna, antil, oversea (14)	local authorit, oversea, saint pierr, pierr miquelon, genetic resourc	saint pierr miquelon, local authorit corsica, department oversea, rural agricul develop, convent pass state	None		Keywords include names of oversea territories
Security	securit, polic, securis, violenc, delinqu, terrorism, crim, insecurit, terrorist, forgery (24)	penal procedur, judiciar polic, state member, constitutionnal council, million euro	suspend internet acc, violenc done wom, commiss protect right, statu civil right, jail euro fine	social securit, financ securit, alimentar securit, medical securit, fiscal insecurit		
Sport	sport, athletic, footbal, horse riding, doping, olympic, cyclist, hippodrom, hooliganism, uefa	million euro, bet onlin, gam onlin, local authorit, sport event	solidarity social economy, competit sport event, game bet online, gambling chance, nation develop sport	None		
Taxes	fiscal, tax, levy, tax system, VAT, fiscal (singular), taxat, CICE, ISF, tax exemption (20)	million euro, own tax, tax credit, gener tax, turnover	EPCI own tax, intermunicipalit public cooper, public instit cooper, tax intermunicipalit cooper, reduced rate vat			VAT, CICE, ISF are acronyms which stands for specific taxes.
Trade	trade, commerce, commercial, commerci, commercial (singular), export, customs, customs officer, import, exporter	million euro, trade industry, chamber commerc, public service, illegal trade	chamber commerc industr, clerk tribunal commerc, mission public service, decree state council, greenhouse gas	None		
Transports	transport, vehicle, train, airport, SNCF, automobil, auto, train station, car, carrier (35)	million euro, local authorit, public servic, organisat authorit, greenhouse	greenhouse gas, emiss greenhouse gas, regulat train activit, authorit organisat transport, EPCI own tax	legislative vehicle, pesticid vehicle, air pesticid, conductive thread, political driver (16)		
Women	wom, sex, gender	wom men, men wom, part time, equalit wom, professional equalit	equalit wom men, violenc done wom, work part time, high council equalit, equalit men wom	same sex, kind offens, uniqu kind, all kind, kind behavior (4)		the french word for gender also means genre or kind of.
Unclassified		editorial amend, precis amend, coordin amend, justify text	justify text same, coordin amend with, precis amend editorial, title categori transfer, coordin with amend			

*Notes:* the data comes from all the amendments produced produced in the Lower House over the period 2002-2017.

## F.2 Descriptive Statistics

Figure F1 displays descriptive statistics on the prevalence of each topic. We see that the most prevalent topic is finance. About 28% of the amendments are classified as finance-related. At the other end of the spectrum, the least prevalent topic is related to civil-servant which include about 1% of all the amendments.

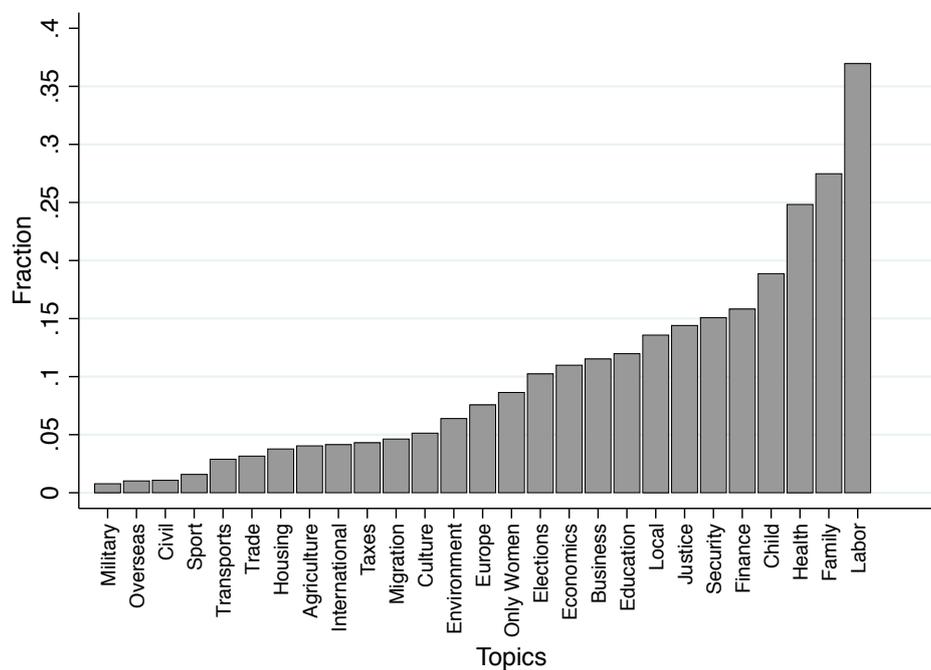
Figure F1: Descriptive Statistics on Topics Prevalence



*Notes:* The data comes from the French Lower House over the 2002-2017 period. Each bar corresponds to a topic and represents the share of amendments associated to this topic. An amendment can be associated to several topics.

Figure F2 displays descriptive statistics on the prevalence of each topic within the women’s issues category. We see that, among women-related amendments, about 35% also refer to labor issues and 25% to health or family issues. At the other end of the spectrum, the least represented topics are military and overseas issues. It should be noted that amendments can be associated to more than 2 topics and therefore, the fractions in the histogram do not sum to 1.

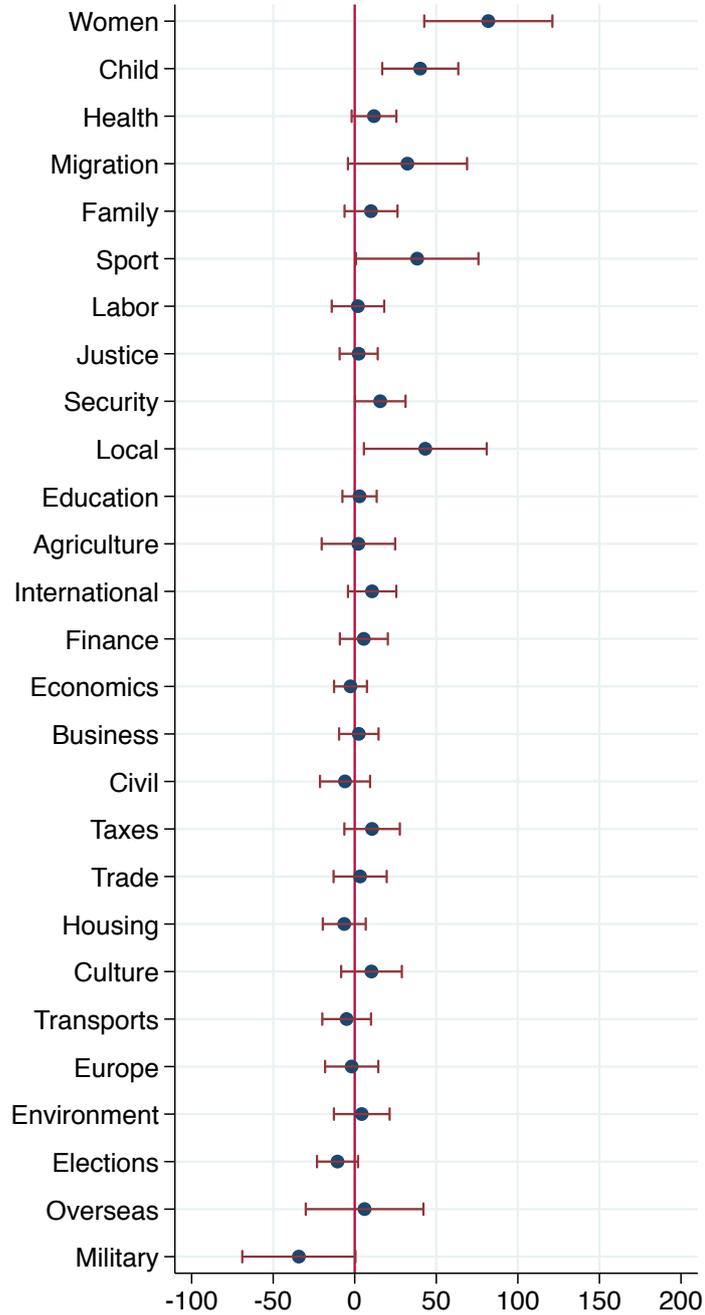
Figure F2: Descriptive Statistics on Topics Prevalence Within Women’s Issues



*Notes:* The data comes from the French Lower House over the 2002-2017 period. The sample is restricted to women-related amendments. Each bar corresponds to a topic and represents the share of amendments associated to this topic. An amendment can be associated to several topics.

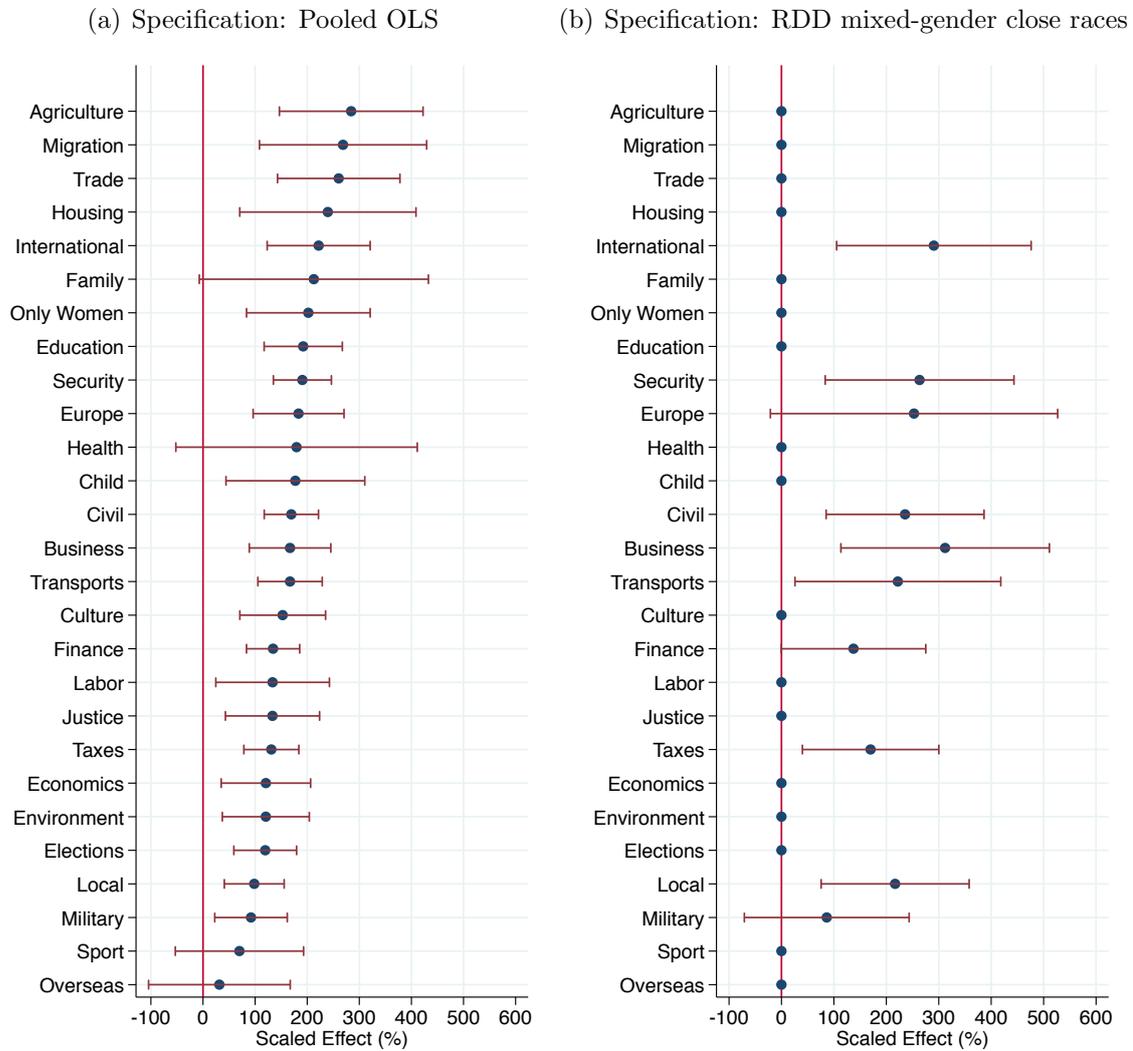
### F.3 Additional Results

Figure F3: Extension to Other Topics: Authorship Analysis - Fixed-effects specification



*Notes:* The data comes from the French Lower House over the 2002-2017 period. The sample contains all the legislators endorsed by a political party. Each row corresponds to a topic. The outcome is a dummy that equals 1 if the legislator initiates at least one amendment on the topic considered. Each dot represents the coefficient associated to the variable *Woman* divided by the average of male legislators (scaled effect). Confidence intervals are represented at the 90% level. Estimates come from the fixed-effect specifications.

Figure F4: Extension to Other Topics: Authorship Analysis Within Women-Related Amendments



Notes: The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. The sample is restricted to women-related amendments. About 91.34% of women-related amendments are also related to another topic. Each row corresponds to a topic within the sample of women-related amendments. The outcome is a dummy that equals 1 if the legislator initiates at least one amendment on the topic considered. Each dot represents the coefficient associated to the variable *Woman* divided by the average of male legislators (scaled effect). Confidence intervals are represented at the 95% level. Graph (a) and (b) respectively represent estimates from the pooled OLS and the RDD mixed-gender close race specifications with the CCT bandwidth. Because of the large standards errors for several topics in graph (b), only coefficients significant at the 10% level are displayed.

## F.4 Classification Using Unsupervised Methods

In this section, I discuss the use of unsupervised methods to uncover topics of interest (instead of the dictionary-based methods used in the paper). The method used is a Latent Dirichlet Allocation and the inference is done with variational Bayes. As compared to dictionary-based methods, the main advantage of this method is that the user does not need to specify words associated to topics. Therefore, it allows the research to abstract from its subjectivity in the first steps of the analysis.

This absence of subjectivity is true only in the pre-processing steps of the data. When analyzing the results, subjectivity is necessary. For instance, if we consider topic 8 obtained in Table F4, the top words associated to this topic are clearly related to energy and it is tempting to label topic 8 as energy-related. Using this information, we could then construct a variable classifying an amendment as energy-related if topic 8 is the most prevalent in the amendment. Then, we could compare the relative involvement of male and female legislator on this topic and draw conclusions on their relative interest for this topic. While this is tempting, this methodology has two severe limitations. First, topic 8 is likely to be a subset of the full energy-related topic. For instance, 50% of the amendments related to energy could use associations of words found in topic 8 and the other half could be much more diverse and included in different topics. Therefore, classifying topic 8 as the "energy-related topic" would miss all the information not contained in topic 8. Second, while some parts of topic 8 are likely to be related to energy issues, some words are also likely to be classified as related to other topics such as transport (for instance the word vehicle). Therefore, topic 8 is likely to be a mixture of energy and transport issues.

Finally, one last and perhaps the most important limitation of unsupervised methods is that they do not deliver topics that we may be interested in. For instance, consider the main interest of this paper which is on women's issues. Reading the list of topics and their associated top words, topic 11 is perhaps the closest to these issues because it contains the word "wom" among its top words. But it also contains the words retired and family. Therefore, it is difficult to conclude on whether topic 11 represents women's issues, a subset of those, or a different topic. Moreover, some topics that we may be interested in such as "military issues" do not appear in the list.

Table F4: Latent Dirichlet Allocation Classification Method

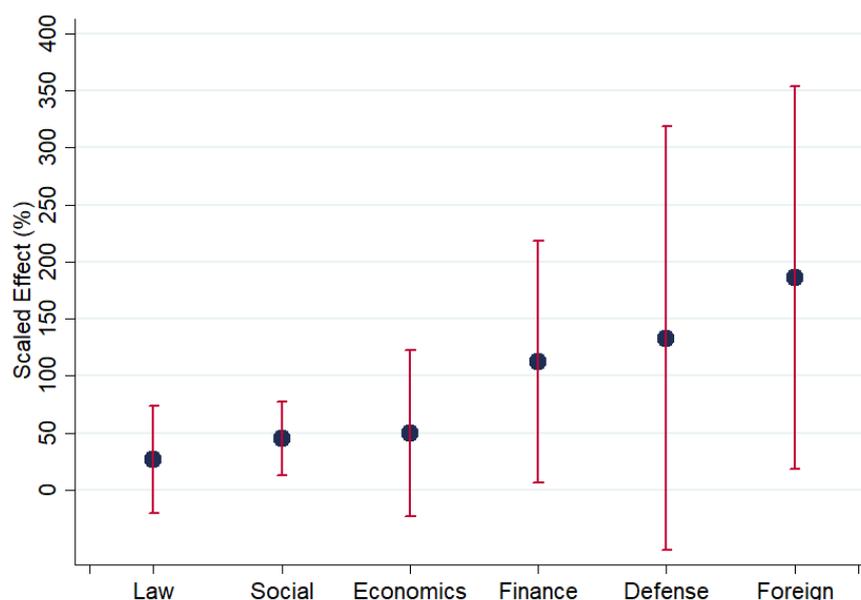
Topic	Top 5 words
Topic 1	fiscal, tax, rate, title, compens
Topic 2	agricul, product, exploit, price, metropol
Topic 3	national, governm, princip, assembl, text
Topic 4	municipal, territor, zon, habit, mountain, popul
Topic 5	be, same, done, effect, more
Topic 6	environm, protect, water, natural, biodiversit
Topic 7	french, transport, countr, european, road
Topic 8	energy, energetic, vehicle, transit, renewabl
Topic 9	financ, million, euro, fund, region
Topic 10	articl, present, redact, erase, new
Topic 11	individu, wom, situat, retired, famil
Topic 12	collectivit, territor, region, compet, local
Topic 13	politic, develop, economic, program, objectiv
Topic 14	housing, income, rate, social, tax
Topic 15	council, represent, mandate elected, member
Topic 16	amendment, redactional, precis, clarif, harmoniz
Topic 17	servic, public, activt, establish, contract
Topic 18	sentenc, diseas, regim, complementar, crim
Topic 19	notion, criter, definit, chamber, commerc
Topic 20	numeric, servic, public, operator, market
Topic 21	salaried, work, enterpris, job, social
Topic 22	text, justify, redistrict, high, board
Topic 23	procedur, control, demand, decis, precis
Topic 24	amendment, coordin, coherenc, consequ, withdraw
Topic 25	research, langu, scientific, cultur, teach
Topic 26	health, care, medecine, securit, establish
Topic 27	right, people, penal, judiciar, polic
Topic 28	format, child, professional, young, educ
Topic 29	year, delay, length, elect, period, ballot
Topic 30	bank, deliver, payment, banking, fee

*Notes:* the data comes from all the amendments produced produced in the Lower House over the period 2002-2017.

## G Mechanisms

### G.1 Results by Committee

Figure G1: Results by Committee



*Notes:* The data comes from the French Lower House over the period 2002-2017. The sample contains all the legislators endorsed by a political party. Confidence intervals are represented at the 90% level. The x-axis represents the committees. The y-axis represents the coefficient associated to the variable *Woman* divided by the average of male legislators (scaled effect) in a regression where the outcome is a dummy that equals 1 if the legislator initiates at least one women-related amendment. The estimates are obtained with the Pooled OLS specification controlling for age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency and term fixed-effects.

## G.2 Potential Influence of Parliamentarian Assistants

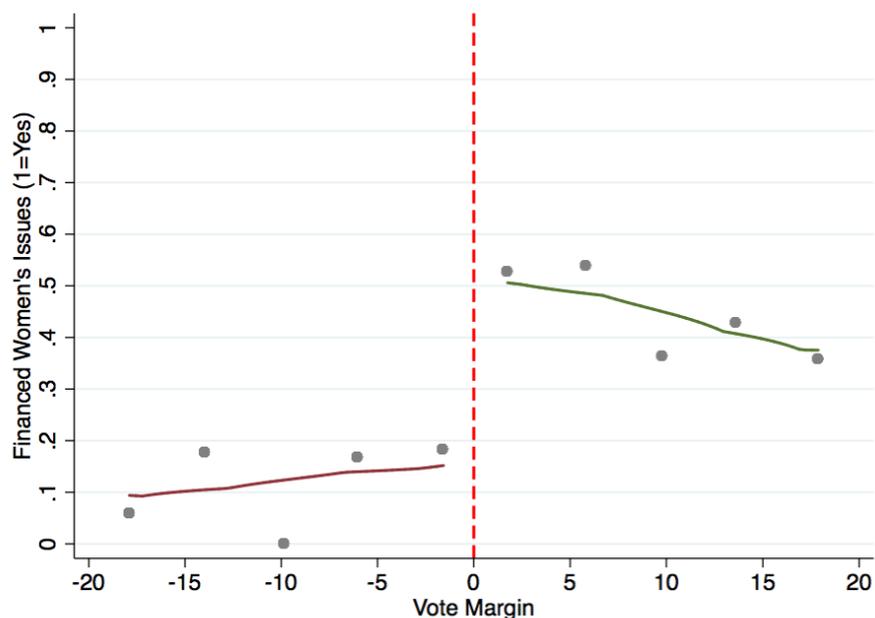
Table G1: Authorship of Women-Related Amendments Depending on the Composition of the Team of Parliamentarian Assistants - Lower House

<i>Dep. Var.: At Least one Women-Related Amendment Initiated (1=Yes)</i>			
	(1)	(2)	(3)
Woman (1=Yes)	0.13*	0.15*	0.11
	(0.08)	(0.08)	(0.08)
AboveMedianShareFemaleAssistant			-0.05
			(0.05)
Woman*AboveMedianShareFemaleAssistant			0.06
			(0.11)
Share Female Assistant Above Median	No	Yes	All
Control Mean	0.43	0.36	
Scaled Effect	30.8	41.1	
Observations	218	235	453

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Lower House over the period 2012-2017 for which information on the parliamentarian assistants is available. The sample contains all the legislators endorsed by a political party who were in the House when the data was collected. Controls include the age at the beginning of the term, the political inclination (left or right-wing), the incumbency status, the margin of victory at the election, the female participation rate to the labor market in the constituency. The "Control Mean" line designates the outcome mean for the sample of male legislators. The "Scaled Effect" line designates the impact of female legislators scaled to the mean of male legislators (Treatment Effect/Control Mean). The median share of female assistant is 2/3.

### G.3 Evidence From Legislators' Discretionary Funds

Figure G2: Legislator's Use of Discretionary Funds for Women's Issues



*Notes:* the data comes from the French Lower House over the period 2012-2017. The sample contains all the parliamentarians endorsed by a political party. The outcome is a dummy that equals 1 if the legislator has funded associations or projects related to women's issues. The x-axis represents the vote margin between the first woman and the first man in a mixed-gender election. On the right side of the vertical dashed line, a woman is elected whereas on the left it is a man. The solid lines correspond to a lowess fit of the bin-averages. There are 5 bins on each side of the cutoff.

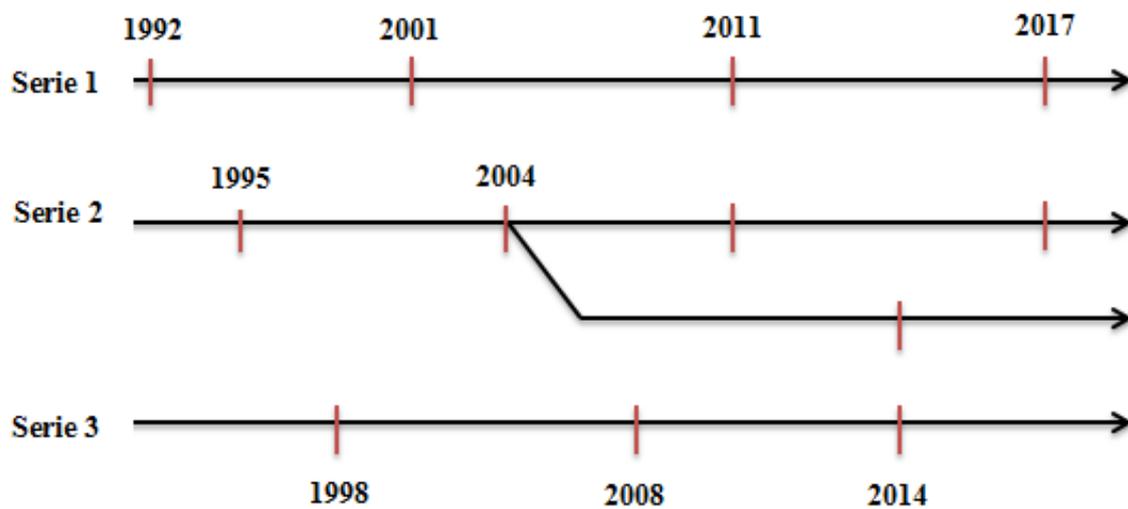
## H Evidence from the Upper House

### H.1 Institutional Setting

Figure H1 schematizes the schedule of the Upper House election system. Initially, there were 3 series. The first had elections in 1995, 2001, 2011 and 2017. The second had election in 1995 and 2004. After 2004, this serie was splitted in two (randomly) and half of the senators were reelected in 2014 (and will be in 2020) and the other half in 2011 and then 2017. Finally, the last serie had elections in 1998, 2008 and 2014 (and will have in 2020).

Gender quotas were voted in 2000. As such, they were applied for the first time in 2001 (serie 1), 2004 (serie 2) and 2008 (serie 3).

Figure H1: Upper House Election Schedule



*Notes:* This figure schematizes the schedule of the French Upper House election system. Each short vertical red line represents an election.

## H.2 Descriptive Statistics

Table H1: Descriptive Statistics on Constituencies' Characteristics and their Activity Related to Amendments

	(1)	(2)	(3)	(4)
	Mean	S.D.	Min	Max
N Elected	3.04	1.81	1.0	12.0
N Elected Women	0.53	0.89	0.0	5.0
Share Women Elected	0.12	0.18	0.0	1.0
N Co-Sponsored Per Year	135.65	93.98	2.0	451.3
N Co-Sponsored Per Year Gender	2.57	2.63	0.0	14.3
Share Co-Sponsored Gender	0.02	0.02	0.0	0.1
N Authored Per Year	21.45	22.59	0.0	169.3
N Authored Per Year Gender	0.30	0.61	0.0	4.9
Share Authored Gender	0.01	0.02	0.0	0.2
At Least One Authored Gender (1=Yes)	0.56	0.50	0.0	1.0
At Least One Authored (1=Yes)	1.00	0.07	0.0	1.0
Observations	216			

*Notes:* the data comes from the French Upper House over the period 2001-2017. *Gender* indicates that the amendment is identified as related to women's issues with a dictionary-based method.

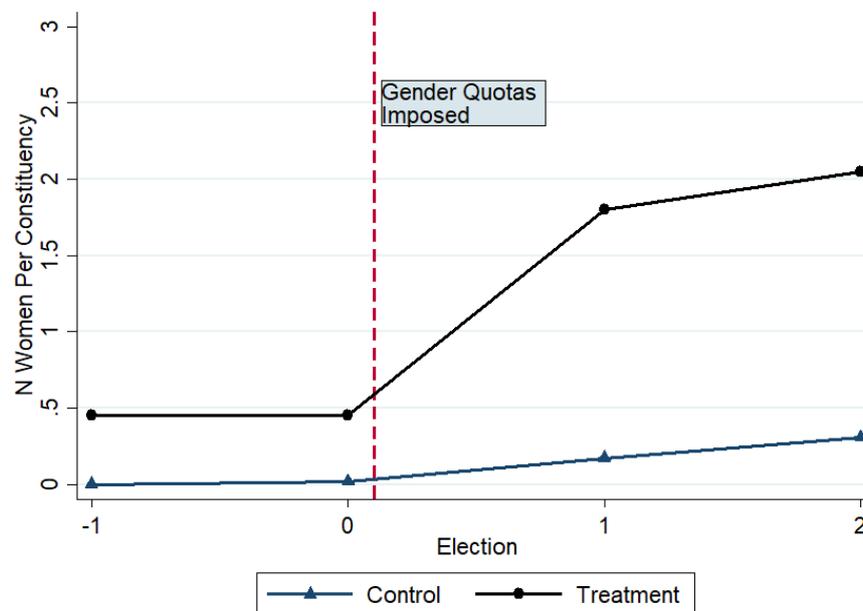
Table H2: Most Frequent Trigrams and Bigrams in the Sample of Amendments Related to Women’s Issues - Upper House

(1)	(2)	(3)	(4)	(5)	(6)
<i>Trigrams</i>			<i>Bigrams</i>		
Rank	N	Keywords	N	Keywords	
1	111	delegation rights women	480	women men	
2	110	equality women men	265	national assembly	
3	54	professional women men	264	men women	
4	51	equality professional women	236	part time	
5	50	equal access women	185	equality professional	

*Notes:* the data comes from all the amendments produced in the French Upper House over the period 2001-2017. It is restricted to amendments identified as related to women’s issues with a dictionary-based method.

### H.3 Results

Figure H2: First-Stage - Impact of the Gender Quota on the Number of Female Senators in the Upper House



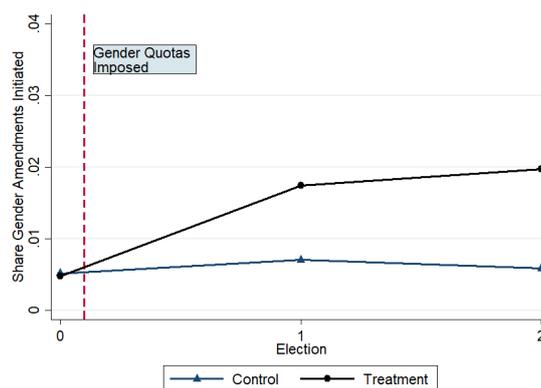
*Notes:* the data come from the election results of the French Upper House over the period 1988-2017. The y-axis represents the average number of women elected per constituency. The x-axis represents the election dates. Circles and triangles respectively designate the average number of women per constituency for those that have to comply with the quota and those that do not need to. The vertical red-dashed line corresponds to the date where gender quotas were introduced.

Table H3: Overall Gender Differences in Parliamentary Activities - OLS and Wald Estimates in the Upper House

Dependent Variable	(1) N Authored
<i>Panel A: OLS Estimates</i>	
N Women	0.65 (2.42)
Observations	216
Constituencies	72
<i>Panel B: Wald Estimates</i>	
N Women	2.32 (4.80)
Observations	216
Constituencies	72

Notes: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. The dependent variable is the number of amendments initiated. Standard errors clustered at the constituency level are given in parentheses. Panel A displays OLS estimates and Panel B Wald estimates.

Figure H3: Impact of the Gender Quota on Authorship of Women-Related Amendments in the Upper House



Notes: the data comes from the French Upper House over the period 2001-2017. Circles and triangles respectively designate the average number of women per constituency for those that have to comply with the quota and those that do not need to. The y-axis represents the share of authored women-related amendments. The vertical red dashed line corresponds to the time where gender quotas were introduced.

Below, I estimate the reduced-form impact of the gender quotas in the Upper House. Formally, I estimate:

$$Y_{ct} = \alpha + \delta Treatment_c + \gamma Post_t + \beta Treatment_c * Post_t + \epsilon_{ct} \quad (5)$$

Where  $c$  is the subscript for the constituency level and  $t$  for time.  $Treatment_c$  equals 1 if the constituency has to comply with the quota.  $Post_t$  equals 1 if the election happened after the introduction of the gender quota.

Table H4: Reduced-Form Impact of Gender Quotas on Initiation of Women-Related Amendments - Upper House

Dependent Variable	(1) N	(2) Share	(3) At least One (1=Yes)
Treatment	0.06 (0.08)	-0.00 (0.00)	0.08 (0.13)
Post	0.07 (0.08)	-0.00 (0.00)	0.15* (0.09)
Treatment*Post	0.48*** (0.16)	0.02*** (0.01)	0.35** (0.14)
Observations	216	216	216
Constituencies	72	72	72

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses. Treatment corresponds to constituency that have to comply with the quota, i.e. those with more than 4 representatives. Post corresponds to the period after the first election with quotas.

Table H5: First Stage Results: Impact of Gender Quotas - Upper House

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)
	N Women		At Least One Woman (1=Yes)		Share Women	
Quota*Post Pool	1.23*** (0.24)		0.35*** (0.12)		0.13*** (0.05)	
Post Pool	0.22*** (0.05)		0.22*** (0.05)		0.09*** (0.02)	
Quota*Post 1		1.20*** (0.25)		0.45*** (0.12)		0.14*** (0.05)
Quota*Post 2		1.26*** (0.26)		0.26* (0.13)		0.13** (0.06)
Post 1		0.15*** (0.05)		0.15*** (0.05)		0.06*** (0.02)
Post 2		0.29*** (0.07)		0.29*** (0.07)		0.12*** (0.03)
Quota	0.48*** (0.15)	0.48*** (0.15)	0.38*** (0.11)	0.38*** (0.11)	0.09*** (0.03)	0.09*** (0.03)
F-Statistic	35.7	22.7	316.4	565.6	72.2	53.9
Observations	216	216	216	216	216	216
Constituencies	72	72	72	72	72	72

Notes: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. The dependent variables are the number of women (column 1 and 2), a dummy that equals 1 if at least one woman is elected (column 3 and 4), the share of women elected (column 5 and 6). The regressions are run at the constituency level.

Table H6: Instrumental Variable Strategy

<i>Dep Var: Share Women-Related Amendments Initiated</i>			
	(1)	(2)	(3)
N Women	0.02** (0.01)		
Share Women		0.16** (0.07)	
At Least One Woman			0.06** (0.03)
Treated	-0.01* (0.01)	-0.02 (0.01)	-0.03 (0.02)
Post	-0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)
Observations	215	215	215
Constituencies	72	72	72

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses. The dependent variable is the share of women-related amendment initiated in a constituency. Each column displays the results using a different measure of the presence of elected women per constituency (number of women for column 1, the share of women for column 2 and a dummy that equals 1 if at least one woman is elected in column 3).

Table H7: Extrapolating to the Macro Effect - Wald Estimates

Dependent Variable	(1)
	Share Amendments Women's Issues
Share Women	0.159** (0.071)
Observations	216
Constituencies	72

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes from the French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses.

## H.4 Robustness

In Table H8, I replicate the main analysis using a restrictive definition of women-related amendments. Only amendments containing the word "wom" are classified as women-related. The results are essentially similar although slightly lower in magnitude.

Table H8: Impact of Gender Quotas on Initiation of Women-Related Amendments **Restricted Definition** - OLS and Wald Estimates in the Upper House

Dependent Variable	(1) N	(2) Share	(3) At least One (1=Yes)
<i>Panel A: OLS Estimates</i>			
N Women	0.166* (0.084)	0.005*** (0.002)	0.122*** (0.039)
Observations	216	215	215
Constituencies	72	72	72
<i>Panel B: Wald Estimates</i>			
N Women	0.391** (0.155)	0.017** (0.007)	0.278** (0.132)
Observations	216	215	215
Constituencies	72	72	72

*Notes:* \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The data comes French Upper House over the period 2001-2017. Standard errors clustered at the constituency level are given in parentheses. Panel A displays OLS estimates and Panel B Wald estimates.

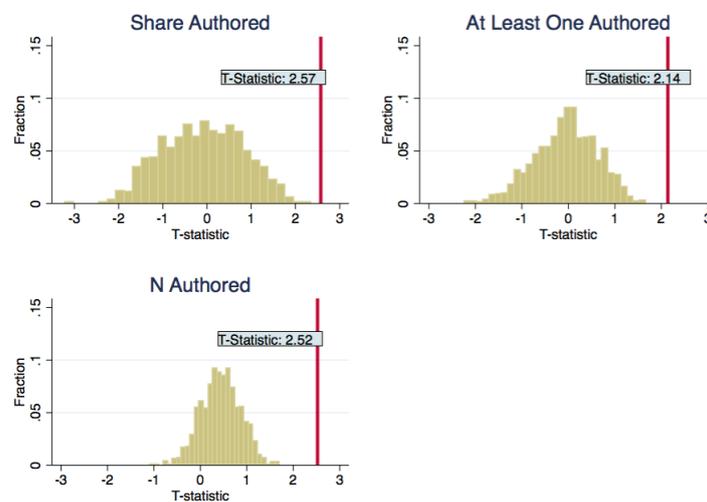
While the introduction of a gender quotas has increased the share of amendments initiated on women-related topics in the Upper House, the question remains as to what extent this finding depends on the fact that these amendments are related to women's issues? To investigate, I build a placebo test that consists in drawing a set of random sample of amendments (500) of equal size to the sample used in the main regression (2,064) and comparing the estimates related to the difference-in-differences coefficient (*Quota \* Post*) to the one with the main sample.

Figures H4 displays the t-statistics for the three outcomes which are respectively: the share of amendments initiated, the probability to initiate at least one amendment and the

raw count of amendments initiated. The placebo test shows that it is very unlikely to obtain findings consistent with the body of the article using a random sample of amendments.

For the main outcome which is the share of amendments initiated, there does not exist any random sample that delivers a larger t-statistic than the one with the main sample. Only 7 (1.4%) samples deliver estimates significant at the 5% level. These figures are equal to zero for the other two outcomes. Consequently this test provides supporting evidence of the existence of homogeneity and relevance in the sample of amendments selected using the dictionary-based approach.

Figure H4: Placebo Test Random Sample Amendments - Upper House



*Notes:* The data comes from the French Upper House over the period 2001-2017. The histogram represents the distribution of T-statistics related to the difference-in-differences coefficient  $Quota * PostPool$  using 1000 placebo samples constituted of random draws of amendments. Each graph represents a different outcome.