

Discussion Paper Series

IZA DP No. 18559

April 2026

Give More, Receive More? Gender and Cooperativeness Among Politicians

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Give More, Receive More? Gender and Cooperativeness Among Politicians

Abstract

This paper investigates gender-based differences in cooperativeness among French parliamentarians by analyzing legislative behaviors, such as cosponsorship and voting patterns. Using a comprehensive dataset covering all bills and amendments authored in France's Lower House between 2012 and 2022, we show that female parliamentarians attract fewer cosponsors, particularly from members of their own parties, despite being more likely to support their colleagues' initiatives and exhibit higher voting participation. This asymmetry highlights a paradox: while female legislators display greater cooperative and altruistic behaviors, they receive less reciprocal backing, limiting their legislative influence. The observed patterns are driven by behavioral gender differences rather than differences in observable characteristics, thematic alignment, or the quality of the politicians.

JEL classification

J16, D72, D73

Keywords

gender, cooperativeness, politicians, parliament

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1 Introduction

The share of women in the French parliament has risen from 5% in the 1990s to almost 40% in the late 2010s. This rapid increase has been largely driven by the implementation of financial incentives requiring political parties to nominate an equal number of male and female candidates for parliamentary elections.¹ However, questions remain as to whether this rise in female participation translates into tangible improvements in legislative processes and outcomes. Specifically, does gender diversity enhance cooperation, a vital yet often overlooked dimension of legislative efficiency?

The ability to cooperate is likely to affect the productivity and efficiency of parliamentarians. While legislation can be introduced by individuals, the collaborative work conducted within political parties or between political groups to improve, disseminate, and pass legislation is essential. This skill becomes even more important in a polarized political environment ([Barber et al. \(2015\)](#)). More broadly, the literature demonstrates that cooperation is a crucial element of economic efficiency across various contexts.²

In this article, we examine the ability of male and female parliamentarians to cooperate by focusing on several dimensions of cooperation. We study gender differences in the propensity to have bills and amendments supported by other parliamentarians (i.e., the ability to recruit cosponsors) and in the propensity to cosponsor bills and amendments authored by other parliamentarians. Parliamentary activity provides a rare non-experimental context in which cooperation can be measured, as cosponsorship constitutes a formal, low-cost show of support for other parliamentarians' initiatives and is less binding than a vote.³

Many studies have explored gender differences among politicians at various levels. However,

¹This bill was voted in 2000 and implemented for the first time for the 2002 parliamentary elections. If less than 50% of a political party's nominees are women, the party's public funding will be reduced proportionally to the gender gap among its nominees.

²In organizations, promoting and encouraging teamwork and cooperation enhances group performance ([Hamilton et al. \(2003\)](#); [Ichniowski et al. \(1997\)](#); [Lazear \(2000\)](#)), fosters innovation ([Jansen et al. \(2006\)](#)), and increases worker motivation ([Frey and Jegen \(2001\)](#)). At the macro level, [Algan and Cahuc \(2010\)](#) show that trust, which is closely related to cooperative behavior, influences GDP levels.

³See [Balliet et al. \(2011\)](#) for a meta-analytic review of the experimental literature on gender differences in cooperation.

most of these approaches focus on final outcomes rather than the underlying processes. Specifically, previous research often examines political decisions, such as budget allocation for public goods, compensation of state workers, or political budget cycles. Another strand of literature focuses on parliamentarians, analyzing gender differences in overall activity, effectiveness, or the topics of bills and amendments. The evidence on gender differences among politicians is mixed.⁴ This paper addresses this gap by investigating gender differences in a key aspect of the legislative process: cooperativeness.

Why might male and female parliamentarians exhibit different cooperative behaviors? Behavioral economics provides robust evidence of gender differences in cooperation, with women often demonstrating a higher propensity to collaborate.⁵ An increase in the share of female parliamentarians could, therefore, enhance the efficiency of the legislative process by fostering greater cooperation. However, the rapid influx of women into parliament may also have unintended consequences. A potential selection effect could lower the average quality of parliamentarians, negatively impacting cooperation.⁶ Additionally, male and female parliamentarians often differ in terms of experience, policy interests, or legislative priorities, which may influence cosponsorship behaviors. Moreover,

⁴For instance, women have been shown to increase public expenditures on health and education ([Clots-Figueras \(2011, 2012\)](#)) and infrastructure ([Bhalotra and Clots-Figueras \(2014\)](#)), set higher compensation for state workers ([Besley and Case \(2000\)](#)), and engage more in strategic spending during pre-electoral and electoral years ([Accettura and Profeta \(2021\)](#)). They also provide public goods that better reflect women’s preferences ([Chattopadhyay and Duflo \(2004\)](#)). However, [Ferreira and Gyourko \(2014\)](#) find no effect of a mayor’s gender on policy outcomes related to the size of local government, with similar findings reported by [Bagues and Campa \(2021\)](#); [Carozzi and Gago \(2023\)](#) in Spain, [Geys and Sørensen \(2019\)](#) in Norway, and [Baltrunaite et al. \(2019\)](#) in Italy. Regarding parliamentary effectiveness, results are inconclusive: [Anzia and Berry \(2011\)](#) and [Volden and Wiseman \(2018\)](#) find that female parliamentarians are more effective than their male counterparts in passing bills they author, whereas [Jeydel and Taylor \(2003\)](#) report no significant differences. [Frémeaux and Maarek \(2025\)](#) observe that women are less effective than men in passing bills but more effective in passing amendments. Gender biases in the topics parliamentarians focus on have been documented by [Thomas \(1991\)](#) and [Lippmann \(2022\)](#). Finally, while [Júlio and Tavares \(2017\)](#), [Besley et al. \(2017\)](#) and [Bo’ et al. \(2022\)](#) explore gender differences in the quality of politicians, they do not examine policy outcomes and find no significant differences, despite the rapid and substantial increase in female political representation.

⁵[Croson and Gneezy \(2009\)](#) review experimental literature on gender differences, showing that women tend to cooperate more than men. [Eckel and Grossman \(1998\)](#) and [Cremer and Janssen \(2007\)](#) report that women make more altruistic and cooperative choices in experimental games. [Ortmann and Tichy \(1999\)](#) highlight women’s inclination toward mutual cooperation in prisoner’s dilemma experiments, while [Niederle and Vesterlund \(2007\)](#) suggest women prefer cooperative over competitive environments. For broader evidence on gender differences in preferences and attitudes, see [Niederle and Vesterlund \(2011\)](#), [Buser \(2016\)](#), [Eber et al. \(2021\)](#) (attitude toward competition), [Kanthak and Woon \(2015\)](#) (aversion into entering electoral competition), [Ellison and Swanson \(2018\)](#) (feedback attitudes), [Eckel and Grossman \(1998\)](#) (selfishness), [Kamas and Preston \(2018\)](#) (self-confidence), and [Buser et al. \(2020\)](#) (redistributive preferences).

⁶Selection effects can operate in the opposite direction as well. If women face discrimination in the electoral process, those who succeed in getting elected may be of higher quality than their male counterparts ([Anzia and Berry \(2011\)](#)).

women operating in a predominantly male environment may encounter barriers that hinder their ability to cooperate effectively.

It is challenging to measure cooperation in non-experimental contexts. One might argue that cosponsorship behaviors should not differ by gender since it might be seen as a poor proxy of cooperation as it is relatively low-cost and non-binding. Supporting a bill through cosponsorship does not oblige parliamentarians to act as its spokesperson or even to vote for it. Cosponsorship may also reflect collective party strategies, where members are encouraged to support initiatives within their political group to maximize visibility. Under such circumstances, one might expect little to no gender differences in cosponsorship behaviors. On the other hand, not all bills are voted on as they are selected by the political group. We show that bills with more cosponsors are more likely to be selected. Similarly, amendments with more cosponsors are more likely to be accepted. Recruiting cosponsors may take on a strategic character by increasing the parliamentarians' visibility and their legislative effectiveness.

Few studies have analyzed cooperation through cosponsorship, and most focus on the U.S. Congress. [Anzia and Berry \(2011\)](#) demonstrate that female representatives are more likely to grant cosponsors. Similarly, [Gagliarducci and Paserman \(2022\)](#) find that female legislators tend to recruit more cosponsors for bills than their male counterparts, attributing this gap to “commonality of interest, rather than gender *per se*”. [Bagues et al. \(2026\)](#) **show that this gender gap widened between 2011 and 2020 and they find that women in recent years might have been overall more cooperative than men.** Contrastingly, [Lawless et al. \(2018\)](#) use a composite cooperation index (combining cosponsorship granted and received) and find no significant gender differences among U.S. legislators.

Our study builds on and departs from this literature in several ways. First, we examine a broader set of legislative activities, including bills and amendments. As shown in [Frémeaux and Maarek \(2025\)](#), amendments are the primary tool for French parliamentarians to influence legislation, as the

volume of authored amendments far exceeds that of bills (450,000 vs. 3,900 between 2012 and 2022). More importantly, amendments are seven times more likely to pass than bills (14% vs. 2%). This is a significant difference compared to the United States where approximately 20% of bills authored by US representatives are passed ([Gagliarducci and Paserman \(2022\)](#)). Second, the institutional context in France differs significantly from that of the U.S. The French parliament has a larger proportion of female representatives—36% on average between 2012 and 2022, compared to 15% in the U.S. House of Representatives and it is a multiparty system. These two aspects could mitigate selection effects and amplify peer dynamics, making this a compelling case study (see section [6.2](#)).

We collected unique data on all bills and amendments authored by parliamentarians in the Lower House between 2012 and 2022. Using multivariate regressions and regression discontinuity design (RDD), we show that bills authored by women are 7.3 percentage points less likely to be cosponsored, and when they are, they recruit 6.4 fewer cosponsors than bills authored by men (compared to an average of 39 cosponsors per bill). This difference mostly arises from within the parliamentarian’s own group rather than from other political groups. We also detect a gender gap for amendments, but it is smaller and not statistically significant. Conversely, women are more likely than men to support other parliamentarians’ initiatives, particularly amendments originating from their own political group for which women support 10% more amendments. These gender differences are all the more important because we show that cosponsorship is positively related with parliamentary effectiveness, with fewer cosponsors reducing the likelihood of passing bills and amendments.

Overall, these findings suggest that there is no systematic gender gap and that context seems to matter as women struggle to recruit cosponsors for their bills and that they are more likely to cosponsor other parliamentarians’ amendments. First, these results may reflect a lower effort by women in recruiting cosponsors on their bills. This would be compatible with the literature in behavioral economics suggesting women’s aversion to competition ([Niederle and Vesterlund \(2011\)](#), [Buser \(2016\)](#), [Eber et al. \(2021\)](#)). Second, these results could also reflect discrimination against

female parliamentarians in a male-dominated environment. The strategic nature of having cosponsors may lead to marginalization strategies in order to promote one’s own bills. The fact that female parliamentarians, on the contrary, grant more cosponsorships on amendments in an undifferentiated manner toward both male and female parliamentarians suggests greater altruism also documented in the behavioral economics literature. we rule out several potential mechanisms :topics, peer effects, and the quality of parliamentarians.

The remainder of the article is structured as follows. Section 2 describes the features of the French parliament. Section 3 presents the dataset. Section 4 outlines our empirical strategy. We then investigate how gender affects cooperativeness (Section 5) before discussing our results (Section 6). Section 7 concludes.

2 Context

The elections for the Lower House of the French parliament occur every 5 years. A total of 577 representatives in 577 constituencies are elected by direct universal suffrage. The parliamentary election (for the Lower House) follows a two-round plurality voting rule system. To be elected in the first round, an individual must obtain more than 50% of the votes from 25% of the registered citizens. If this is not the case, a second round is organized. Candidates qualify only if their first-round vote share was higher than 12.5% of the registered citizens. To be elected in the second round, a relative majority is sufficient, and the candidate who receives the highest vote share is the winner.

A political group may be formed as long as it consists of at least 15 parliamentarians. These members elect a group leader. A parliamentarians may belong to only one group. Those who do not join any group are referred to as “non-inscrits”.

The activity of French parliamentarians is multidimensional. It can be divided into two main categories: legislative development and government oversight. This analysis of cosponsorship focuses exclusively on the first aspect. Authoring a *bill* represents the most direct approach to legislative

development. However, parliamentarians can also modify, delete, or add articles to bills through *amendments*, regardless of whether the bills are authored by parliamentarians or the government. The cosponsorship process begins as soon as a bill or amendment is registered in the Lower House. The list of cosponsors, if any, appears on the first page of the bill or amendment following the author's name (for an example, see Figure A.1 in the appendix).⁷

No specific rules govern cosponsorship. Cosponsors may belong to the same political group as the author or to a different one. There is no limit to the number of cosponsors granted or recruited, nor is there a prescribed order for listing them. According to guidelines provided to parliamentarians, bills and amendments cosponsored, particularly by influential figures such as political group leaders or parliamentary commission presidents, are more likely to pass.⁸ Therefore, parliamentarians are encouraged to recruit cosponsors. Thus, recruiting cosponsors and choosing whom to support through cosponsorship are strategic activities for parliamentarians seeking to influence the legislative process.

The legislative process differs for bills and amendments. Once a bill is registered, it is first examined by the relevant parliamentary commission. The commission appoints a *rapporteur* to study the bill and draft a report, which may include proposed amendments. Not all bills are voted on, as the government sets the legislative agenda for two weeks each month, while opposition parties control the agenda for one day per month. On these days, opposition groups must prioritize a few bills (typically three to five) for examination. Recruiting cosponsors can increase a bill's chances of selection by a parliamentary group. Conversely, supporting a bill through cosponsorship is also a strategic decision, as parliamentarians compete for their bills to be voted on. Once selected, the Lower (or Upper) House votes on each article of the bill before voting on the bill as a whole. If

⁷Unlike amendments, bills can be coauthored by several parliamentarians, although this occurs in fewer than 4% of cases. By definition, the individual contributions of coauthors cannot be measured. However, evidence suggests that some coauthors are included for strategic purposes. For instance, a bill authored jointly by the head of a political group or by members from both the Lower and Upper Houses may aim to promote the bill and increase its probability of passing. The frequency of coauthored bills is similar for men and women. For coauthored bills, we attribute the bill equally to all authors. Additionally, we include a control variable in our analysis to distinguish single-authored bills from coauthored ones. When coauthored bills are excluded, our findings remain unchanged.

⁸These guidelines are accessible here: [https://www.senat.fr/fileadmin/Fichiers/Images/relations_internationales/cooperativeness_interparlementaire/Guides_et_recueils/Rediger_la_loi_juin_2007.pdf](https://www.senat.fr/fileadmin/Fichiers/Images/rerelations_internationales/cooperativeness_interparlementaire/Guides_et_recueils/Rediger_la_loi_juin_2007.pdf).

approved, the bill proceeds to the other House for a similar process. A bill becomes law only if identical versions are approved by both Houses. In cases of disagreement, a joint commission of seven parliamentarians and seven senators drafts a new version, which is then subjected to a final vote in the Lower House.

Unlike bills, all admissible amendments must be examined and be voted on.⁹ Parliamentarians may withdraw their own amendments, which can also be dropped if the author is absent during deliberations or if similar amendments have already been accepted or rejected.

3 Data

The Lower House’s open data website provides information on all bills and amendments authored during the last two parliamentary terms: 2012–2017 and 2017–2022. Ultimately, our sample includes 3,904 bills and 450,894 amendments.

We compiled three main types of information. First, we identified the author and cosponsors of each bill and amendment and gathered data on various attributes of the parliamentarians, including gender, age, political experience (e.g., number of past terms, local or governmental roles), leadership positions in the Lower House (e.g., president, vice-president or secretary of the Lower House; head of a political group), political affiliation, size of the political group, permanent parliamentary commission membership, previous occupations, and education.¹⁰ Constituency-level data were also collected, such as population size, demographic composition by age and gender, education levels, and employment status. These variables enable us to test whether any observed gender gaps are driven by the author’s observable characteristics.¹¹

Second, for each bill and amendment, we recorded their topics based on text summaries and

⁹ Amendments may be declared inadmissible for two main reasons. First, amendments cannot be adopted if they would reduce public resources. Second, legal inadmissibility applies when an amendment falls outside the scope of the bill, is filed too late, or does not allow sufficient time for the authors to prepare a response. If deemed inadmissible for any reason, an amendment is not put to a vote.

¹⁰ Educational attainment data were sourced externally and are available for 72% of parliamentarians. Consequently, this variable is used as a robustness check but not in the main analysis.

¹¹ Table B.1 provides descriptive statistics on parliamentarians.

collected the filing dates. This allows us to analyze trends in cosponsorship over time, such as whether cosponsorship patterns shifted toward the end of each term or were influenced by remote work during the 2020 lockdown.¹²

Third, to assess the consequences of cosponsorship, we collected detailed data on the voting process, enabling us to measure legislative effectiveness (i.e., the number of bills and amendments passed). For amendments, we also recorded their admissibility status and whether they were defended by their authors in plenary sessions. For bills, we documented their selection by political groups, as not all bills are subjected to a vote (as discussed in section 2). Finally, we gathered data on voting behavior to examine whether the patterns observed in cosponsorship extend to voting—a more active and deliberate form of support.

4 Empirical strategy

To evaluate the influence of a parliamentarian’s gender on cooperativeness, we analyze two dimensions: the cosponsors recruited by parliamentarians for their bills and amendments and the cosponsors they granted to others.

For the first dimension, we consider two main outcomes: a binary variable equal to 1 if the bill or amendment is cosponsored (*extensive margin*), and a continuous variable measuring the number of cosponsors recruited (*intensive margin*). This distinction is important, as not recruiting any cosponsors differs fundamentally from attracting more or fewer cosponsors.¹³ Additionally, we decompose

¹²Our dataset spans 2012–2022, encompassing the COVID-19 crisis and associated lockdowns. During the main lockdown (March–June 2020), 30 parliamentarians (three per political group) worked onsite at the Palais Bourbon, while the remaining 547 parliamentarians worked remotely. This situation may have affected cosponsorship dynamics. In Table B.2, we analyze the lockdown’s effects on cosponsorship, excluding 2020 entirely and focusing on bills and amendments filed during lockdown periods (March–June and November 2020). For bills (Panel A), the lockdown produced mixed effects: the gender gap widened at the extensive margin but narrowed or even reversed at the intensive margin when considering the entire year. For amendments (Panel B), the results were generally insignificant, although women appeared to attract more cosponsors than men during this period. Thus, while the cosponsorship process changed during the lockdown, its impact on gender differences was limited and does not fully explain our results. It is of course complex to distinguish the effect of remote work from the topics of bills and amendments that were discussed during this period.

¹³When we combine the two margins (by setting to zero the number of cosponsors when the bill/amendment is not cosponsored), the results remain similar: negative and statistically significant coefficient for bills and slightly negative but not statistically significant for amendments (Table B.3).

the number of cosponsors by their origin: same political group, other groups, and opposite groups (i.e., majority when the parliamentarian is in the opposition and vice versa). The unit of analysis is at the bill/amendment level, which allows us to examine whether any observed gender gap is influenced by specific characteristics of the legislative initiative. We estimate the following regression model:

$$Y_{dit} = \beta_0 + \beta_1 FemaleParliamentarian_i + \beta_2 X_{dit} + \mu_t + u_{dit} \quad (1)$$

where d denotes the bill or amendment, i refers to the parliamentarian, and t indicates the parliamentary term. We use an OLS model for both extensive and intensive margins.¹⁴ Standard errors are clustered at the parliamentarian level.

The control variables (X_{dit}) include political experience (age, number of past terms, local political roles such as mayor, and governmental experience); political characteristics (leadership roles in the Lower House such as president, vice-president, secretary, quaestor, head of a political group or commission; political orientation such as majority/opposition or left/right, and group size); membership in permanent parliamentary commissions (cultural affairs and education; defense; economic affairs; finance and budgetary control; foreign affairs; law; social affairs; sustainable development); and previous occupation and education.¹⁵ We also control for the characteristics of the constituency: adult population, age, and employment status (separately for men and women). Finally, we include term fixed effects (μ_t) to capture the global evolution of parliamentary activities.¹⁶ We use the characteristics of the legislative initiative (topics, date, etc.) in the analysis of mechanisms (section 5.4).

Controlling for parliamentary experience is crucial, as the recent increase in the share of women has mechanically led to a gender difference in experience. Additionally, controlling for previous oc-

¹⁴We also use a logit model for the extensive margin. The results are consistent, as we obtain a marginal effect of +7.3 pp for bills (statistically significant at 5%) and +1.7 pp for amendments (not significant).

¹⁵We classified the previous occupation into 10 categories: executive (private sector), executive (public sector), liberal profession, executive (retired), self-employed, intermediate positions, employee, worker-farmer, and inactive.

¹⁶When we use year fixed effect instead of term fixed effect, the results remain unchanged.

cupation and education matters because financial incentives have pushed political parties to rapidly increase the number of female candidates, potentially leading to less selective criteria. These differences may affect the recruitment of cosponsors.

For the second dimension, we explore the willingness to support the legislative initiatives of others. To this end, we analyze gender differences in the number of cosponsors granted by each parliamentarian and the number of votes in which each parliamentarian participated. The regression model is as follows:

$$Y_{it} = \beta_0 + \beta_1 \text{FemaleParliamentarian}_{it} + \beta_2 X_{it} + \mu_t + u_{it} \quad (2)$$

where i refers to the parliamentarian and t indicates the term. Y_{it} corresponds to the number of cosponsors granted or the number of votes participated in by a parliamentarian. X_{it} includes the same set of control variables presented earlier, and μ_t represents term fixed effects. We use OLS models.

5 Results

5.1 How many cosponsors do male and female parliamentarians recruit?

Descriptive statistics Figure 1 illustrates the gender differences in cosponsorship for bills and amendments. Figure 1a shows that the share of bills with at least one recruited cosponsor (75%) exceeds that of amendments (53%). At the extensive margin, the gender gap is not visually evident. However, at the intensive margin, a substantial gender gap appears at the intensive margin for bills (Figure 1b), as those authored by male parliamentarians attract more cosponsors (40 on average) than those authored by female parliamentarians (35). For amendments, the average number of cosponsors is smaller (17), and no gender gap is detected.¹⁷ Finally, Figure 1c depicts the type

¹⁷Figure B.1 presents the kernel density for the number of cosponsors. For bills authored by women, most data points cluster at the lower end of the distribution, whereas no visual difference is observed for amendments.

of cosponsors. Approximately 80% of cosponsors belong to the parliamentarian’s political group, regardless of whether the legislation is a bill or amendment. Among cosponsors from other groups than that of the author, those with a different political orientation (e.g., majority when the parliamentarian is in opposition) represent a higher share for amendments (10%) compared to bills (5%). This share is slightly higher for women than for men.

Multivariate regressions Table 1 reports the results of multivariate regressions for bills (Panel A) and amendments (Panel B). We analyze the extensive margin (column 1) and the intensive margin (column 2). We then examine the type of cosponsors: from the parliamentarian’s political group (column 3), from other groups (column 4), and from opposing groups (column 5).¹⁸ We control for parliamentarian and constituency characteristics as well as a term fixed effect.

Female parliamentarians are significantly less likely to have their bills cosponsored, with a marginal effect of -7.9 percentage points (pp), compared to a cosponsorship rate of 75%. When cosponsored, bills authored by female parliamentarians attract fewer cosponsors (-6.4), aligning with the findings in Figure 1b. This effect is both statistically significant and substantial, as the average number of cosponsors is 38.8, corresponding to a relative gap of 16.4%. The gender gap is primarily attributed to cosponsors from the parliamentarian’s own group rather than other political groups (- 3.9 vs. -2.5, respectively). This pattern persists when examining cosponsors from opposing groups, although the relative gap remains significant due to the smaller number of cosponsors from other groups (5.6 on average versus 33.1 from the parliamentarian’s own group).

No significant differences are observed for amendments (Panel B). Female parliamentarians are slightly more likely to have their amendments cosponsored, but the effect is minor (1.8 pp) compared to an average of 53%. The number of cosponsors is lower for women (-0.48), but the gap is also small relative to an average of 16.9 cosponsors. Women are less likely to recruit cosponsors from other

¹⁸This breakdown differs slightly from that in Figure 1c, where cosponsors from other political groups are categorized by political orientation (same or different). The descriptive analysis ensures the origin of cosponsors sums to 100%, while the econometric analysis first considers all cosponsors from other groups, and then focuses on those with a different political orientation.

political groups and opposing groups. However, no significant gender gap exists within their own group, although the relative gaps are large (25% and 37%, respectively).

Covariates To understand these findings, we analyze the effect of observable characteristics in Table 2. We focus on the likelihood of recruiting cosponsors and the total number of cosponsors and we progressively add control variables: first age and occupation, then political experience, political characteristics, parliamentary commission and finally constituency characteristics.

For bills, at the extensive margin (Panel A), the coefficient becomes more negative when controlling for political experience and it becomes statistically significant when constituency characteristics are included. The estimated gender gap in the number of cosponsors (Panel B) ranges between -3 and -6, regardless of specification. The coefficient becomes large and statistically significant when we control for political characteristics, in particular the size of the political group and its political orientation (majority or opposition). Political experience and parliamentary commissions have little impact. For amendments, changes in coefficients are limited, and none are statistically different from zero across specifications.¹⁹

Given that political experience explains a large part of the differences in activity between parliamentarians (Frémeaux and Maarek (2025)), we are looking into this mechanism in greater depth. Even though controlling for political experience only slightly alters the gender gap, which persists among both male and female newcomers (Table B.5), one might hypothesize a gender-differentiated learning effect over the course of the parliamentary term. This could include disparities in how men and women develop networks among colleagues. To investigate this, we examine the gender gap among newcomers over the term. We find no evidence of a significant change over the term (Table B.6).

¹⁹In Appendix Table B.4, we replicate this analysis for cosponsor types. For both bills and amendments, estimates for cosponsors from the parliamentarian's own group remain stable across specifications. For other outcomes, such as cosponsors from other groups or opposing groups, including political characteristics or, to a lesser extent, parliamentary commission assignments tends to increase the gender gap.

Robustness tests Table B.7 summarizes robustness tests. First, we exclude parliamentarians in influential positions likely to attract more cosponsors (*bureau* members, political group leaders, parliamentary commission chairs, and former ministers). Second, we exclude the top 5% most active authors, whose support may erode over time. We also exclude unaffiliated parliamentarians (*non-inscrits*), who are less connected politically. Finally, we control for the term duration, as some parliamentarians do not complete their full term. The gender gap estimates remain consistent with our main specification. Third, in Table B.8, we compute alternative measures: the share of cosponsors from the parliamentarian’s group and the share from other groups. Results confirm prior findings.

5.2 How many cosponsors do male and female parliamentarians grant?

Cooperativeness can also be analyzed from the other angle, as parliamentarians contribute to their colleagues’ bills and amendments through cosponsorship. One possible explanation for the gender gap in the number of cosponsors recruited could lie in differences in cosponsorship behavior, with women potentially lending less frequent support to bills or amendments authored by their peers.

Cosponsors granted We begin by examining the number of cosponsors granted by parliamentarians (Figure 2). Women appear to grant more cosponsors than men for amendments (3,250 versus 3,166) but fewer for bills (79 versus 97). Additionally, there is a slight difference in the type of authorship: female parliamentarians grant a smaller share of cosponsors to members of their own group compared to their male counterparts.

In Table 3, we examine whether these differences persist when including covariates. For bills, the gender gap disappears after accounting for these controls, as women slightly exceed men in the number of cosponsored bills (+1.6), though this difference is not statistically significant. Similarly, no gender disparity is observed when restricting the analysis to parliamentarians who authored at least one bill (column 2). The same conclusion applies when analyzing the cosponsors granted within the parliamentarian’s own group versus other groups.

For amendments, women grant more cosponsors (+324). The gap is statistically significant at the 5% level, both in the full sample and among authors. The difference between men and women is substantial, with a relative gap of over 10%. This overall gender effect is driven by all categories of authors, though it is significant only for cosponsors within the parliamentarians' own group.

In Appendix (Table B.9), we explore the impact of covariates on these estimates. For bills, the gross gender gap vanishes when controlling for variables such as experience and political characteristics. For amendments, the negative gross gap is close to 0 when political experience is controlled for and it become positive and statistically significant once political characteristics are included.²⁰

Several robustness tests were conducted. First, we excluded parliamentarians with influential positions that might increase their likelihood of granting cosponsorship. We also excluded the most active cosponsors (top 5%) to prevent their activity from skewing the results and masking gender disparities. These restrictions did not affect the estimates (Table B.11). Second, we extend the analysis to votes. Information on voting behavior is limited to open ballots, which represent a limited and unrepresentative portion of the total votes. Table B.12 in the appendix shows that women participate in more votes than men. The gap is substantial (+ 41 votes compared to an average of 436 votes) and statistically significant. We do not observe any gender differences in deviations from the political group's majority vote.²¹ Since open ballots are more formal and often requested for close decisions, this result could even underestimate the true effect that we could find of all votes.

Bilateral analysis A more direct way to analyze reciprocity is to examine the relationships between parliamentarians. Using the available information on the authors and cosponsors, we summarize all interactions between parliamentarians. Relationships between parliamentarians can be categorized

²⁰Consistently with the analysis about the cosponsors recruited, we find no evidence of a significant change over the term (Table B.10). Interestingly, newcomers, regardless of their gender, tend to grant a higher number of cosponsors than more experienced parliamentarians. This suggests that supporting colleagues may serve as a strategy for building networks.

²¹Votes can take four values: for, against, not voting, or abstention. A deviation occurs when a parliamentarian's vote differs from the group's majority vote.

as reciprocal (both parliamentarians cosponsored each other), altruistic (one parliamentarian cosponsored the other without reciprocity), or selfish (one parliamentarian received cosponsorship without providing it in return).²² We also assess the intensity of these relationships by measuring the share of a parliamentarian’s bills or amendments that were cosponsored by a specific colleague. The analysis is at the parliamentarian level and we study separately bills and amendments. The sample is restricted to parliamentarians who authored and cosponsored at least one bill/amendment.

Table 4 presents the results. For bills, we do not find any statistically significant gender differences, though female parliamentarians tend to engage in more reciprocal relationships and fewer selfish relationships compared to male parliamentarians. Similar patterns emerge for amendments (+2.5 pp for reciprocity), and these differences are statistically significant. Additionally, women tend to support their colleagues with greater intensity (column 4). When a parliamentarian cosponsors a colleague, they typically do so for and 10% of their amendments. For female parliamentarians, this share is higher by 1.1 pp. compared to male parliamentarians, suggesting a greater intensity of reciprocity among women.

5.3 Does cosponsorship matter for passing bills and amendments?

So far, we showed that female parliamentarians exhibit greater altruistic and cooperative behaviors, by cosponsoring colleagues’ initiatives, but receive less support from their peers. These findings raise a crucial question: does cosponsorship influence the effectiveness of bills and amendments?

Fewer than 2% of all bills authored by parliamentarians are passed, compared to 14% for amendments. Effectiveness strongly depends on the parliamentarian’s political orientation. For bills, the likelihood of passage is nearly zero for opposition parliamentarians but reaches 11% for those in the majority. This gap is similarly significant for amendments: 3.4% of amendments authored by opposition members pass, compared to 39% for those from the majority.²³

²²We use a fairly strict definition to distinguish between selfish and altruistic behavior as parliamentarians may reward a cosponsorship with another action (that may not be observed in the data).

²³For a detailed analysis of effectiveness, see [Frémeaux and Maarek \(2025\)](#).

Even though cosponsorship is endogenous, we can still analyze the relationship between cosponsorship and effectiveness. To do so, it is necessary to understand each stage of the voting process. As noted in section 2, not all bills are voted on, as parliamentary groups control the agenda only one day per month (each time a different group), generally discussing three to five bills. As a result, groups must select a few bills among all those authored by their members.

In Table 5 (columns 1–3), we show that women’s bills are less likely to be selected (even though the gap is not statistically significant). However, this gap is close to zero when controlling for the number of cosponsors recruited. The number of cosponsors is positively related to the likelihood of a bill being selected for a vote.²⁴ This effect is consistent across genders (column 3). Therefore, women’s lower ability to recruit cosponsors has a negative effect on their likelihood of selection.

In Panel B, we examine amendments.²⁵ Selection criteria differ for amendments, as all admissible amendments are voted on unless rejected beforehand because of inadmissibility, absence of the author during defense, or redundancy with already-passed or rejected amendments. Approximately 43% of all amendments are voted on. We do not detect any gender gap but like for bills, there is a positive relationship between cosponsorship and the likelihood of a vote, with similar effects across genders.

In columns 4–6, we analyze the likelihood of bills and amendments passing. For bills, the initial gender gap (significant at 10%) is reduced when controlling for the number of cosponsors recruited. The number of cosponsors also has a positive effect, with the influence significantly larger for men than women. For amendments (Panel B), the number of cosponsors recruited is positively correlated with the probability of passage. However, having at least one cosponsor reduces the probability of passage (column 6). This effect is primarily observed among majority-group members. This reflects that some amendments, directly supported by the government, do not require additional support.

However, for opposition members, the effect of cosponsorship is positive. Unlike bills, cosponsorship

²⁴This positive effect is also found when considering the extensive margin of cosponsorship. Being cosponsored increases the likelihood of a bill being selected by 14 pp.. 94% of bills selected by groups have at least one cosponsor.

²⁵This analysis excludes amendments authored by *rapporteurs* of bills, as their amendments are less likely to be cosponsored but more likely to pass (44% compared to 10% for non-*rapporteurs*). Including *rapporteur* amendments does not alter the coefficient signs.

has a similar effect for male and female parliamentarians.

In summary, these results suggest that even if cosponsoring is not costly, it nonetheless remains a strategic activity. For bills, more support pushes bills to be selected by the group for voting and cosponsor activity appears as a selection mechanism. For amendments, more support increases its probability of passing. Having less support through cosponsors marginalizes female parliamentarians in their legislative activity.

5.4 Mechanisms

Overall, these findings suggest that there is no systematic gender gap and that context plays an important role: women face greater difficulty in recruiting cosponsors for their bills (but not for their amendments), while they are more likely to cosponsor other parliamentarians' amendments (but not their bills).

Given the mechanisms we rule out below (topics, peer effects, and the quality of parliamentarians), we argue that our results are consistent with two complementary mechanisms that help explain our results. These mechanisms stem from the intrinsic differences between bills and amendments. While bills compete with one another for selection by political parties, amendments do not face such competition, as they are all put to a vote (provided they are admissible and not withdrawn by parliamentarians). This fundamental difference may underlie the observed gender gap for two reasons.

First, women appear to be more penalized than men in competitive environments, such as the selection of their bills within political groups. By contrast, in non-competitive settings (i.e., amendments), no gender gap is observed. The within-group gender gap in bill cosponsorship, combined with the fact that men grant fewer cosponsorships than women, could therefore be interpreted as a strategic behavior by male politicians to marginalize their female counterparts and preserve parliamentary influence. Second, women may exert less effort to recruit cosponsors for bills than for

amendments. This interpretation is consistent with evidence on gender differences in aversion to competition, as documented by [Niederle and Vesterlund \(2011\)](#), [Buser \(2016\)](#), and [Eber et al. \(2021\)](#). Moreover, [Frémeaux and Maarek \(2025\)](#) suggest that men may place greater value on more visible parliamentary activities that arise from authoring a bills such as initiating debates or attracting media coverage (which is less common for amendments). In this case, recruiting cosponsors may be worthwhile despite the low probability that a bill will be passed. Unfortunately, we are unable to test these plausible mechanisms directly, as the absence of an experimental setting constitutes a limitation.

In the remaining of this section, we test other potential mechanisms. None of them seem to explain our results.

Topics Certain topics may be perceived as more consensual, making it easier to recruit cosponsors. [Gagliarducci and Paserman \(2022\)](#) suggest that gender differences in cooperativeness may stem from “commonality of interest”. This conclusion is partially confirmed by [Bagues et al. \(2026\)](#).

Using a dictionary-based method from [Lippmann \(2022\)](#), we identify the topics of bills and amendments.²⁶ We conduct two complementary analyses. First, we control for topics (Table [B.14](#)), and the results remain unchanged. Second, in Table [B.15](#), we focus on topics that are more prevalent among female parliamentarians (i.e., women, children, and health issues). These topics attract more cosponsors overall, but this effect does not vary with the gender of the bill’s author. The gender gap is reduced (and not statistically significant) at the extensive margin but it is even larger when restricting the analysis to these topics at the intensive margin (-8.2 cosponsors for these topics compared with -6.2 for all other topics). Regarding amendments, the absence of a significant effect when considering all topics masks stronger support among women on these gendered issues at the extensive margin. However, at the intensive margin, the results remain unchanged, with no evidence

²⁶To classify a bill or amendment, we search for keywords in the text summary. For example, for women’s issues, we use terms such as women, gender, pregnancy, domestic abuse, violence. For health, we use health, care, hospital, disease, physician, patient, COVID-19, drugs. For children, we use child, childhood, kindergarten.

of a gender gap. Overall, these findings suggest that gender differences in cooperativeness among French parliamentarians are not driven by topic-specific variation.²⁷

Characteristics of cosponsors Beyond individual characteristics, gender differences in cooperativeness may stem from peer effects. If parliamentarians tend to cooperate more within their own gender, male parliamentarians would be expected to recruit more cosponsors. Men accounted for 65% of parliamentarians between 2012 and 2022, with substantial variation across political groups (ranging from 35% to 93%). In Table B.16, we show that amendments authored by women tend to have a higher share of female cosponsors compared to those authored by men (+4.8 pp.). For bills, no such gender gap is observed.

To test for this composition effect, we include the number of women in the parliamentarian’s political group as both a control and an interaction variable in the specification (columns 2-4). For bills, an increase in the number of women within a group has a positive effect on cosponsorship at the intensive margin, which is significant for cosponsors from the author’s own group (column 4). However, this effect does not benefit women, as the interaction between gender and group composition is not statistically significant. For amendments, a higher number of women in a parliamentary group increases the likelihood of being cosponsored. The interaction term is positive, but statistically significant only for cosponsors from the parliamentarian’s own group. Overall, peer effects do not account for the results observed for bills and appear to play only a limited role for amendments.

In addition to gender, we assess the quality of cosponsors by considering experienced cosponsors and those who hold influential positions in the Lower House. One could hypothesize that fewer cosponsors might be offset by higher quality. However, Table B.17 shows no significant difference

²⁷To align with [Gagliarducci and Paserman \(2022\)](#)’s approach (which defines women’s issues more broadly), we also use standing parliamentary committees as a proxy for parliamentarians’ areas of specialization. As shown in Table B.1, women are overrepresented in committees such as Culture and Education and underrepresented in Defence. We find no clear relationship between the proportion of women in committees and the average number of cosponsors for bills or amendments originating from these committees. In addition, our estimates remain stable when controlling for committee affiliation (Table 2). Nonetheless, committees may be an imperfect proxy for expertise, as parliamentarians can author bills and amendments outside their primary area of specialization.

between male and female parliamentarians in the type of cosponsors recruited. Parliamentarians holding influential positions grant less cosponsors but female authors tend to receive more support from these influential parliamentarians than men do. However, the interaction term is statistically significant only for the amendments. Thus, when it comes to amendments, women on average have higher-quality cosponsors than men.

Quality If we suppose that women are discriminated against and that political parties tend to place women in constituencies that are difficult to win or, on the contrary, following [Barbanchon and Sauvagnat \(2022\)](#), that female candidates are allocated to safe seats, due to prejudices among voters, then we are actually comparing men and women who also differ in terms of competence.

Measuring quality is subjective and complex. First, following [Besley et al. \(2011\)](#), [Besley et al. \(2017\)](#), and [Bo' et al. \(2022\)](#), we use education and occupation as proxies for the quality of politicians (Table B.18). The results remain unchanged once we include these controls. Second, [Frémeaux and Maarek \(2025\)](#) show that women are more likely to author admissible amendments and to defend them in plenary sessions, resulting better probability of passing amendments and suggesting gender differences in quality. Although there are no equivalent indicators for bills, assuming a positive correlation between the quality of amendments and bills, we could infer that the bills authored by women are not of lower quality than those authored by men.

6 Discussion

6.1 Causal effect

So far, we described gender differences in cooperativeness conditional on being in parliament, with and without different sets of controls and by testing several mechanisms. Can we conclude that there is a causal effect of gender? It is difficult to answer with certainty because we can always assume that there are missing variables, particularly with regard to behavioral aspects.

An alternative empirical strategy often used in this literature is to apply a regression discontinuity design (RDD), exploiting close mixed-gender elections.²⁸ The goal is to approximate the random assignment of male and female parliamentarians. The RDD specification is as follows:

$$Y_{dit} = \beta_0 + \beta_1 D_{dit} + \beta_2 f(X_{dit}) + u_{dit} \quad (3)$$

where d refers to the bill/amendment, i denotes the parliamentarian, and t indicates the term. X_{dit} is the running variable, and D_{dit} is equal to 1 if the bill/amendment is authored by a woman. $f(X_{dit})$ is a polynomial function interacting with D_{dit} . The parameter β_1 represents the local average treatment effect (LATE) of electing a woman instead of a man following a close election. In our preferred specification, we follow [Cattaneo et al. \(2020\)](#) by nonparametrically estimating this coefficient with a local linear function and a triangular kernel, and we use their robust bias-correction method for inference.²⁹ For defining the reference bandwidth, we follow the methodology in [Calonico et al. \(2014\)](#).³⁰

Table [C.1](#) presents the RDD estimates and Figures [C.3](#), [C.4](#) and [C.5](#) illustrate the results. Overall, this complementary strategy tends to confirm the results obtained from the multivariate regressions, even though most of the coefficients are not statistically significant. For bills, all the intensive margin results are consistent with those from the full sample, although the estimates are larger in average for the cosponsors recruited. For amendments, the estimate for the cosponsors granted (column 3) is close to that obtained in Table [3](#).

We face several limitations. First, the estimates lack precision due to the limited number of observations around the threshold. Second, we can assume that a bundle of characteristics changes

²⁸See for instance [Lee \(2008\)](#); [Ferreira and Gyourko \(2014\)](#); [Bagues and Campa \(2021\)](#); [Lippmann \(2022\)](#); [Gagliarducci and Paserman \(2022\)](#).

²⁹We also tested several specifications using a uniform kernel function and alternative bandwidth choices (separate MSE-optimal selectors on either side of the cutoff and fixed bandwidths of ± 5 points). Overall, the estimates are consistent with our preferred specification.

³⁰The bandwidths are selected using the Stata package *rdrobust* ([Calonico et al. \(2017\)](#)). All validity tests are presented in Appendix [C](#).

across the threshold. Controlling for observable characteristics, as we did, and implementing RD balance checks could be a solution but not for unobservable characteristics, such as competence for instance.³¹

The main problem with RDDs is their interpretation in our context. As explained by [Marshall \(2024\)](#), RDDs based on close elections are useful for getting at the causal effects of winning vs. not winning an election. But they do not deliver the causal effects of a politician being female vs. male. As a result, when we compare the close female winner to the close male winner, we are not comparing a female candidate with an otherwise-identical male candidate. Instead, we are comparing candidates that have been elected with a narrow margin and with a bundle of observable and unobservable characteristics that changes across the threshold, not just gender.

6.2 Context

Our findings regarding French parliamentarians differ from those in the US context. While in both France and the United States women grant more cosponsorships, they recruit fewer cosponsors for their bills in France than in the United States ([Gagliarducci and Paserman \(2022\)](#)). To what extent can contextual factors explain this difference?

The proportion of female parliamentarians could account for this result. In France, this share averages 36% between 2012 and 2022, compared to 15% in the U.S. House of Representatives between 1988 and 2010 ([Gagliarducci and Paserman \(2022\)](#)), and around 21% between 2011 and 2020 ([Bagues et al. \(2026\)](#)). This higher proportion of women might have a direct effect through peer dynamics; however, we show that this is not the case.

More than the proportion of women, the selection process could play a significant role. In the absence of quotas, one might expect the selection process in the United States to be more stringent, leading to comparisons between women of differing levels of quality.³² While this hypothesis is

³¹See Figures [C.1](#) and [C.2](#)

³²This argument is further supported by the fact that, in [Gagliarducci and Paserman \(2022\)](#), the effect is driven mainly by the Republican Party, where women account for less than 10% of representatives. In the updated analysis

plausible, several issues arise. First, it is difficult to directly measure the quality of parliamentarians both within and across countries. Second, if quality was the sole explanation, one might expect a more symmetrical effect across bills and amendments, which is not observed.

Another major difference is political, as the French Lower House comprises multiple political parties. This has two implications: the political gap between parties is narrower, and governing majorities can be larger in France than in the United States.³³ The first aspect may make it easier to form coalitions with parliamentarians from other parties, but the evidence suggests otherwise, as a higher proportion of cosponsors come from other parties in the United States than in France (27% compared with 15%). Regarding the second aspect, party discipline may be less strict within the majority party, since a bill can pass even without full group support. However, it remains unclear to what extent this greater ease in finding cosponsors benefits women more than men because weaker party discipline can also lead to strategic behavior, which may be more common among men.

Finally, differences in the role of bills and amendments may constitute another distinguishing factor. Although it is difficult to compare the substantive importance of these legislative instruments across the two countries, it is worth noting that the likelihood of a bill becoming law is significantly higher in the United States than in France. Approximately 20% of bills authored by US representatives are passed ([Gagliarducci and Paserman \(2022\)](#)), whereas the figure is below 2% in France. From the perspective of legislative impact, one might therefore question whether American bills are more comparable to French amendments. Even under this comparison, however, the results differ between the two countries.

Ultimately, while the French and American contexts may explain some of the differences between the two countries, the comparison remains complex and would warrant a more in-depth analysis that goes beyond the scope of this paper

of [Bagues et al. \(2026\)](#), the proportion of female representatives is higher and the gender gap is smaller.

³³In France, the president's party held an absolute majority in parliament between 2012 and 2022. In the United States, between 1988 and 2020, there were periods of narrower, more unstable majorities, as well as periods of divided government.

7 Conclusion

This paper examines gender-based differences in cooperativeness among French parliamentarians, offering a novel perspective on how gender dynamics shape legislative processes. Our findings highlight a pronounced asymmetry: female parliamentarians exhibit greater altruistic and cooperative behaviors, such as cosponsoring colleagues' amendments, but receive less reciprocal support on their bills from their peers. This imbalance underscores a critical challenge: while increased female representation enhances the cooperative fabric of legislatures, systemic barriers persist.

The observation of such pronounced gender differences is striking as cosponsorship might be perceived as a visible and low-cost way to demonstrate cooperation and could easily align with collective party strategies. From this perspective, one might have expected little to no gender-based variation. Our findings suggest that in more costly or engaging forms of cooperation, these behavioral differences between men and women could be even more pronounced.

These results have significant implications for policymaking and institutional design. From a broader perspective, the increasing feminization of parliament represents a positive development for political parties, as it brings into their ranks parliamentarians who are more likely to support their colleagues. For women, however, the picture is less encouraging. While quotas have successfully increased female representation, the lack of reciprocity faced by female legislators remains a significant barrier that limits their influence.

Finally, this study raises important questions for future research. How do these gendered patterns of cooperation affect broader policy outcomes? Are similar dynamics observed in other political contexts, such as executive decision-making or local governance? Addressing these questions will be essential for understanding and leveraging the full potential of gender diversity in political institutions.

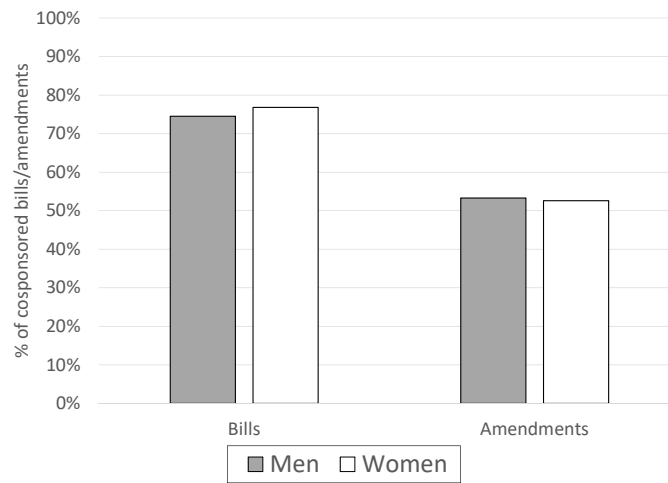
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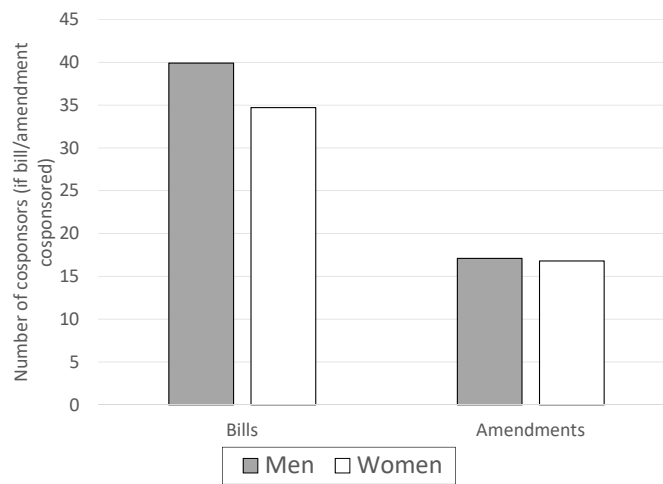
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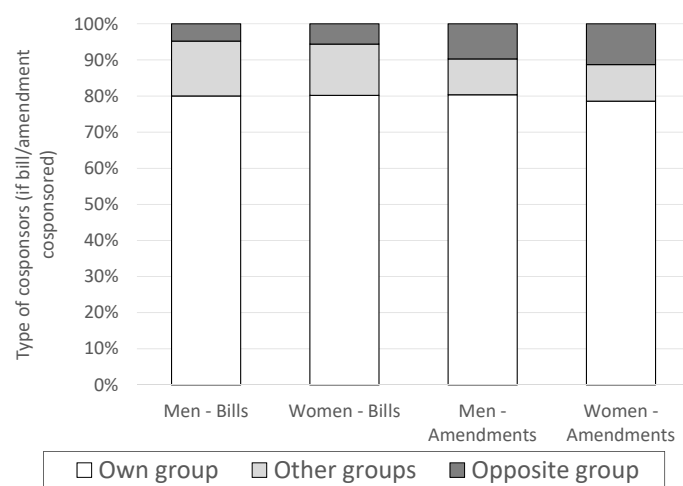
Figure 1: Differences in cosponsors recruited across gender



(a) Share of bills/amendments cosponsored



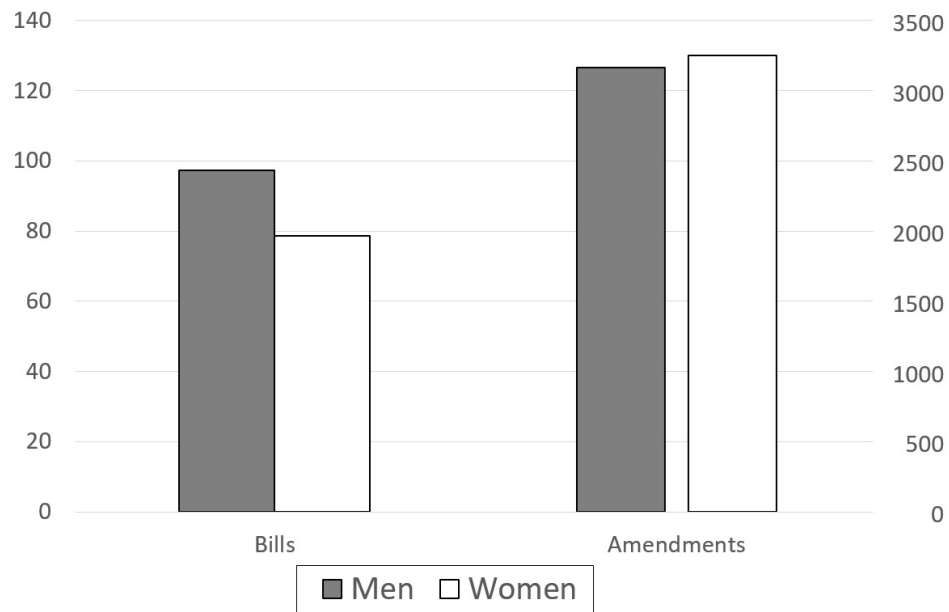
(b) Number of cosponsors recruited



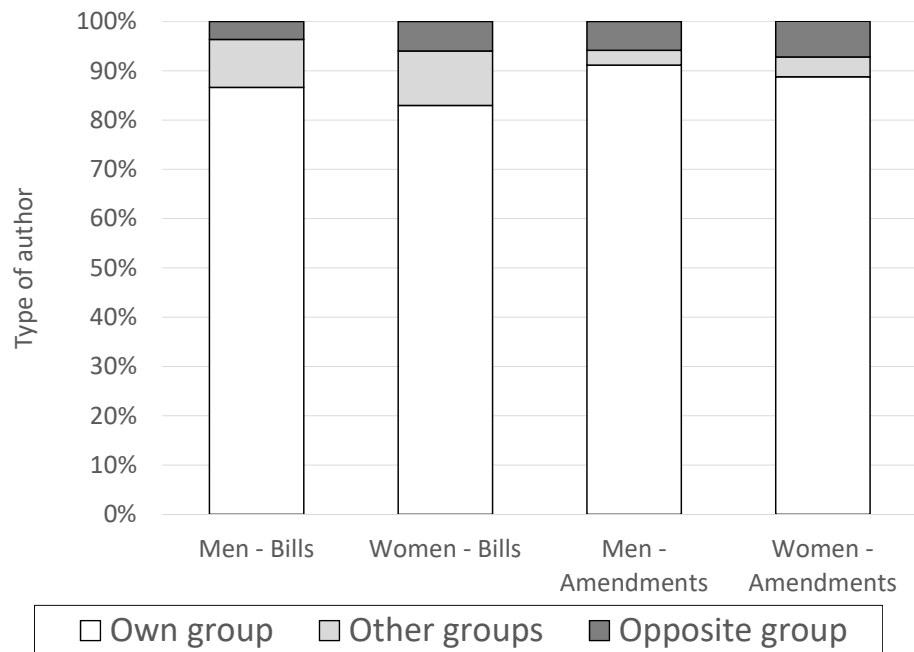
(c) Type of cosponsors recruited

Note: In Figures 1b and 1c, we restrict the sample to bills and amendments with at least one cosponsor.

Figure 2: Differences in cosponsors granted across gender



(a) Number of cosponsors granted



(b) Type of author

Note: for Figure 2a, values for bills can be read on the left-hand axis, for amendments on the right-hand axis

Table 1: Effect of gender on the number of cosponsors recruited

	(1)	(2)	(3)	(4)	(5)
	Cosponsored (=1)	Total number of cosponsors	Nb of cosponsors from own group	Nb of cosponsors from other groups	Nb of cosponsors from opposite group
Panel A: Bills					
Female parl.	-0.079** (0.040)	-6.387** (3.002)	-3.902 (2.603)	-2.485** (1.250)	-0.707 (0.467)
<i>N</i>	3904	2966	2966	2966	2966
Mean dep. var.	0.75	38.8	33.1	5.6	1.7
Relative effect	-10.5%	-16.4%	-11.7%	-44.4%	-41.6%
Panel B: Amendments					
Female parl.	0.018 (0.028)	-0.479 (0.879)	-0.069 (0.856)	-0.409 (0.280)	-0.488* (0.250)
<i>N</i>	450969	238204	238204	238204	238204
Mean dep. var.	0.53	16.9	15.4	1.6	1.3
Relative effect	3.4%	-2.8%	-0.4%	-25.6%	-37.5%
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation. Relative effect is defined as ratio coefficient/mean of dependent variable.

Table 2: Effect of observables on the number of cosponsors recruited

	(1)	(2)	(3)	(4)	(5)	(6)
	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Spec. 6
Panel A: Bills - Cosponsored (=1)						
Female parl.	-0.016 (0.054)	-0.022 (0.056)	-0.058 (0.050)	-0.052 (0.048)	-0.066 (0.041)	-0.079** (0.040)
<i>N</i>	3904	3904	3904	3904	3904	3904
Panel B: Bills - Total nb of cosponsors						
Female parl.	-3.912 (4.165)	-3.618 (4.673)	-3.099 (4.123)	-5.717** (2.890)	-5.727** (2.885)	-6.387** (3.002)
<i>N</i>	2966	2966	2966	2966	2966	2966
Panel C: Amendments - Cosponsored (=1)						
Female parl.	-0.008 (0.039)	0.001 (0.038)	0.011 (0.036)	0.017 (0.030)	0.017 (0.030)	0.018 (0.028)
<i>N</i>	450969	450969	450969	450969	450969	450969
Panel D: Amendments - Total nb of cosponsors						
Female parl.	-0.708 (0.916)	-0.789 (0.938)	-0.670 (0.929)	-0.077 (0.871)	0.005 (0.856)	-0.479 (0.879)
<i>N</i>	238204	238204	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS	OLS
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Age and occupation	No	Yes	Yes	Yes	Yes	Yes
Political exp.	No	No	Yes	Yes	Yes	Yes
Political charact.	No	No	No	Yes	Yes	Yes
Parl. comm.	No	No	No	No	Yes	Yes
Constituency	No	No	No	No	No	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa).

Table 3: Effect of gender on the cosponsors granted

	(1) Number of cosponsors granted All parl.	(2) Number of cosponsors granted Authors only	(3) Nb of cosponsors granted to own gp	(4) Nb of cosponsors granted to other gp	(5) Nb of cosponsors granted to opposite gp
Panel A: Bills					
Female parl.	1.641 (5.300)	-0.837 (9.757)	2.127 (4.805)	-0.486 (1.065)	0.081 (0.512)
<i>N</i>	1139	606	1139	1139	1139
Mean dep. var.	91	127	78	13	4
Relative effect	1.8%	-0.7%	2.7%	-3.7%	2.3%
Panel B: Amendments					
Female parl.	320.1** (144.711)	324.4** (149.058)	298.9** (140.368)	21.25 (35.564)	6.193 (31.299)
<i>N</i>	1140	1101	1140	1140	1140
Mean dep. var.	3085	3195	2789	298	194
Relative effect	10.4%	10.2%	10.4%	7.1%	3.2%
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Notes: standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentarian. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentarian is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation. In column 2, we restrict the sample to parliamentarians who authored/cosponsored at least one bill (Panel A) or one amendment (Panel B). Relative effect is defined as ratio coefficient/mean of dependent variable.

Table 4: Effect of gender on the relationship between parliamentarians

	(1)	(2)	(3)	(4)
	Interactions with other parliamentarians:			% of author's
	Reciprocal	Selfish	Altruistic	initiatives cosponsored
Panel A: Bills				
Female parl.	0.024	-0.017	-0.006	0.021
	(0.017)	(0.021)	(0.028)	(0.013)
<i>N</i>	606	606	606	606
Mean dep. var.	0.30	0.27	0.43	0.25
Panel B: Amendments				
Female parl.	0.025**	-0.004	-0.021	0.011***
	(0.012)	(0.011)	(0.017)	(0.003)
<i>N</i>	1091	1091	1091	1091
Mean dep. var.	0.42	0.24	0.34	0.11
Controls:				
Term f.e.	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes

Notes: standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation. We restrict the sample to parliamentarians who authored at least one bill (Panel A) or one amendment (Panel B)

Table 5: Effect of gender on effectiveness

	(1)	(2)	(3)	(4)	(5)	(6)
	Voted on (=1)	Voted on (=1)	Voted on (=1)	Passed (=1)	Passed (=1)	Passed (=1)
Panel A: Bills						
Female parliamentarian	-0.015 (0.015)	0.001 (0.014)		-0.012* (0.007)	-0.009 (0.006)	
Nb cosponsors		0.002*** (0.000)			0.0004*** (0.000)	
Male $\times$ NoCosponsored			Ref.			Ref.
Female $\times$ NoCosponsored			-0.0098 (0.019)			-0.005 (0.013)
Male $\times$ Cosponsored			0.096*** (0.014)			0.017** (0.007)
Female $\times$ Cosponsored			0.089*** (0.020)			0.005 (0.008)
<i>N</i>	3904	3904	3904	3904	3904	3904
Mean dep. var.		9.7%			1.9%	
Panel B: Amendments						
Female parliamentarian	-0.001 (0.016)	-0.0007 (0.015)		-0.008 (0.012)	-0.008 (0.012)	
Nb cosponsors		0.003*** (0.000)			0.0004*** (0.000)	
Male $\times$ NoCosponsored			Ref.			Ref.
Female $\times$ NoCosponsored			0.011 (0.029)			-0.007 (0.019)
Male $\times$ Cosponsored			0.181*** (0.020)			-0.045*** (0.011)
Female $\times$ Cosponsored			0.167*** (0.021)			-0.053*** (0.015)
<i>N</i>	407448	407448	407448	407448	407448	407448
Mean dep. var.		43.4%			13.7%	
Spec.	OLS	OLS	OLS	OLS	OLS	OLS
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at parliamentarian level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation. In Panel B, we drop the amendments authored by the *rapporteur* of the bill.

A Example of a bill

Figure A.1: Example of a bill with cosponsors on the Lower House website

N° 2997

ASSEMBLÉE NATIONALE

CONSTITUTION DU 4 OCTOBRE 1958

QUINZIÈME LÉGISLATURE

Enregistré à la Présidence de l'Assemblée nationale le 26 mai 2020.


Date

PROPOSITION DE LOI

instaurant un droit à des modalités d'accès non dématérialisées
aux démarches administratives,

Bill's title 

(Renvoyée à la commission des lois constitutionnelles, de la législation et de l'administration générale de la République, à défaut de constitution d'une commission spéciale dans les délais prévus par les articles 30 et 31 du Règlement.)

Author  Cosponsor 1  Cosponsor 2 

présentée par Mesdames et Messieurs

Laurent FURST, Jean-Marie SERMIER, Michèle TABAROT, Jean-Pierre VIGIER, Arnaud VIALA, Robin REDA, Jean-Pierre DOOR, Bernard PERRUT, Marie-Christine DALLOZ, Nathalie BASSIRE, Éric CIOTTI, Nicolas FORISSIER, Patrick HETZEL, Daniel FASQUELLE, Éric STRAUMANN, Gérard CHERPION, Julien AUBERT, Pierre VATIN, Martial SADDIER, Marc LE FUR, Stéphane VIRY, Frédéric REISS, Bérengère POLETTI, Michel HERBILLON,

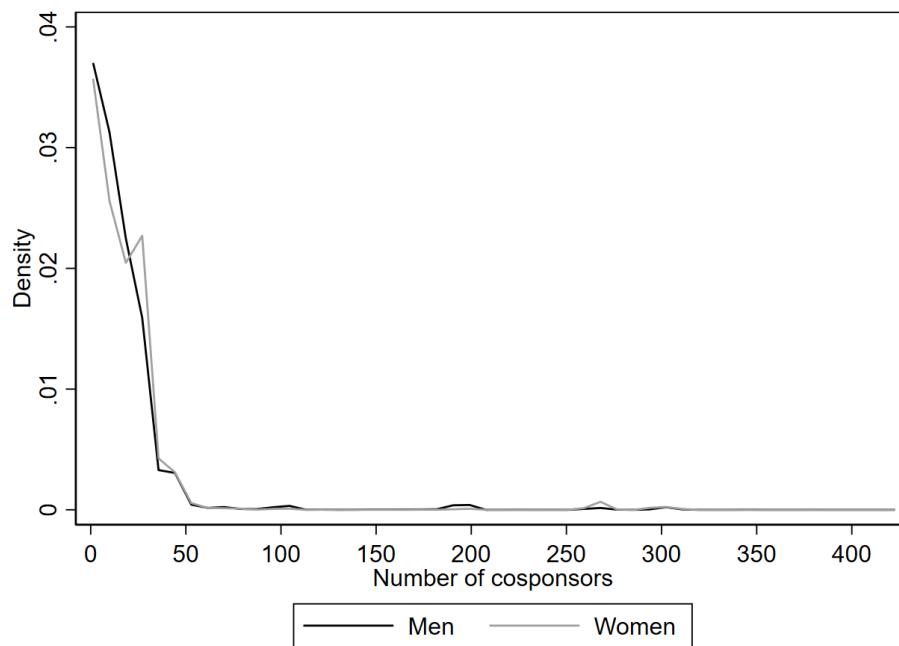
Note: when there is more than one author (less than 4% of all bills), it is explicitly mentioned in the file collected.

B Supplementary results

Figure B.1: Differences in cosponsors recruited across gender (kernel density)



(a) Bills



(b) Amendments

Note: We restrict the sample to bills and amendments with at least one cosponsor.

Table B.1: Characteristics of parliamentarians

	(1) All parl.	(2) Women	(3) Men	(4) = (2) - (3) Difference
Age	55.8	54.0	56.7	-2.7***
Nb of terms served	0.87	0.39	1.12	-0.73***
1st term (%)	0.60	0.76	0.52	0.24***
Governmental experience (%)	0.04	0.02	0.04	-0.02**
Influential positions (%)	0.12	0.11	0.12	-0.01
Left (%)	0.32	0.34	0.31	0.02
Neutral (%)	0.06	0.08	0.05	0.03**
Majority (%)	0.55	0.67	0.50	0.17***
Group size	182	190	178	12*
<i>Parliamentary comm. (%):</i>				
Culture-education	0.12	0.16	0.09	0.06***
Defence	0.12	0.10	0.13	-0.03
Foreign affairs	0.12	0.10	0.13	-0.03
Economy	0.12	0.12	0.12	0.00
Public finances	0.12	0.08	0.13	-0.05***
Environment	0.11	0.11	0.12	-0.01
Social affairs	0.12	0.16	0.09	0.06***
Law	0.12	0.10	0.13	-0.02
<i>Occupation (%):</i>				
Farmer-worker	0.03	0.02	0.03	-0.02*
Self-employed	0.08	0.06	0.09	-0.03*
Executive (private)	0.24	0.24	0.24	0.00
Executive (public)	0.29	0.28	0.30	-0.02
Liberal profession	0.15	0.12	0.17	-0.04**
Executive (retired)	0.07	0.07	0.07	0.00
Intermediate prof.	0.06	0.08	0.05	0.03**
Employee	0.03	0.05	0.02	0.03***
Inactive	0.06	0.09	0.04	0.04
<i>Parliamentary activity (per term):</i>				
N bills authored	2.93	1.80	3.52	-1.71***
N amendments authored	389.1	355.9	406.0	-50.2
N	1,310	446 (34%)	864 (66%)	
incl. authors of bills	644	185 (29%)	459 (71%)	
incl. authors of amendments	1,230	417 (34%)	813 (66%)	

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. % 1st term represents the share of parliamentarians for whom the current term is their first term. Governmental experience represents the share of parliamentarians who have been either minister or secretary of state. Influential positions include president/vice-president/secretary/quaestor of the Lower House as well as president of the parliamentary group/commission.

Table B.2: Cosponsors recruited - Lockdowns and remote work

	(1)	(2)	(3)	(4)	(5)	(6)
	Excluding 2020 Cosponsored (=1)	2020 only Cosponsored (=1)	Lockdowns only Cosponsored (=1)	Excluding 2020 Nb cosponsors	2020 only Nb cosponsors	Lockdowns only Nb cosponsors
Panel A: Bills						
Female parl.	-0.073* (0.043)	-0.091** (0.035)	-0.106** (0.053)	-9.407*** (3.240)	3.445 (6.542)	-2.348 (7.803)
<i>N</i>	3342	535	225	2477	489	240
Mean dep. var.	0.73	0.88	0.85	39.4	35.7	35.8
Panel B: Amendments						
Female parl.	-0.006 (0.026)	0.057* (0.030)	0.059 (0.046)	-0.519 (0.895)	0.389 (1.290)	0.698 (1.922)
<i>N</i>	344244	106725	16368	204748	33456	10925
Mean dep. var.	0.60	0.32	0.69	16.6	19.1	20.5
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentarian level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Lockdown only” include the bills/amendments registered during the lockdown periods: March-June 2020 and November 2020.

Table B.3: Cosponsors recruited - Extensive and intensive margins combined

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Spec. 6	Spec. 7
Panel A: Bills - Number of cosponsors							
Female parl.	-3.773 (4.432)	-3.577 (3.814)	-6.380 (4.186)	-7.493** (3.400)	-6.934** (3.055)	-7.275** (3.181)	-8.830*** (3.255)
<i>N</i>	3904	3904	3904	3898	3898	3898	3898
Panel B: Amendments - Number of cosponsors							
Female parl.	-0.339 (0.870)	-0.518 (0.862)	-0.137 (0.812)	0.462 (0.693)	0.449 (0.692)	0.464 (0.679)	0.285 (0.646)
<i>N</i>	450969	450969	450969	450969	450969	450969	450969
Controls:							
Term f.e.	No	Yes	Yes	Yes	Yes	Yes	Yes
Experience	No	No	Yes	Yes	Yes	Yes	Yes
Political	No	No	No	Yes	Yes	Yes	Yes
Parl. comm.	No	No	No	No	Yes	Yes	Yes
Occupation	No	No	No	No	No	Yes	Yes
Constituency	No	No	No	No	No	No	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. We set the number of cosponsors to 0 when the bill/amendment is not cosponsored.

Table B.4: Cosponsors recruited - Effect of observables (continued)

	(1)	(2)	(3)	(4)	(5)	(6)
	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Spec. 6
Panel A: Bills - Nb of cosponsors from own group						
Female parl.	-3.056 (4.110)	-2.631 (4.614)	-2.098 (3.936)	-3.627 (2.519)	-3.287 (2.628)	-3.902 (2.603)
<i>N</i>	2966	2966	2966	2966	2966	2966
Panel B: Bills - Nb of cosponsors from other groups						
Female parl.	-0.855 (1.332)	-0.987 (1.386)	-1.000 (1.450)	-2.090* (1.236)	-2.440* (1.247)	-2.485** (1.250)
<i>N</i>	2966	2966	2966	2966	2966	2966
Panel C: Bills - Nb of cosponsors from opposite group						
Female parl.	-0.213 (0.473)	-0.345 (0.515)	-0.292 (0.508)	-0.719 (0.439)	-0.662 (0.463)	-0.707 (0.467)
<i>N</i>	2966	2966	2966	2966	2966	2966
Panel D: Amendments - Nb of cosponsors from own group						
Female parl.	-0.850 (0.985)	-0.981 (0.997)	-0.932 (0.972)	0.253 (0.862)	0.375 (0.849)	-0.0699 (0.856)
<i>N</i>	238204	238204	238204	238204	238204	238204
Panel E: Amendments - Nb of cosponsors from other groups						
Female parl.	0.142 (0.363)	0.192 (0.354)	0.262 (0.308)	-0.330 (0.256)	-0.370 (0.269)	-0.409 (0.280)
<i>N</i>	238204	238204	238204	238204	238204	238204
Panel F: Amendments - Nb of cosponsors from opposite group						
Female parl.	0.113 (0.336)	0.128 (0.327)	0.136 (0.271)	-0.390* (0.235)	-0.440* (0.249)	-0.488* (0.250)
<i>N</i>	238204	238204	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS	OLS
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Age and occupation	No	Yes	Yes	Yes	Yes	Yes
Political exp.	No	No	Yes	Yes	Yes	Yes
Political charact.	No	No	No	Yes	Yes	Yes
Parl. comm.	No	No	No	No	Yes	Yes
Constituency	No	No	No	No	No	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa).

Table B.5: Cosponsors recruited - Newcomer and experienced parliamentarians

	(1) Cosponsored (=1)	(2) Total number of cosponsors	(3) Nb of cosponsors from own group	(4) Nb of cosponsors from other groups	(5) Nb of cosponsors from opposite group
Panel A: Bills					
Male × Experienced	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Newcomer	0.021 (0.042)	-6.391 (4.344)	-6.442 (4.191)	0.0508 (1.174)	-0.975** (0.451)
Female × Experienced	-0.045 (0.079)	-8.446* (4.539)	-6.684* (3.704)	-1.762 (2.103)	-1.090* (0.555)
Female × Newcomer	-0.008 (0.057)	-11.47** (4.591)	-8.421* (4.412)	-3.052** (1.306)	-1.450** (0.684)
<i>Female - male newcomer</i>	<i>-0.029</i>	<i>-5.079</i>	<i>-1.979</i>	<i>-3.103**</i>	<i>-0.475</i>
<i>N</i>	3904	2966	2966	2966	2966
Panel B: Amendments					
Male × Experienced	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Newcomer	0.025 (0.034)	1.279 (1.311)	1.999 (1.281)	-0.720** (0.356)	-0.567 (0.350)
Male × Experienced	0.121** (0.051)	1.033 (1.702)	1.759 (1.666)	-0.727** (0.341)	-0.749** (0.356)
Female × Newcomer	0.003 (0.036)	0.307 (1.356)	1.398 (1.301)	-1.091** (0.540)	-1.012* (0.528)
<i>Female - male newcomer</i>	<i>-0.022</i>	<i>-0.972</i>	<i>-0.601</i>	<i>-0.371</i>	<i>-0.445</i>
<i>N</i>	450969	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.6: Cosponsors recruited - Newcomer and experienced parliamentarians (by sub-periods)

	(1) Beginning Cosponsored (=1)	(2) Middle Cosponsored (=1)	(3) End Cosponsored (=1)	(4) Beginning Total nb of cosponsors	(5) Middle Total nb of cosponsors	(6) End Total nb of cosponsors
Panel A: Bills						
Male × Experienced	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Newcomer	0.118** (0.059)	0.009 (0.040)	-0.027 (0.056)	3.385 (4.203)	-9.190* (5.488)	-11.66 (8.386)
Female × Experienced	-0.017 (0.085)	-0.027 (0.075)	-0.068 (0.107)	-0.468 (4.924)	-13.66*** (5.061)	-6.311 (9.513)
Female × Newcomer	0.109 (0.089)	-0.050 (0.057)	-0.058 (0.077)	-4.400 (4.626)	-12.85** (6.306)	-18.53** (9.234)
<i>Female - male newcomer</i>	<i>-0.009</i>	<i>-0.059</i>	<i>-0.031</i>	<i>-7.785</i>	<i>-3.660</i>	<i>-6.87</i>
<i>N</i>	1343	1516	1045	969	1242	755
Panel B: Amendments						
Male × Experienced	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Newcomer	0.115*** (0.034)	0.002 (0.038)	0.026 (0.038)	1.810 (1.874)	0.176 (1.509)	2.496 (2.021)
Male × Experienced	0.035 (0.050)	0.135** (0.057)	0.055 (0.056)	1.637 (1.654)	0.857 (1.918)	0.824 (2.404)
Female × Newcomer	0.088** (0.039)	0.006 (0.041)	0.007 (0.043)	-0.623 (2.027)	-1.120 (1.610)	2.235 (1.860)
<i>Female - male newcomer</i>	<i>-0.027</i>	<i>0.004</i>	<i>-0.019</i>	<i>-2.433</i>	<i>-1.296</i>	<i>-0.261</i>
<i>N</i>	112856	234506	103602	66535	110788	60881
Spec.	OLS	OLS	OLS	OLS	OLS	OLS
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors clustered at parliamentarian level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Beginning” refers to the first 18 months of the term, “end” to the last 18 months of the term and “Middle” to the 2 years between the beginning and the end. Control variables about individual characteristics include: political characteristics, parliamentary commission and occupation.

Table B.7: Cosponsors recruited - Estimates without outliers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Without top 5% authors Cosponsored (=1)	Total number of cosponsors	Without presidents of pol. gp Cosponsored (=1)	Total number of cosponsors	Without influential positions Cosponsored (=1)	Total number of cosponsors	Without influential positions and former ministers Cosponsored (=1)	Total number of cosponsors
Panel A: Bills								
Female parl.	0.0174 (0.028)	-4.969 (3.390)	-0.0806** (0.040)	-5.643* (3.099)	-0.0850** (0.042)	-5.992** (2.988)	-0.0875** (0.043)	-6.032* (3.170)
<i>N</i>	2809	2224	3780	2860	3286	2489	3228	2442
Panel B: Amendments								
Female parl.	0.0693*** (0.024)	-0.845 (1.017)	0.0106 (0.028)	-0.919 (0.891)	0.0200 (0.029)	-0.612 (0.956)	0.0194 (0.029)	-0.625 (0.975)
<i>N</i>	297385	171322	438953	230871	380339	195107	372015	190989
Spec.	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Controls:								
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.8: Cosponsors recruited - Share (%) instead of nb of parliamentarians

	(1)	(2)	(3)	(4)
	All bills/amend.		Cosponsored bills/amend.	
	% of own gp having cosponsored	% of own gp having cosponsored	% of other gp among cosp.	% of opposite gp among cosp.
Panel A: Bills				
Female parl.	-0.045** (0.021)	-0.031* (0.018)	-0.015 (0.016)	-0.0099 (0.011)
N	3517	2752	2752	2752
adj. R^2	0.379	0.433	0.428	0.313
Mean dep. var.	0.28	0.36	0.12	0.05
Panel B: Amendments				
Female parl.	0.007 (0.016)	-0.004 (0.013)	-0.028** (0.012)	-0.029** (0.012)
N	419683	223158	223158	223158
adj. R^2	0.231	0.603	0.261	0.282
Mean dep. var.	0.17	0.32	0.08	0.09
Spec.	OLS	OLS	OLS	OLS
Controls:				
Term f.e.	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. We exclude parliamentarians who do not belong to any political group (*non-inscrits*). In columns 2, 3 and 4, we restrict the sample to bills and amendments that are cosponsored.

Table B.9: Cosponsors granted - Effect of observables on cosponsors granted

	(1)	(2)	(3)	(4)	(5)	(6)
	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Spec. 6
Panel A: Bills						
Female parl.	-22.96*** (7.064)	-19.24*** (7.065)	-8.335 (6.928)	2.262 (5.051)	0.862 (5.282)	1.641 (5.252)
<i>N</i>	1139	1139	1139	1139	1139	1139
Panel B: Amendments						
Female parl.	-280.5 (212.832)	-254.9 (219.329)	-65.11 (223.027)	376.2** (152.354)	334.3** (152.840)	320.1** (153.416)
<i>N</i>	1140	1140	1140	1140	1140	1140
Spec.	OLS	OLS	OLS	OLS	OLS	OLS
Controls:						
Term f.e.	Yes	Yes	Yes	Yes	Yes	Yes
Age and occupation	No	Yes	Yes	Yes	Yes	Yes
Political exp.	No	No	Yes	Yes	Yes	Yes
Political charact.	No	No	No	Yes	Yes	Yes
Parl. comm.	No	No	No	No	Yes	Yes
Constituency	No	No	No	No	No	Yes

Notes: standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B.10: Cosponsors granted - Newcomer and experienced parliamentarians (by sub-periods)

	(1) Beginning Cosponsors granted	(2) Middle Cosponsors granted	(3) End Cosponsors granted
Panel A: Bills			
Male $\times$ Experienced	Ref.	Ref.	Ref.
Male $\times$ Newcomer	-1.009 (2.608)	-3.602 (3.370)	1.118 (1.665)
Female $\times$ Experienced	1.244 (3.535)	-3.430 (4.568)	-0.963 (2.256)
Female $\times$ Newcomer	-2.760 (2.901)	-2.136 (3.749)	3.617* (1.852)
<i>Female - male newcomer</i>	<i>-1.751</i>	<i>1.466</i>	<i>2.499*</i>
<i>N</i>	1139	1139	1139
Panel B: Amendments			
Male $\times$ Experienced	Ref.	Ref.	Ref.
Male $\times$ Newcomer	51.37** (24.557)	176.6*** (48.414)	53.66*** (18.344)
Male $\times$ Experienced	-3.278 (33.289)	-47.30 (65.627)	4.823 (24.867)
Female $\times$ Newcomer	74.19*** (27.317)	234.3*** (53.855)	81.87*** (20.406)
<i>Female - male newcomer</i>	<i>22.8</i>	<i>57.7</i>	<i>28.2</i>
<i>N</i>	1140	1140	1140
Spec.	OLS	OLS	OLS
Controls:			
Term f.e.	Yes	Yes	Yes
Individual	Yes	Yes	Yes
Constituency	Yes	Yes	Yes

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. ‘Beginning’ refers to the first 18 months of the term, ‘end’ to the last 18 months of the term and ‘Middle’ to the 2 years between the beginning and the end. Control variables about individual characteristics include: political characteristics, parliamentary commission and occupation.

Table B.11: Cosponsors granted - Estimates without outliers

	(1)	(2)	(3)
	With most active cosponsors (top 5%)	Without presidents of pol. gp.	Without influential positions
Panel A: Bills			
Female parl.	0.138 (3.204)	2.336 (5.315)	2.681 (5.649)
N	1076	1125	989
adj. R^2	0.460	0.463	0.444
Mean dep. var.	75	95	95
Panel B: Amendments			
Female parl.	218.6** (107.985)	314.2** (144.823)	367.0** (156.347)
N	1076	1126	990
adj. R^2	0.649	0.614	0.607
Mean dep. var.	2713	3169	3167
Spec.	OLS	OLS	OLS
Controls:			
Term f.e.	Yes	Yes	Yes
Individual	Yes	Yes	Yes
Constituency	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. In columns 3 and 4, we restrict the sample to bills and amendments that are cosponsored.

Table B.12: Effect of gender on votes

	(1)	(2)	(3)	(4)	(5)
	Number of votes All	Number of votes RDD	Deviation from group's majority (%) All votes	Deviation from group's majority (%) Serious deviations	Deviation from group's majority (%) Government
Female parl.	41.16** (16.556)	-31.59 (44.993)	0.002 (0.005)	-0.0008 (0.002)	0.0002 (0.004)
<i>N</i>	1158	228	1158	1158	1156
Mean dep. var.	436		0.052	0.023	0.039
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Notes: standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. In column 4, we focus on serious deviations (i.e., vote “for” while the group votes “against”). and vice-versa. In column 5, we focus on the bills initiated by the government. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.13: Cosponsors recruited - Majority and opposition groups

	(1)	(2)	(3)	(4)	(5)
	Cosponsored (=1)	Total number of cosponsors	Nb of cosponsors from own group	Nb of cosponsors from other groups	Nb of cosponsors from opposite group
Panel A: Bills					
Male $\times$ Opposition	Ref.	Ref.	Ref.	Ref.	Ref.
Male $\times$ Majority	-0.058 (0.071)	28.90*** (9.916)	7.904 (6.787)	21.00*** (6.313)	5.163*** (1.713)
Female $\times$ Opposition	-0.103** (0.045)	-3.519 (2.328)	-2.695 (2.106)	-0.824 (1.009)	0.115 (0.356)
Female $\times$ Majority	-0.028 (0.080)	8.982 (10.185)	-1.463 (7.971)	10.44* (5.342)	0.376 (2.045)
<i>Diff female - male majority</i>	<i>0.030</i>	<i>-19.918</i>	<i>-9.367</i>	<i>-10.560**</i>	<i>-4.787**</i>
<i>N</i>	3904	2966	2966	2966	2966
Panel B: Amendments					
Male $\times$ Opposition	Ref.	Ref.	Ref.	Ref.	Ref.
Male $\times$ Majority	0.063* (0.034)	1.420 (1.320)	-1.618 (1.368)	3.039*** (0.706)	3.119*** (0.689)
Female $\times$ Opposition	-0.006 (0.039)	-2.483** (1.211)	-3.086** (1.263)	0.603* (0.360)	0.518 (0.326)
Female $\times$ Majority	0.123*** (0.138)	2.285 (1.447)	0.332 (1.511)	1.953*** (0.456)	1.773*** (0.362)
<i>Diff female - male majority</i>	<i>0.059*</i>	<i>0.865</i>	<i>1.950</i>	<i>-1.806*</i>	<i>-1.346**</i>
<i>N</i>	450969	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.14: Cosponsors recruited - Control for topics

	(1) Cosponsored (=1)	(2) Total number of cosponsors	(3) Nb of cosponsors from own group	(4) Nb of cosponsors from other groups	(5) Nb of cosponsors from opposite group
Panel A: Bills					
Female parl.	-0.077* (0.040)	-6.896** (3.064)	-4.412* (2.677)	-2.484** (1.210)	-0.702 (0.437)
<i>N</i>	3904	2966	2966	2966	2966
Panel B: Amendments					
Female parl.	0.016 (0.025)	-0.553 (0.844)	-0.142 (0.826)	-0.411 (0.277)	-0.482* (0.247)
<i>N</i>	450969	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes
Topics	Yes	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. “Other groups” means than the cosponsors come from a group other than that of the parliamentary. “Opposite group” means than the cosponsor’ group does not have the same political orientation (i.e. it belongs to the majority if the parliamentary is in the opposition group and vice-versa). Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.15: Cosponsors recruited - Bills and amendments about women, health and child issues

	(1) Cosponsored (=1)	(2) Total number of cosponsors	(3) Nb of cosponsors from own group	(4) Nb of cosponsors from other groups	(5) Nb of cosponsors from opposite group
Panel A: Bills					
Male × Other issues	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Women's issues [1]	-0.017 (0.022)	3.640 (2.666)	3.394 (2.334)	0.245 (0.818)	-0.221 (0.273)
Female × Other issues [2]	-0.094** (0.043)	-6.171* (3.225)	-3.465 (2.789)	-2.705** (1.333)	-0.920* (0.505)
Female × Women's issues [3]	-0.045 (0.038)	-4.554 (3.773)	-2.881 (3.258)	-1.672 (1.681)	-0.230 (0.709)
[3] - [1]	-0.028	-8.194**	-6.275*	-1.917	-0.009
[3] - [2]	0.050*	1.617	-0.584	1.033	0.690
<i>N</i>	3904	2966	2966	2966	2966
Panel B: Amendments					
Male × Other issues	Ref.	Ref.	Ref.	Ref.	Ref.
Male × Women's issues [1]	0.005 (0.014)	-0.067 (0.637)	0.005 (0.629)	-0.072 (0.076)	-0.156*** (0.056)
Female × Other issues [2]	-0.0005 (0.029)	-0.798 (0.909)	-0.296 (0.881)	-0.502* (0.296)	-0.523* (0.270)
Female × Women's issues [3]	0.068** (0.031)	0.203 (1.016)	0.461 (0.997)	-0.258 (0.307)	-0.548** (0.249)
[3] - [1]	0.063***	0.270	0.456	-0.186	-0.392
[3] - [2]	0.067***	1.001**	0.757	0.244	-0.025
<i>N</i>	450969	238204	238204	238204	238204
Spec.	OLS	OLS	OLS	OLS	OLS
Controls:					
Term f.e.	Yes	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Control variables about individual characteristics include: political characteristics, parliamentary commission and occupation. Women's issues include the topics that are more prevalent among female parliamentarians: women, children, and health issues.

Table B.16: Cosponsors recruited - Gender composition of the political group

	(1) Share of women among cosponsors	(2) Cosponsored (=1)	(3) Total number of cosponsors	(4) Nb of cosponsors from own group
Panel A: Bills				
Female parl.	0.010 (0.009)	-0.056 (0.058)	-2.139 (4.575)	-1.130 (3.996)
Nb women in political group		-0.001 (0.001)	0.256 (0.177)	0.396*** (0.143)
Female parl. × Nb women in gp		-0.0003 (0.001)	-0.137 (0.153)	-0.111 (0.141)
<i>N</i>	2752	3517	2752	2752
Mean dep. var.	0.26			
Panel B: Amendments				
Female parl.	0.048*** (0.009)	0.019 (0.038)	-1.650 (1.293)	-2.168* (1.246)
Nb women in political group		0.005*** (0.001)	-0.006 (0.051)	0.033 (0.050)
Female parl. × Nb women in gp		0.0004 (0.000)	0.021 (0.019)	0.038** (0.017)
<i>N</i>	223158	419683	223158	223158
Mean dep. var.	0.38			
Spec.	OLS	OLS	OLS	OLS
Controls:				
Term f.e.	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation. The unaffiliated parliamentarians (*non-inscrits*) are excluded.

Table B.17: Cosponsors recruited - Experience and influential positions

	(1)	(2)	(3)	(4)
	% of experienced cosponsors	% of cosponsors with influential pos.	Total number of cosponsors	Nb of cosponsors from own group
Panel A: Bills				
Female parl.	0.023 (0.016)	0.002 (0.009)	-7.621* (4.601)	-4.773 (3.814)
% of cosponsors with influential pos.			-22.16 (13.956)	-13.77 (12.342)
Female parl. × % influential pos.			9.618 (23.685)	6.765 (20.732)
<i>N</i>	2966	2966	2966	2966
Mean dep. var.	0.47	0.13		
Panel B: Amendments				
Female parl.	-0.019 (0.020)	0.004 (0.007)	-2.274** (0.977)	-1.761* (0.927)
% of cosponsors with influential pos.			-2.912 (3.136)	-5.575* (3.049)
Female parl. × % influential pos.			14.42*** (4.208)	13.67*** (3.977)
<i>N</i>	238204	238204	238204	238204
Mean dep. var.	0.53	0.13		
Spec.	OLS	OLS	OLS	OLS
Controls:				
Term f.e.	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. We restrict the sample to bills/amendments cosponsored. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

Table B.18: Cosponsors recruited - Control for parliamentarians' occupation and education

	(1)	(2)	(3)	(4)
	Baseline w/o occupation	Baseline with occupation	Baseline with education	Baseline with occ. and educ.
Panel A: Bills - Cosponsored (=1)				
Female parl.	-0.077** (0.037)	-0.079** (0.040)	-0.086** (0.039)	-0.091** (0.042)
<i>N</i>	3904	3904	3904	3904
Panel B: Bills - Total nb of cosponsors				
Female parl.	-6.300** (2.861)	-6.387** (3.002)	-5.648* (2.908)	-5.963* (3.036)
<i>N</i>	2966	2966	2966	2966
Panel C: Amendments - Cosponsored (=1)				
Female parl.	0.015 (0.029)	0.018 (0.028)	0.011 (0.028)	0.014 (0.027)
<i>N</i>	450969	450969	449560	449560
Panel D: Amendments - Total nb of cosponsors				
Female parl.	-0.372 (0.849)	-0.479 (0.879)	-0.168 (0.828)	-0.371 (0.857)
<i>N</i>	238204	238204	238128	238128
Controls:				
Term f.e.	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes
Constituency	Yes	Yes	Yes	Yes

Notes: standard errors clustered at parliamentary level in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Control variables about individual characteristics include: experience, political characteristics and parliamentary commission.

C RDD - Internal validity tests and supplementary results

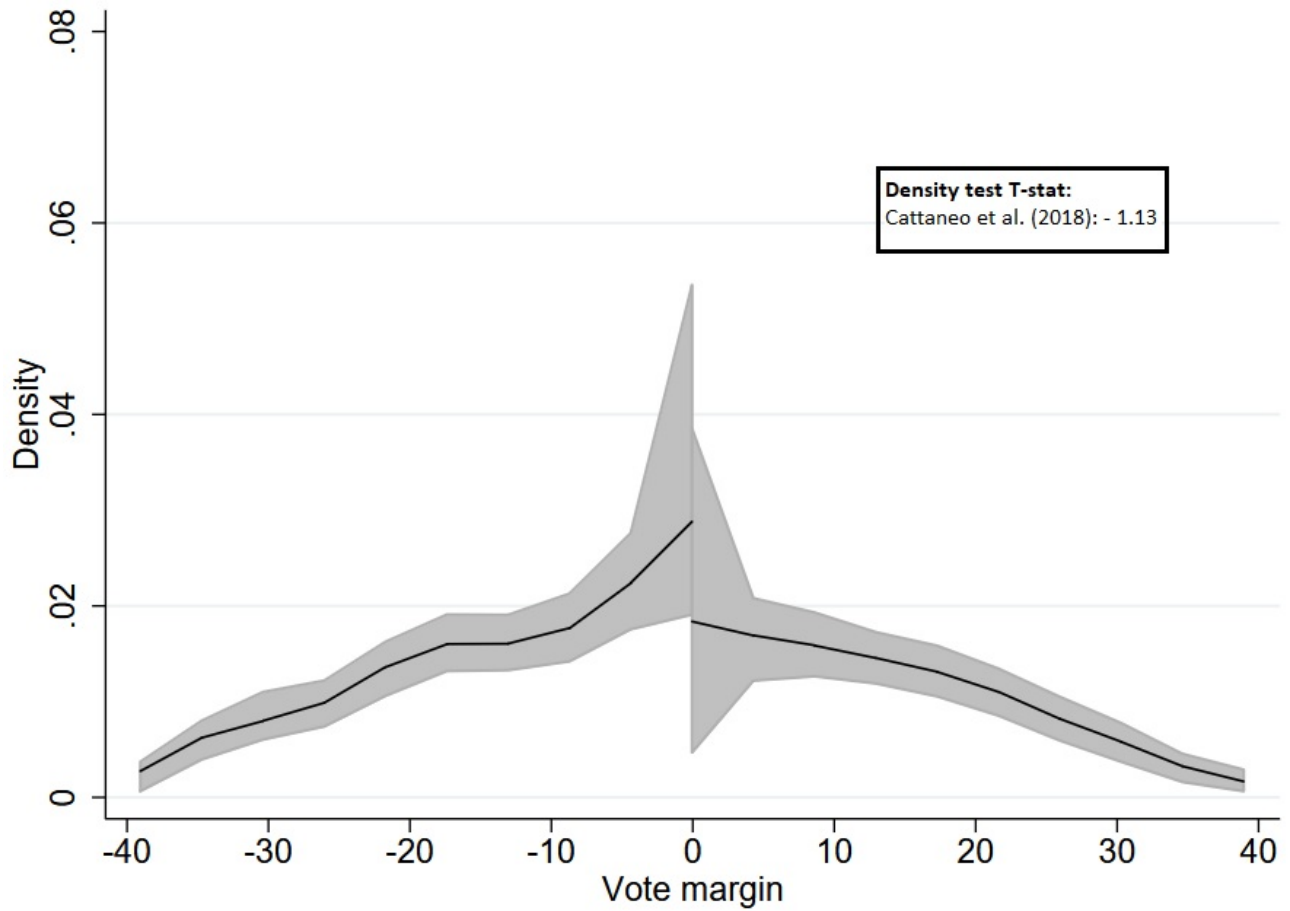
In approximately half of all parliamentary elections, the second round opposes a male and a female candidate (272 elections in 2012-2017 and 293 elections in 2017-2022). The number of close elections depends on the bandwidth chosen. Among the elections with a second round opposing a male and a female candidate, 212 (resp. 111) present a gap of less than 10 points (resp. 5 points) between the winner and the contestant.

Our empirical strategy is valid as long as there is no manipulation around the threshold. Figure C.1 shows that male candidates are slightly more likely to win against female candidates. However, following Cattaneo et al. (2020), we test whether there is a manipulation: we do not reject the null hypothesis of no manipulation.

Moreover, to be valid, we also need to test the continuity of the main confounders to check whether male and female parliamentarians close to each side of the threshold are comparable.³⁴ In Figure C.2, we report the outcomes of a local linear regression, estimated separately on each side of the threshold. We find a statistically significant gap for the parliamentary experience (number of terms served) and for political characteristics (belonging to the majority group and to a left party). For parliamentary experience, the gap is not affected by the distance to the threshold, as a difference is also found for the parliamentarians elected by a wider margin. Therefore, the parliamentarians close to the cutoff do not differ from those of the full sample, which is crucial when interpreting the results. To solve this issue, we thus include control variables about experience and political characteristics in our RDD analysis. For all the other characteristics depicted (size of the political group, occupation and top positions in the Lower House), we do not detect any statistically significant difference around the threshold. The absence of difference in past occupation seems to suggest that there is no selection effect linked to the massive entry of women into the profession.

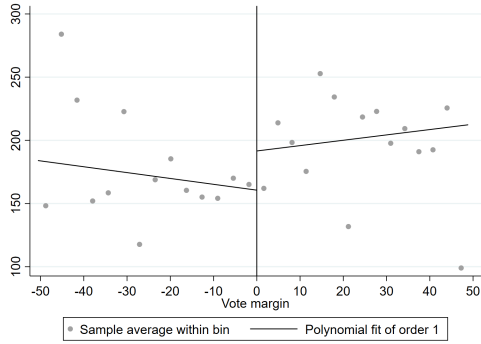
³⁴We focus on characteristics that are significantly correctly to cosponsorship.

Figure C.1: Manipulation test

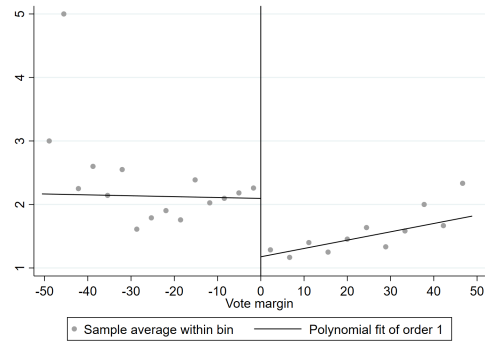


Note: We restrict the sample to elections for which a second round between a male and a female candidate has been organized. The x-axis represents the vote margin for the female candidate. On the right-hand side of the vertical line, a woman is elected, and on the left-hand side, a man is elected.

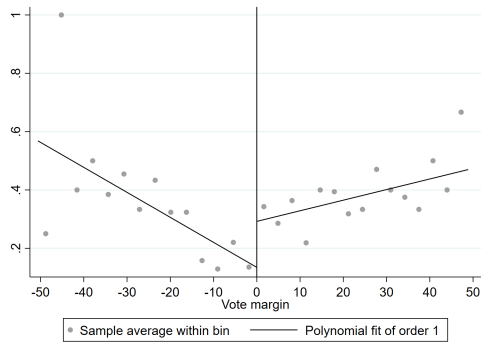
Figure C.2: RDD plots - Continuity assumption



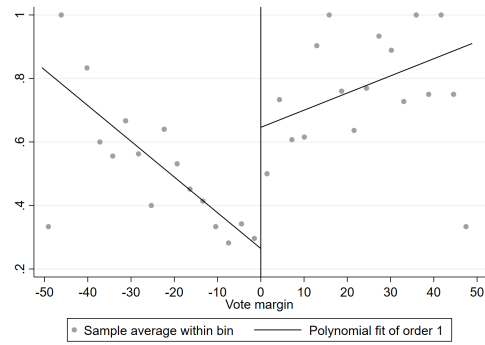
(a) Group size



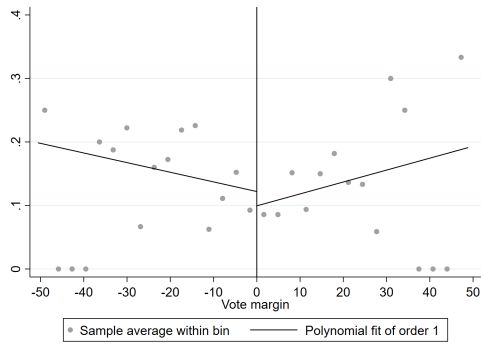
(b) Parl. experience (number of terms)



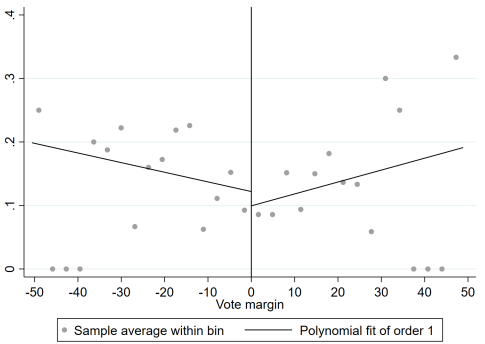
(c) Left parties (%)



(d) Majority group



(e) Influential positions (%)



(f) High-skilled occupations (%)

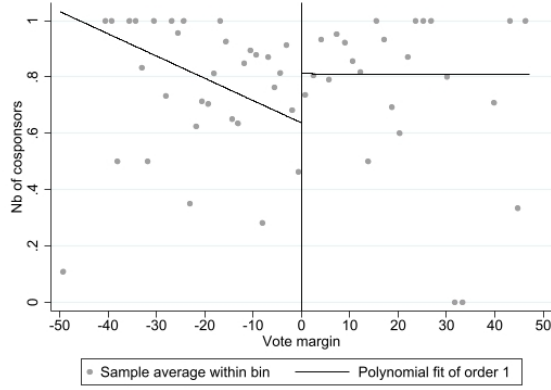
Note: We restrict the sample to elections for which a second round between a male and a female candidate has been organized. The solid lines represent a first-order polynomial. The vertical lines capture the discontinuity point at zero. The x-axis represents the vote margin for the female candidate. On the right-hand side of the vertical line, a woman is elected, and on the left-hand side, a man is elected. High-skilled occupation = former or current liberal professions and executives (from the public or private sectors). Influential positions = president/vice-president/secretary/quaestor of the Lower House, head of political group, head of parliamentary commission.

Table C.1: RDD - Effect of gender on the number of cosponsors recruited and granted

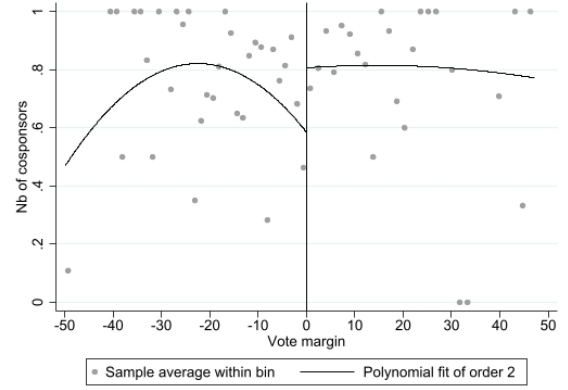
	(1)	(2)	(3)
	Cosponsors recruited (= 1)	Nb of cosponsors recruited	Nb of cosponsors granted
Panel A: Bills			
Female parl.	-0.222 (-1.188)	-19.721* (-1.838)	-3.989 [20.029]
<i>N</i>	388	256	213
Panel B: Amendments			
Female parl.	-0.091 (-1.251)	-2.346 (-0.852)	341.43 [592.38]
<i>N</i>	47,322	34,425	313
Controls:			
Term f.e.	Yes	Yes	Yes
Individual	Yes	Yes	Yes

Notes: z-stat clustered at parliamentary level in parentheses; standard error clustered at parliamentary level in brackets; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. In columns 1 and 2, the number of observations corresponds to the number of bills or amendments. In column 3, it represents the number of parliamentarians. Control variables about individual characteristics include: experience, political characteristics, parliamentary commission and occupation.

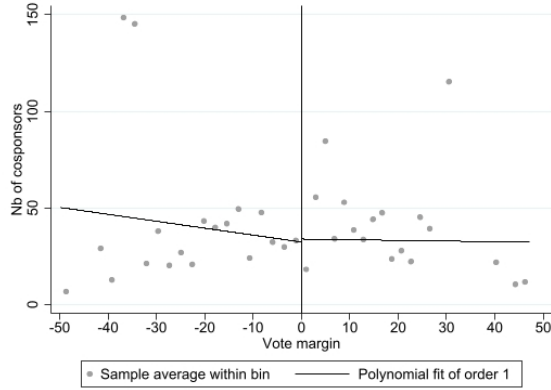
Figure C.3: RDD plots - Cosponsors recruited - Bills



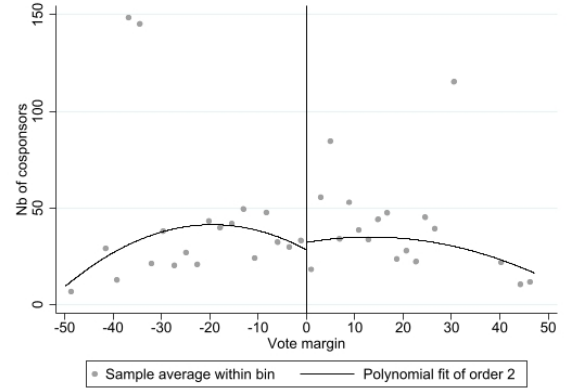
(a) Extensive margin - 1st order polynomial



(b) Extensive margin - 2nd order polynomial



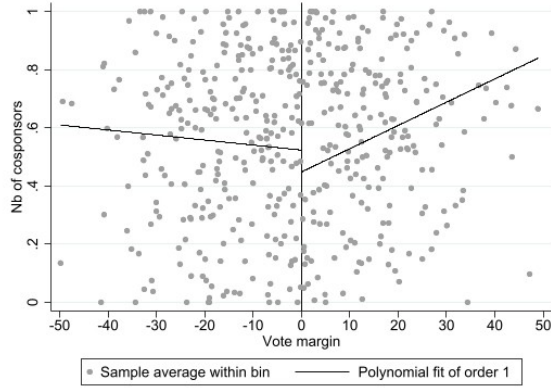
(c) Intensive margin - 1st order polynomial



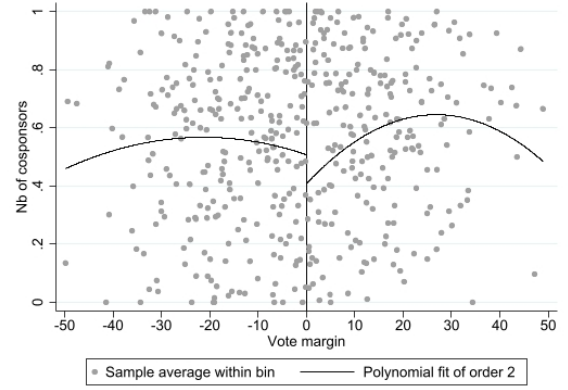
(d) Intensive margin - 2nd order polynomial

Note: We restrict the sample to elections for which a second round between a male and a female candidate has been organized. The vertical lines capture the discontinuity point at zero. The x-axis represents the vote margin for the female candidate. On the right-hand side of the vertical line, a woman is elected, and on the left-hand side, a man is elected. We use a triangular kernel in all specifications.

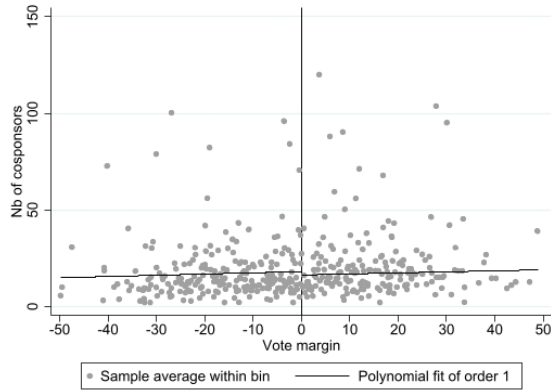
Figure C.4: RDD plots - Cosponsors recruited - Amendments



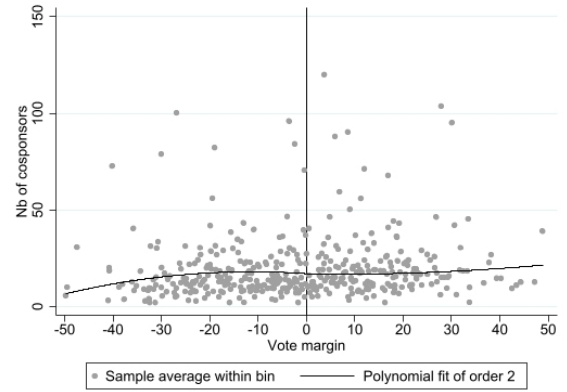
(a) Extensive margin - 1st order polynomial



(b) Extensive margin - 2nd order polynomial



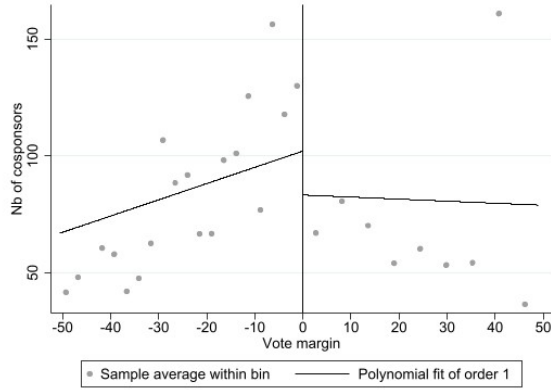
(c) Intensive margin - 1st order polynomial



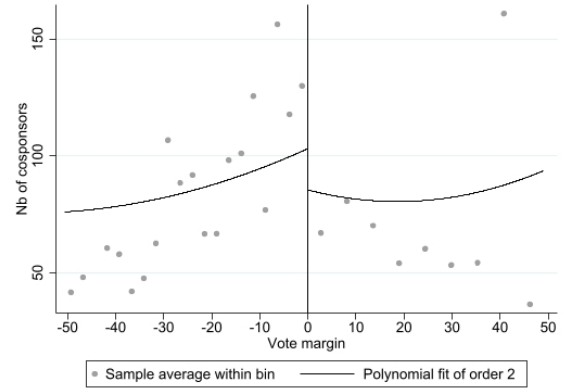
(d) Intensive margin - 2nd order polynomial

Note: We restrict the sample to elections for which a second round between a male and a female candidate has been organized. The vertical lines capture the discontinuity point at zero. The x-axis represents the vote margin for the female candidate. On the right-hand side of the vertical line, a woman is elected, and on the left-hand side, a man is elected. We use a triangular kernel in all specifications.

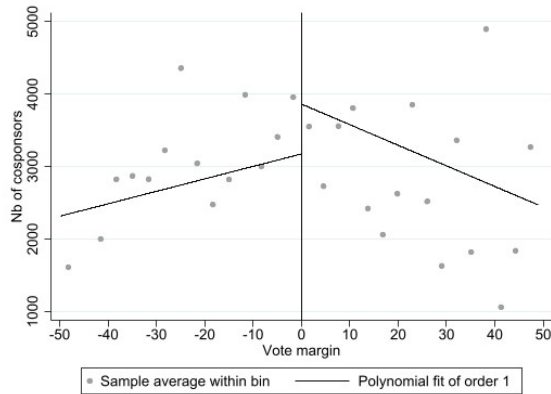
Figure C.5: RDD plots - Cosponsors granted



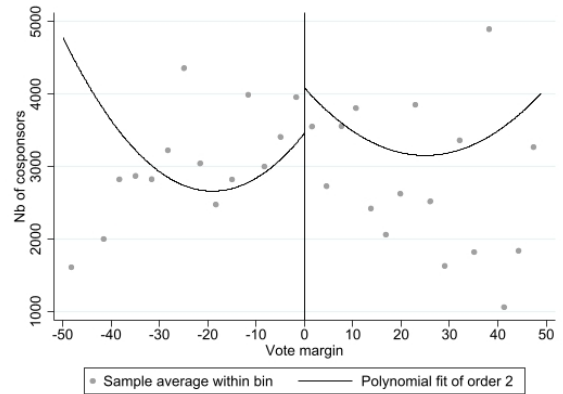
(a) Bills - 1st order polynomial



(b) Bills - 2nd order polynomial



(c) Amendments - 1st order polynomial



(d) Amendments - 2nd order polynomial

Note: We restrict the sample to elections for which a second round between a male and a female candidate has been organized. The vertical lines capture the discontinuity point at zero. The x-axis represents the vote margin for the female candidate. On the right-hand side of the vertical line, a woman is elected, and on the left-hand side, a man is elected. We use a triangular kernel in all specifications.