Gender, Institutions, and Legislative Speech

Eduardo Alemán, Tiffany D. Barnes, Juan Pablo Micozzi,
and Sebastián Vallejo Vera

Legislative speechmaking is a powerful tool that enables legislators to signal their preferences, showcase their expertise, and influence the lawmaking process. It can enhance the visibility of women in male-dominated institutions and assist them to influence legislative outcomes more effectively.[1] A growing body of research on women's speechmaking demonstrates that women are inclined to "speak for" women on the chamber floor, representing women's substantive interests.[2] Nonetheless, a considerable gap persists in our understanding of why the opportunities and thematic focus of women's speechmaking might diverge from those of their male counterparts.

Drawing on a large body of research that seeks to explain how institutions structure women's legislative behavior,[3] we argue that formal and informal institutions (specifically, committee assignments and seniority), district characteristics, and issue priorities play a significant role in shaping women's speech participation in the legislature. Research indicates that districts that elect women often differ from those that elect men,[4] and once in office, women are frequently appointed to different committees and face restricted access to leadership roles.[5] Furthermore, the marked disparity between the numbers of women and men legislators, especially pronounced in chambers without gender quotas, directly influences the prevalence of women's speeches heard on the plenary floor.

Beyond the influence of institutional structures and diverse pathways to power,[6] we expect that women legislators will show a greater commitment than their male counterparts to addressing in their speeches policy areas that disproportionately affect women's lives.[7]

To test our expectations, we use a comprehensive dataset of over 87,000 speeches covering twenty-one issue areas from 1990 to 2018 in Chile, one of the most stable and enduring democracies in Latin America. Looking first at the descriptive trends, we show that, although women tend to deliver a similar number of speeches on average as men, women's voices are proportionally underrepresented across a range of salient

policy areas on the chamber floor and overrepresented on fewer issues. These descriptive trends, in and of themselves, are important because they illustrate the underrepresentation of women's voices in substantial policy issues. Having shown that women's participation in floor speeches is different, we investigate whether these gaps persist once we account for factors that structure legislators' speechmaking incentives, such as committee assignments, tenure, district characteristics, and partisan affiliation. The findings show persistent, albeit positive, gender gaps on a subset of issues. In line with existing research on women's substantive representation,[8] our analysis confirms that women's participation outpaces men's participation on several key topics that align closely with policy areas that disproportionately affect women.

This research makes several contributions to our understanding of legislative behavior. First, most research on women's participation during floor debates examines whether there are meaningful differences in men's and women's behavior after accounting for key differences known to explain legislative behavior. This approach, however, sidesteps an informative precursor: descriptive patterns showing that women's voices are underrepresented in debates in most policy areas. After accounting for their share of the membership and other relevant factors, such as committee assignments, tenure, and district characteristics, we find that women and men deliver a similar proportion of speeches on most topics, and, in a few areas, women even outpace men. Second, apart from a few exceptions, previous studies have primarily focused on the overall quantity of women's speech participation or restricted the scope of the analysis to a narrow range of topics. In this article, we broaden the analysis to include the content of women's legislative speech beyond women's issues. Lastly, most studies on women's legislative speech concentrate on the U.S. and Western Europe, leaving a gap in our knowledge about speechmaking in other regions. Our study sheds light on the nature of women's speech participation in a consolidated Latin American democracy where women have been historically underrepresented in the legislature.

The Importance of Women's Voices on the Plenary

Legislators use a variety of mechanisms to connect with constituents and signal party leaders, colleagues, and relevant observers their positions on policy and other issues. Speechmaking is one such tool in a legislator's arsenal. Forums that allow legislators to deliver speeches provide communicational opportunities. They use them to convey information and take public stances that help them build reputations with voters, colleagues, and the media.[9] Speeches allow legislators to deliver critical statements of interest to political actors, what Mayhew[10] called "position-taking." In many instances, the target of such position-taking is voters. Constituency-focused activities enhance the reputation of the legislator and might benefit the party brand, contributing a collective good to the rest of the party membership. Speechmaking also presents opportunities to convey informational signals to colleagues and expertise to the media.

Access to the plenary is an invaluable resource for all legislators and holds particular significance for women lawmakers. As they frequently constitute a numerical

minority and are subject to both formal and informal constraints on their political power, speeches can become a pivotal tool for women to amplify their influence in policy-making.[11] Legislative speeches can enhance women's visibility, giving them more clout. Research shows women tend to draw on evidence from their personal experiences to support their arguments. They are more likely to consider concrete policy implications for specific groups and issues, and are less confrontational in their speaking styles, which can be considered more "effective and engaging."[12]

Recognizing the importance of women's voices on the chamber floor, a growing body of research examines whether women participate at similar rates to men. The studies draw from an array of cases, yielding mixed findings. Some research highlights women's underrepresentation in floor speeches and their marginalization during politically salient debates.[13] Conversely, other research finds that women participate in speechmaking at rates comparable to men,[14] sometimes inspired by women in leadership positions.[15] Some studies indicate that women tend to use a more "feminized style of politics" in their speeches, characterized by a more measured demeanor, eschewing loud, defensive, or embattled tactics,[16] displaying a greater openness to listening to opposing views,[17] and maintaining a more positive tone than their male counterparts.[18]

Yet, it is not simply whether women take the floor that matters, but also what they talk about during legislative speeches.[19] Women bring different perspectives and experiences on a broad array of issues.[20] Incorporating women's voices across the full spectrum of legislation can help ensure that public policies are more attuned to women's issues and the diverse interests of the population.

Research on the content of women's legislative speeches has primarily focused on women's substantive representation, showing that women are more likely to speak "as women" and "for women" on the chamber floor,[21] advocating for what are characterized as women's issues and interests.[22] However, the significance of women's voices in the policy-making process extends beyond just women's issues. Because their experiences, interests, and expertise span far beyond these issues, their participation in debates over all policy areas is critical for fostering more representative and effective governance.

Explaining Women's Legislative Speeches

In the previous section, we emphasized the significance of women's voices in the plenary and how speechmaking aids legislators, particularly women, in advancing their representational role. As we proceed to examine gender differences in speechmaking among legislators, it is crucial to note upfront that the primary obstacle to women's voices in legislatures is the glaring fact that too few women are elected to serve as representatives. This point is further elucidated in our description of basic features characterizing the participation of women in speechmaking in Chile's Chamber of Deputies, which appears in the empirical section. Our analysis, however, centers on understanding differences in speechmaking among those elected to serve in the legislature. Despite men and women legislators being similarly motivated to represent constituents and, according to elite surveys, not markedly

different regarding issue priorities, we anticipate that women may have fewer opportunities to deliver speeches on some topics and be more inclined to address others.

We argue that women's speechmaking patterns are influenced by three main factors: political institutions, district features, and issue priorities. Specifically, legislatures are governed by rules and norms that structure who has access to the chamber floor. Additionally, district characteristics generate varying incentives. Thus, the pathways by which legislators arrive at the chamber (e.g., which districts elect them) and their subsequent position within the chamber help explain who has access to the floor and the topics they address once there. Furthermore, even though women may have, on average, an interest in a broad spectrum of policy areas, their commitment to addressing specific issues, such as those disproportionately affecting women's lives, should be evident in speech patterns.

Positions Inside the Chamber and Pathways to Power   Previous works on women in legislatures have highlighted that once elected, women often encounter fewer opportunities to assume leadership roles,[23] experience differential access to committee leadership,[24] and are less likely to rise to the most influential party positions.[25] Additionally, except in countries with term limits, women have usually served shorter tenures in office than their male colleagues.[26]

Just as women's backbencher status explains particular hurdles in advancing their legislative priorities,[27] it is likely to influence legislative speechmaking. Access to leadership positions and tenure often affects speaking opportunities and makes certain speechmaking forums less accessible.[28] For example, Pearson and Dancey show that in the U.S. House of Representatives, more senior members are more likely to give speeches during debates on key bills,[29] and Alemán and Micozzi note that tenure increases the likelihood of giving lawmaking speeches in Chile's Chamber of Deputies.[30] Thus, when women lack the clout associated with leadership and seniority status, their chances of speaking during floor debates can be diminished.

In addition, committee assignments, particularly those across Latin America, tend to follow gendered patterns.[31] For instance, research from Argentina and Mexico shows women are less likely to be represented on committees that act as the clearing house for legislation, such as budget and constitutional affairs.[32] Access to money committees affords legislators more influence than almost any other committee because often crucial legislation must pass through them before it reaches the chamber floor. Research has also shown that women tend to be underrepresented on committees that oversee stereotypically masculine issues such as defense, foreign affairs, energy, transportation, agriculture, and the economy.[33] Furthermore, women tend to be overrepresented on committees addressing stereotypically feminine issues such as education, healthcare, welfare, women, and family. Thus, gender disparities in committee assignments can result in dissimilar opportunities to speak on debates across many important topics.

Committee assignments affect not only legislators' debate participation but also the topics they are likely to address. Recognizing that individual legislators cannot competently cover all policy matters, legislatures have developed norms of specialization,

with committees acting as the main vehicles for this specialization.[34] Committees provide members with access to information, learning opportunities, and links to networks that enhance their expertise[35] and assist the chamber in gathering information about the effects of different policies,[36] with members' recommendations providing valuable information to the rest of the membership.[37] Previous research on the legislatures of Chile,[38] the U.S.,[39] Portugal,[40] Sweden,[41] and the European Union[42] shows that membership in the committee with purview over the bill being debated increases the chances of debate participation. Also, evidence from Argentina, Ecuador, Mexico, and the U.S. suggests that committee chairs are more likely than other legislators to deliver speeches.[43] For these reasons, gender differences in committee assignments are likely to influence the policy areas women address in their speeches. These disparities, whether the product of women's preferences, stereotypes from party leaders, or a mix of factors, limit women's opportunities to speak on certain issue areas while increasing their chances to talk about others.

Speechmaking is also influenced by the paths women and men take to reach the legislature. As indicated previously, speechmaking serves as a means for legislators to signal constituents and represent their interests. Districts that elect women often differ notably from those electing men. For instance, in the U.S., women are more likely to be elected in liberal, urban areas with higher levels of racial diversity, education, and income.[44] Similarly, women elected to the Brazilian Congress are more likely to originate from districts with higher incomes, better-educated populations, and more liberal ideologies.[45] In Peru, women candidates encounter greater obstacles in rural districts,[46] a pattern echoed in Canada and the UK, where women have historically fared better in urban districts.[47] In Chile, women are significantly less likely to run for Congress than men,[48] but when they do, they are more likely to succeed in urban districts and those closer to Santiago, the largest city in the country. These disparities in the districts electing men and women are likely to lead to distinct representational focuses.

Indeed, research shows that district characteristics influence legislative speechmaking.[49] For instance, a higher proportion of rural constituents can lead to an emphasis on agriculture-related speeches. Bäck and Debus have shown that in Germany, the socioeconomic traits of districts shape MPs' debate participation. In Chile, legislators from more remote districts tend to focus their speeches on different issues.[50] Given that women legislators are less likely to hail from rural and remote areas, and since the characteristics of constituencies matter for speechmaking, we expect distinct district demographics to influence the topics that women and men prioritize in their speeches.

In summary, legislators' debate participation and the subjects they address are influenced by their institutional positions, tenure, and the characteristics of their districts. Given that women often receive different committee assignments, are less frequently appointed to influential positions, have shorter tenures, and represent districts with differing characteristics, their speeches are likely to show a different distribution across topics. After our descriptive analysis, we account for these factors when statistically examining gender differences in speech participation across topics.

Commitment to Representing Women's Issues   While the speechmaking priorities of women legislators are generally shaped by the same career-oriented ambitions that influence all politicians—often reflecting partisan and constituency concerns—we acknowledge a notable exception. Despite minimal gender differences in speech topics, once institutional, district, and partisan factors are accounted for, we argue that women are significantly more inclined to speak about women's issues. This aligns with extensive research indicating that women are strongly motivated to engage in substantive representation and research from the U.S. and Western Europe (reviewed above) showing that women are more likely to speak about women's issues during legislative speechmaking.

Lawmakers, regardless of gender, seek to influence policy outcomes across a broad spectrum. For instance, Beall and Barnes analyze legislators' policy priorities across ten issue areas using surveys from fourteen Latin American countries and find minimal gender differences.[51] Other surveys have also found few differences besides those referring to women's issues.[52] Analyses of congressional voting behavior—where partisan pressures are arguably strong—have also shown that differences between women and men are negligible once we account for partisan and constituency characteristics.[53] Additionally, research has shown that women legislators are highly responsive to constituents (often outperforming men) and that this finding is not a function of responsiveness to gender issues or the gender of the constituents.[54]

Yet, women have several "overlooked interests" not traditionally prioritized in legislatures,[55] affecting women from various backgrounds and perspectives.[56] Shared life experiences make women legislators better positioned and more motivated to address these issues on the chamber floor.[57] Wolbrecht summarizes this point nicely, "As a result of personal experiences, female elites may be predisposed to personal and professional issues specific to women, sympathetic to the needs of women vis-à-vis public policy, and cognizant of the unique ways in which government action impinges on women's lives."[58] Wängnerud concludes that women politicians see the representation of women's interests as part of their responsibilities.[59] Thus, we expect women legislators to be more inclined to address issues of particular interest to women.

This expectation is consistent with previous work that has shown that women legislators are more likely than men to introduce bills on issues relevant to women,[60] and are particularly active in delivering speeches on matters that disproportionately affect women's lives. The works of Celis on the Belgian Parliament,[61] Catalano on the British House of Commons,[62] Osborn and Morehouse Mendez on the U.S. Senate,[63] Konak Unal on the Turkish Parliament,[64] and Clayton, Josefsson, and Wang[65] on the Ugandan Parliament underscore how women legislators are more likely than their male counterparts to address topics identified as women's issues.[66]

Before proceeding, it is important to note that there are different perspectives on identifying women's issues. One approach begins by deductively deriving a set of policies considered to affect women's lives. Celis et al. note that this approach typically includes, as women's issues, matters associated with the position of women in the private and public sphere, as well as policies that increase women's autonomy.[67] Others define them as issues that disproportionately affect women or are associated with

women's traditional roles.[68] For example, Schwindt-Bayer, in her work on bill initiation in three Latin American countries, identifies health, education, family and children, and women's equality as women's domain issues—the latter category cutting across traditional thematic policy categories.[69] In terms of conventional policy topics, such as those utilized by the Comparative Manifesto Project, the list typically includes civil rights, health, social welfare, and education.

Other approaches prefer to avoid researchers' predefined categories. One strand, for instance, has proposed categorizing as women's interests those issues prioritized by external actors engaged in advocacy for women. Baldez proposes using those issues identified in the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).[70] Most issues included in this document fall within the four policy subjects previously identified, and some others fit within the law and family category. Another approach relies on public opinion data. For example, Weeks shows that the largest gender gaps in policy preferences between men and women in high-income democracies emerge over maternal employment and work-family policies.[71]

Finally, another strand of research advocates for an inductive approach, defining women's issues as those that women prioritize significantly more than men.[72] For example, Volden, Wiseman, and Wittmer examine forty years of bill sponsorship in the U.S. House, identifying three of the policy issues previously noted—civil rights, health, and education—as well as labor, housing, and law as those prioritized by women.[73] It should be noted, however, that this classification process did not account for any institutional and career factors previously discussed, such as committee assignments, tenure, and district characteristics. While this inductive method offers valuable insights, it is incompatible with studies aiming to assess the extent to which women legislators promote such issues through actions like bill initiation or speechmaking, as is the case with our research and others mentioned previously. Following this approach with our empirical investigation would make our hypothesis about speeches on women's issues unfalsifiable. Nevertheless, advocates of such an approach may find our empirical analysis enlightening, as it highlights those policy areas where women legislators are significantly more active than men.

Women's Participation in the Plenary: Evidence from Chile

Our analysis focuses on legislative speeches in the Chilean Chamber of Deputies, including those delivered during the discussions of bills and resolutions and the interpellations of government officials.[74] Chile's Congress has been characterized as one of Latin America's most effective legislative bodies,[75] boasting a professional membership, a strong committee system, and one of the highest reelection rates in the region.[76] Throughout the period we examine, from 1990 to 2018, Chilean legislators were elected using open-list proportional representation in two-member districts, which fostered incentives to emphasize candidates' personal traits. The personal vote coexisted with

nomination mechanisms that gave substantial weight to party leaders, who, as members of multiparty coalitions, had to negotiate the fielding of candidates in the two-member districts. Almost all deputies elected during this period belonged to one of the two main coalitions, the center-right *Alianza* and the center-left *Concertación* (later renamed *Nueva Mayoría*).

Despite high institutional capabilities, women were markedly underrepresented, making up only 12 percent of the body during the period under study. Unlike in many Latin American countries, gender quotas were not used in the election of Chilean deputies during this time. Moreover, this substantial underrepresentation is particularly concerning when considering that women legislators were typically elected with a higher vote count than men legislators and outperformed their electoral list partners more than men. In essence, despite evidence demonstrating that women had satisfactory electoral performances, the main coalitions nominated few of them for office. This institutional context renders our study particularly pertinent, as it focuses on a chamber recognized for its competence and strong committee system but where women encounter significant barriers to access.

The Chamber of Deputies is led by an executive board (*Mesa*) that includes the president of the chamber and two vice presidents, with formal power centralized in the former. The election of *Mesa* members is conducted by majority rule, preceded by negotiations among the main ideological blocs. During the period under study, there were ninety-three *Mesa* appointments, of which 8.6 percent were women. The *Mesa* is in charge of proposing committee assignments to the chamber, which must approve them. Committee chairs, elected by majority rule inside each committee, typically rotate yearly, but rotation occurs less frequently on some committees. During the period under study, 12.6 percent of chair appointments went to women.

While committee assignments aim to reflect the partisan composition of the chamber, some deviations are not uncommon. The process of assigning committees is complex, involving negotiations among allied parties and between coalitions for seat shares in the most influential committees, coupled with more consensual discussions to accommodate individual legislators' preferences and expertise. Mimica and Navia examine committee assignments among Chilean deputies during this period and, after controlling for various factors, find that women were underrepresented in five out of fifteen committees studied (most in "high policy" areas) and overrepresented in three (Labor, Education, and Housing).[77]

In the Chilean Congress, legislators' ability to target constituents with selective benefits is curtailed by constitutional constraints on initiating tax and spending legislation, effectively preventing them from initiating pork-barrel legislation.[78] In addition, amendment restrictions in these policy areas limit their capacity to use this mechanism to cater to their districts. Thus, despite being elected under rules that promoted the personal vote, Chilean legislators are constrained in their opportunities to use bill initiation and amendments to enhance their personal reputations. Nevertheless, legislative speeches are a valuable tool for deputies to signal their priorities and efforts on behalf of their constituents.

Legislative speeches in Chile are frequently highlighted in local and national news outlets and broadcasted by the chamber's television channel, which is widely available. In the past, legislators would request transcripts of their speeches to be distributed among key constituents and interest groups. More recently, however, they are more likely to be shared on social media platforms. For instance, in January 2015, Deputy Juan Morano delivered a speech supporting an education bill that aimed to end public subsidies to for-profit schools that was covered and published online by a local radio station in his district, Punta Arenas.[79] In March 2022, Deputy Marta Gonzalez, a union leader, addressed the chamber about school lunch program shortages and potential worker strikes coinciding with the start of the school year, with her speech prominently featured in a local newspaper in her district.[80] In April 2022, during a heated debate on a bill allowing withdrawals from government-regulated private retirement accounts, Deputy Marisela Santibáñez expressed her ambivalence about supporting the measure in a speech that was aired by a television news program (Canal 13) and viewed thousands of times on YouTube. Furthermore, in May 2022, Deputy Carmen Hertz took to the floor and criticized Western states during a special session addressing Chile's stance on Russia's invasion of Ukraine, later sharing her speech on Instagram. These examples illustrate the diverse channels through which legislative speeches are disseminated.

The most important parts of the daily session, where bills and resolutions are debated and voted on, are the Order of the Day (*Orden del Día*) and the Agreements and Resolutions period. Nearly four-fifths of the speeches analyzed in the empirical section were delivered in the former forum and about 10 percent in the latter.[81] Bill debates are typically divided into a "general" discussion on the proposal's merits and a "particular" discussion on its specifics. Rules give every legislator the right to speak, preventing formal gatekeeping by parties. Deputies can speak twice at each stage—up to ten and five minutes in the general discussion and up to five minutes in each speech delivered during the particular phase. In the Agreements and Resolutions phase, the maximum number of speakers is capped at four per item discussed, with no more than two in favor and two against, and, again, parties do not have de jure control over the list of possible speakers.[82] While the formal rules establish open forums for speeches delivered in these settings, previous works suggest that legislators adhere to norms that often prioritize participation by more senior members and those serving on the committee relevant to the bill being debated.[83]

Speech Data and Coding   Having established that speeches serve as a vital conduit for legislators to communicate policy positions and build reputations, we proceed to analyze the content of speeches made by Chilean legislators over twenty-eight years. We downloaded and scraped the transcripts of the daily sessions reported in the Journals (*Diarios de Sesiones*) of the Chamber of Deputies between March 1990 and March 2018.[84] This timeframe covers seven four-year congressional terms (3,310 sessions). We cataloged a total of 87,477 speeches delivered in the previously noted forums. Each speech was then

attributed to its respective author, forming the basis for constructing the binary variable *Woman*. Figure 1 presents a boxplot illustrating the number of speeches men and women gave from 1990 to 2018.

The data presented in Figure 1 indicate that the net speech participation by women legislators in the Chilean Chamber of Deputies is comparable to that of men. In other words, while subject to different variance, women and men tend to deliver a similar number of speeches on average. This finding aligns with studies conducted on the U.S. Congress[85] and the parliaments of Germany, France, Ireland, Australia, and the Czech Republic, which have also reported similar participation rates in parliamentary speeches between men and women.[86] However, these observations contrast with research on other legislative bodies, where women have been found to speak less than men.[87]

To evaluate whether women and men talked about different subjects, we started by topic-coding each speech. The classification task was performed using XLM-RoBERTa, an advanced multilingual Transformer model.[88] The model was trained using a sample of 2,300 speech titles with topic labels following a modified version of the Comparative Agendas Project (CAP) coding rules.[89] We adapted the CAP coding scheme of twenty-one topics to the particularities of our speech data.[90] First, we concatenated similar categories that do not have enough occurrences in our dataset. Specifically, we combined domestic commerce with macroeconomics and tourism and foreign trade with international affairs. Second, we added categories relevant to our corpus: local politics, which includes speeches referring to politicians (e.g., tributes) or political parties; territorial organization, which includes speeches referring to the creation of new territorial subdivisions; and sports, which includes speeches referring to sporting events or sport-related comments.

Figure 1   Total Speeches per Term during Lawmaking Debates, 1990–2018
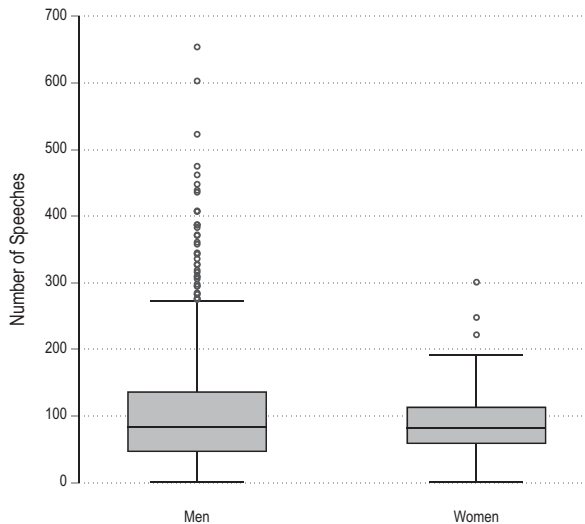
The model achieved an out-of-sample accuracy of 77 percent, a statistically significant improvement over the no-information rate (11 percent).[91]

Next, we applied our model to predict topics for the remaining speeches. To assess the model's accuracy, we hand-coded a sample of 420 speeches and compared these labels with the model's predictions. The results revealed that the model performs with high accuracy. More information about this process, including details on the training process and performance tests, appears in Appendix A.

Women's Speeches: What We See   The first step in analyzing speechmaking partici-pation is descriptive. We aim to delineate the extent of women legislators' involvement across various identified topics, establishing a baseline for our subsequent statistical analysis. From the previous section, it emerged that, on average, women and men legisla-tors delivered a similar number of speeches. Figure 2 displays the proportion of speeches made by women across the twenty-one identified topics. Each topic is listed on the left of the figure, with horizontal bars indicating the percentage of speeches on each topic made by women. Additionally, a dashed vertical line indicates the average share of women deputies in the chamber during the period analyzed, which was 12 percent.

This figure serves as a reference, depicting the actual patterns observed on the chamber floor. Before moving on to the statistical analysis, three points warrant fur-ther elaboration. First, it is evident from the figure that male deputies delivered most speeches. During this period, the volume of speeches made by men was almost nine times greater than the number of women's speeches, reflecting the lopsided gender dif-ferences in membership. Second, we observe four positive gender gaps—topics where women's participation clearly exceeds their membership proportion (dotted line): civil rights, social welfare, education, and health. If one were to follow the inductive path to determining women's issues—as Volden, Wiseman, and Wittmer, for example—we would conclude that these four topics fit this categorization in Chile.[92] This finding aligns with previous research on women's substantive representation, which shows that women legislators are particularly active in these four policy areas.

Lastly and particularly noteworthy are the negative gender gaps, where women are less likely to participate than men. According to the results presented in Figure 2, women are less likely than men to deliver speeches on topics such as energy, technol-ogy, defense, transportation, domestic commerce, foreign affairs, and local politics. The underrepresentation of women's voices in these policy areas underscores a broader con-cern about participation across relevant topics. Dismissing these negative gender gaps as conforming to traditional gender roles and stereotypes about women's and men's inter-ests and expertise may be tempting, but it is too simplistic. In the next section, we move beyond descriptive patterns to estimate speech participation, focusing on differences between men and women while accounting for factors such as committee assignments, leadership roles, tenure, district rurality and remoteness, and ideological bloc, which the specialized literature tells us affect speech participation and, we argued in the first part of this article, are likely correlated with gender.

Figure 2   Proportion of Speeches Delivered by Women by Topic
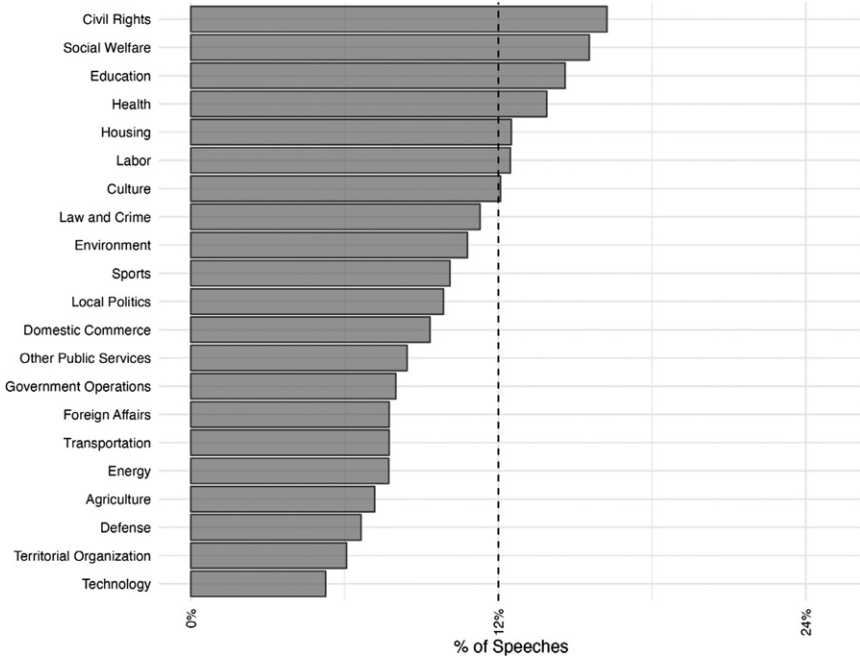
Legislative Debates: Analysis of Differential Access to Policy Domains

The dependent variables used to analyze gender differences in speechmaking are counts of lawmaking speeches for each of the twenty-one topics previously classified using the multilingual machine-learning model XLM-RoBERTa. Like others who have previously examined speech participation, we utilize a negative binomial model.[93] The unit of analysis is the number of speeches per legislator on each topic during each legislative term. The key explanatory variable of interest is gender, measured by a categorical variable indicating whether the legislator is a *Woman*.

In addition, we collected individual-level information on relevant factors that we argued should explain gender differences in speech participation across topics. To capture the effect of institutional rules, we include two variables to capture positions of authority within the chamber: the variable *Mesa Member* indicates whether the legislator was a member of the chamber directorate (*Mesa Directiva*) and the variable *Chair* indicates whether the legislator chaired the committee associated with the topic of the bill being discussed. A prominent position in the chamber and a leadership position in the committee related to the bill are likely to increase the participation of members in bill debates. In addition, we add a series of variables to control for *Committee Membership*. We also account for legislators' political background. A relevant variable is legislator's seniority.

More experienced representatives are more likely to access positions of power inside the chamber, and previous works have found that they are often more likely to speak on the floor of Congress. Thus, we created the variable *Tenure*, which indicates the number of terms the legislator has served in the chamber.

We also argued that districts where women are more likely to be elected tend to differ from others. To capture these influences, we include a variable labeled *Rural Population* that indicates the share of rural inhabitants in the district, obtained from Chilean census information. Another variable labeled *Distance to Capital* measures the (logged) distance between the main town of the legislator's district and *La Moneda*, the presidential building located in Santiago, computed using Google Maps.

In addition to the factors discussed in our theoretical discussion, we control for other background-level variables likely to influence legislative speech. One is electoral vulnerability, labeled *Margin List*, which measures the difference between the votes received by the legislator and her list's partner. Under Chile's open list PR with two seats per district, each of the two main lists would usually win one seat. Thus, an elected legislator's main competitor was typically her list partner. The second and third controls indicate the coalition membership of the legislator. During the period studied, most legislators belonged to one of the two dominant coalitions, the center-left *Concertación* and the center-right *Alianza*, which alternated in government. As these coalitions were divided by ideological concerns, the topics covered in their speeches were likely to differ. To account for these differences, we created two categorical variables. One indicates whether the legislator belonged to the *Alianza* coalition and the other indicates whether it was part of another coalition (*Other*). The baseline, left-out category, refers to legislators who belonged to the *Concertación* coalition, the largest of the two.[94]

Institutional Factors Account for Gender Differences in Speechmaking   Figure 3 presents the odds ratios for the *Woman* variable for the twenty-one topic-specific models. The complete results appear in Appendix B. Topic labels appear to the left of the figure. Dots indicate the point prediction, and the lines reflect the 95 percent confidence interval. Those shown in black reflect statistically significant coefficients ($p<0.05$), whereas those in grey reflect no significant difference between men and women in speech participation. A dashed line signals where the odds ratio equals one, indicating no difference in odds between the two groups being compared.

The results presented in Figure 3 show that women are not significantly less likely than men to give speeches on these topics. The results are consistent with our expectation that after accounting for such factors as institutionally assigned roles and district characteristics, we should not observe, on average, significant gaps where women legislators speak less than men.

Institutional factors play an important in explaining speechmaking patterns. For example, consistent with our argument, we observe that being a *Chair* of the committee associated with the topic being addressed by the speech increases the probability of speaking in most models. Also, members with higher *Tenure* are significantly more

Figure 3 Gender Differences in Speechmaking
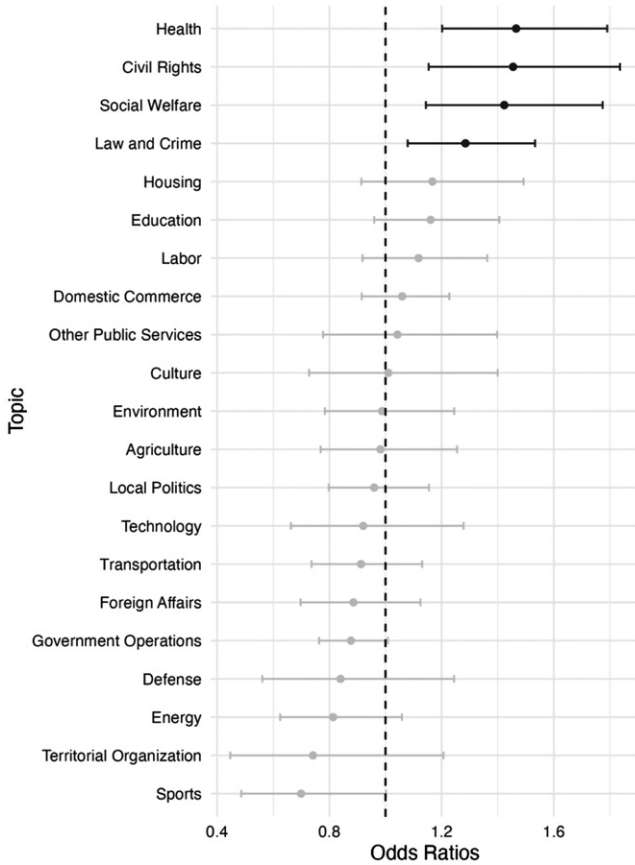
likely to speak about issues such as foreign affairs, agriculture, social welfare, and transportation and less likely to speak about sports, while *Mesa* members are less likely to speak about culture. As anticipated, membership in the *Committee* with jurisdiction over the topic related to the speech significantly increases the likelihood of participation for most topics.

Regarding district characteristics, legislators from areas with a higher percentage of *Rural Population* are more likely to give speeches on agriculture topics, while those from more urban districts are more likely to speak about culture and education. Also, legislators from more peripheral districts are more likely to speak about agriculture, territorial organization, environmental issues, and education, while those closer to the seat of government are more likely to speak about technology and housing. Lastly, members of the rightist coalition are less likely to speak about civil rights, culture, health, and public services than members of the leftist coalition.

In short, women's underrepresentation in speeches on issues like agriculture, territorial organization, foreign affairs, technology, and environmental issues, highlighted in the descriptive section, is no longer evident after controlling for factors correlating with gender, such as district characteristics, committee assignments, and tenure.

Women Give More Speeches about Women's Issues   Although women's positions within the chamber and their pathways to power explain important gender differences observed in legislative speechmaking across a range of issues, some gender gaps persist. Consistent with our expectation that women would be more likely to use floor speeches to engage in the substantive representation of women, we observe positive gender gaps (wherein women participate more than men) across four issue areas: civil rights, social welfare, health, and law and crime. Except for law and crime, which we discuss below, each of these topics encompasses issues that previous work has identified as disproportionately affecting women's lives.[95]

According to the results illustrated in Figure 3, being a woman legislator increases the expected number of speeches on health by about 47 percent, holding other variables constant. In the case of civil rights, the increase in the expected number of speeches is about 45 percent. Finally, women are 42 percent more likely than men to talk about issues pertaining to social welfare. Importantly, our analysis suggests that women's positions within the chamber and their differential pathways to power are not sufficient to explain why women talk more about these issues. Instead, our results indicate that women talk about these issues beyond the extent to which we would expect if their behavior were explained by factors such as their leadership posts, committee assignments, or district characteristics.

Unexpected Gender Gap: Law and Crime   While results showing that women legislators speak more often about civil rights, social welfare, and health fit our expectations and are consistent with the literature on women's substantive representation, the evidence that women speak on matters of Crime and Law at a higher rate than men might seem puzzling. Further examination, however, reveals more familiar patterns.

First, it should be noted that this category, as conceptualized by the Comparative Manifesto Project, also includes Family Law. In their analysis of the U.S. Congress, Volden et al. find that women tend to sponsor bills covering Law, Crime, and Family to a higher degree than men.[96] Similarly, Bulut and Yildirim show that in Turkey, women are more likely than men to deliver speeches about this same category.[97] To further explore differences within this category of speeches, we use a dictionary of words relating to Family Law[98] and estimate its incidence. Examples of Family Law-related discussions include debates on the "definition of domestic violence and procedures to prevent and sanction it" and "modifications to the civil code regarding the property regime of marriage and other legal bodies." The results show that, when discussing topics of Crime and Law, women address Family Law 14.2 percent of the time, while men address it

6.9 percent of the time, a significant difference (t-test, p<0.05). However, Family Law only accounts for 7.7 percent of all speeches on Crime and Law, and by itself, it cannot explain the gender differences shown in Figure 3.

Alternatively, the higher participation of women in Crime and Law speeches might be driven by other women-related issues within this category beyond Family Law. Using a dictionary of "women's issues" provided by Htun et al., we estimate the prevalence of women-related topics within Crime and Law speeches.[99] The results show that women are significantly more likely than men to address these matters within this category of speeches. The top panel of Figure 4 shows the distribution of all Crime and Law speeches, while the lower panel shows the distribution of Crime and Law speeches after removing speeches on women's issues. As the Figure 4 shows, the difference between

Figure 4   Speeches on Law and Crime, by Gender

a. All Law and Crime Speeches
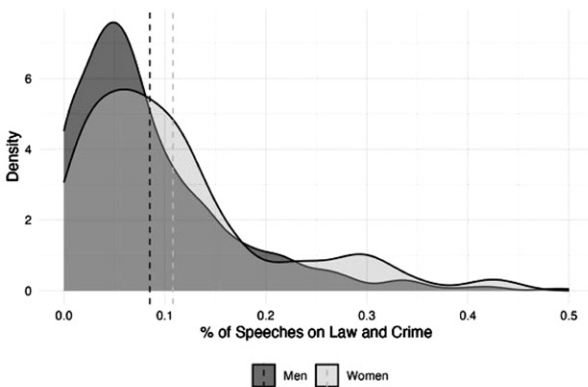
b. Law and Crime Speeches without Women's Issues

women's and men's speeches on Law and Crime issues, clearly visible in the top panel figure, virtually vanishes when we exclude matters characterized as women's issues, according to the work of Htun et al.[100]

Although not the focus of our analysis, it is important to note that a deeper exploration of the speeches would probably uncover additional distinctions, particularly in how speeches about similar subjects diverge in their specific emphases. For example, when discussing a bill on changes to the law on rape, most (male) legislators emphasized its punitive nature, debating alternative punishments. However, discussing the same topic, Congresswoman María Antonieta Saa Díaz pointed out the importance of addressing the broader issue of women's "sexual freedom" and the need to modernize the Penal Code article born from an earlier patriarchal culture. This is in line with Kathlene, who argues that when it comes to Crime and Law policy, women and men "conceptualize the origins of and solutions to crime differently," with women focusing on societal context rather than individual actions and instrumental solutions. [101]

Sensitivity Analysis: Alternative Categorization of Women's Issues   As previously mentioned, there are different conceptualizations of what constitutes women's issues. Our analysis followed the thematic division proposed by the Policy Agendas Project and evaluated whether women spoke more on topics commonly associated with women's interests. One common approach in the empirical literature examining gender differences in legislative behavior, such as bill initiation or speechmaking, has been to build a specific category composed of various subtopics that together form women's issues. As a robustness check, we conclude our article by reanalyzing all the speech data after dividing it into two categories: women's issues and others.

Figure 5   Women's Issues and Others
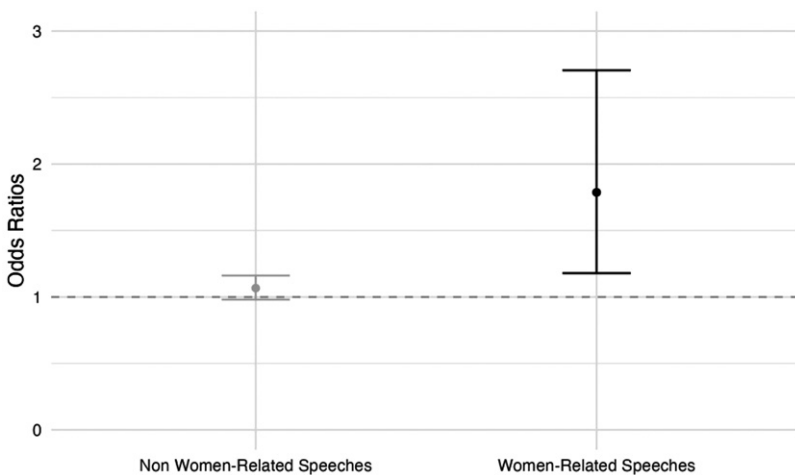
To build the women's category issues, we rely on the work of Htun et al. mentioned in the previous section.[102] In consultation with specialists in this research area, the authors build a list of 173 related keywords. The list includes such topics as violence against women, sexual harassment, childcare, maternity leave, pregnancy, gender equality, working women, gender wage gap, labor discrimination, women's pensions, femicide, reproductive rights, and various health-related topics linked to women. The results for our two types of issues appear in Figure 5.

Consistent with our expectations, women are significantly more likely than men to speak on matters fitting within this category of women's issues. Being a woman legislator increases the expected number of speeches on this topic by about 79 percent, holding other variables constant. In contrast, in the other category, there is no statistically significant difference based on gender. These results are consistent with our expectations.

Conclusion

Our article began by emphasizing the significance of women's involvement in legislative debates. The subsequent description of the basic patterns of speech participation by men and women over twenty-eight years revealed that in Chile, women's speeches constituted a small share of the speeches given on all topics, falling far short of parity. This descriptive analysis is important because it illustrates women's observable levels of speech participation in different policy areas. By initially describing women's actual level of speech participation in the plenary and subsequently demonstrating their reduced involvement across various topics can be partially explained by institutional and district factors associated with women's career pathways and chamber roles, we contribute to a relatively nascent body of work exploring whether and how gender differences have "consequences for the legislative output and policy effectiveness of female legislators".[103]

A second contribution of our research lies in examining women's participation in speechmaking across a broad range of legislative issues. While some previous studies on legislative speechmaking have examined whether women speak as much as men[104] or focused on their speaking style,[105] our research contributes to a smaller body of work that seeks to uncover and explain what women talk about in the plenary.[106]

Moreover, we posited that women are significantly more inclined to speak about women's issues, aligning with extensive research indicating that women are particularly motivated to engage in substantive representation. To assess this hypothesis, we analyzed results using both the traditional categorization of policy topics along the lines of the Comparative Agendas Project and the often-used approach of creating a separate women's issue category. Both paths provide results that are consistent with our expectation.

The commitment women legislators in Chile show to representing women's issues suggests that they may be poised to significantly influence the outcome of legislation on these issues. Studies on the U.S. Congress indicate that women legislators often discuss women's issues with emotional intensity, potentially eliciting positive responses from

male legislators.[107] Future research on the connection between emotional intensity in speechmaking and responsiveness from male colleagues should illuminate whether preliminary findings from the U.S. travel to other legislative settings.

Finally, future work should consider the broader implications of women's participation in speechmaking, both within and beyond the legislature. This study has primarily focused on explaining patterns of speech participation across various policy areas, but also relevant is investigating the consequences of such participation on legislative outcomes and career advancement within the chamber. Additionally, speechmaking can pave the way for numerous opportunities in government and the private sector. By establishing themselves as experts through active participation in debates, legislators could secure prestigious executive appointments or attractive positions in the private sector.

NOTES

1. Kathryn Pearson and Logan Dancey, "Elevating Women's Voices in Congress: Speech Participation in the House of Representatives," *Political Research Quarterly*, 64 (December 2011a), 910–23; Lotte Hargrave and Tone Langengen, "The Gendered Debate: Do Men and Women Communicate Differently in the House Of Commons?," *Politics & Gender,* 17 (December 2021), 580–606; Bryce J. Dietrich, Matthew Hayes, and Diana Z. O'Brien, "Pitch Perfect: Vocal Pitch and the Emotional Intensity of Congressional Speech," *American Political Science Review*, 113 (November 2019), 941–62.

2. Hanna Bäck and Marc Debus, "When Do Women Speak? A Comparative Analysis of the Role of Gender in Legislative Debates," *Political Studies*, 67 (August 2019), 576–96; Hanna Bäck, Marc Debus, and Jochen Müller, "Who Takes the Parliamentary Floor? The Role of Gender in Speech-Making in the Swedish Riksdag," *Political Research Quarterly*, 67 (September 2014), 504–18; Amanda Clayton, Cecilia Josefsson, and Vibeke Wang, "Quotas and Women's Substantive Representation: Evidence from a Content Analysis of Ugandan Plenary Debates," *Politics & Gender*, 13 (June 2017), 276–304; Magda Hinojosa, Jill Carle, and Gina Serignese Woodall, "Speaking as a Woman: Descriptive Presentation and Representation in Costa Rica's Legislative Assembly," *Journal of Women, Politics & Policy*, 39 (November 2018), 407–29; Tracy Osborn and Jeanette Morehouse Mendez. "Speaking as Women: Women and Floor Speeches in the Senate," *Journal of Women, Politics & Policy*, 31 (February 2010), 1–21; Jennifer M. Piscopo, "Rethinking Descriptive Representation: Rendering Women in Legislative Debates," *Parliamentary Affairs*, 64 (July 2011), 448–72; Kathryn Pearson and Logan Dancey, "Speaking for the Underrepresented in the House of Representatives: Voicing Women's Interests in a Partisan Era," *Politics & Gender*, 7 (December 2011), 493–519.

3. Leslie A. Schwindt-Bayer, *Political Power and Women's Representation in Latin America* (New York: Oxford University Press, 2010); Franceschet, 2011; Kaitlin Senk, "Are Women Less Effective at Passing Bills? Exploring the Direct and Indirect Effects of Gender," *Legislative Studies Quarterly*, 46 (August 2021), 791–816.

4. Magda Hinojosa, *Selecting Women, Electing Women: Political Representation and Candidate Selection in Latin America* (Philidelphia: Temple University Press, 2012); Kendall D. Funk, Magda Hinojosa, and Jennifer M. Piscopo, "Still Left Behind: Gender, Political Parties, and Latin America's Pink Tide," *Social Politics: International Studies in Gender, State & Society*, 24 (December 2017), 399–424; Gregory D. Schmidt, "¿Favorecen a las candidatas las listas abiertas o cerradas?: comparaciones entre Lima y las provincias en el Perú," *Apuntes*, 47 (June 2020), 155–81.

5. Roseanna Michelle Heath, Leslie A. Schwindt-Bayer, and Michelle M. Taylor-Robinson, "Women on the Sidelines: Women's Representation on Committees in Latin American Legislatures," *American Journal of Political Science*, 49 (March 2005), 420–36; Yann P. Kerevel and Lonna Rae Atkeson, "Explaining the Marginalization of Women in Legislative Institutions," *The Journal of Politics*, 75 (October 2013), 980–92; Nicolás Mimica and Patricio Navia, "Party Affiliation and Individual Incentives: Committee Assignments in the Chamber of Deputies in Chile, 1990–2018," *Revista de Ciencia Política*, 42 (December 2022), 591–615; Senk, 2021; Schwindt-Bayer, 2010; Jana Morgan and Magda Hinojosa, "Women in Political Parties: Seen but Not Heard," in Leslie Schwindt-Bayer, ed., *Gender and Representation in Latin America* (New York: Oxfrod University Press, 2018), 74–98.

6. Tiffany D. Barnes and Mirya R. Holman, "Gender Quotas, Women's Representation, and Legislative Diversity," *The Journal of Politics*, 82 (October 2020), 1271–86; Franceschet; Susan Franceschet and Jennifer M. Piscopo, "Gender Quotas and Women's Substantive Representation: Lessons from Argentina," *Politics & Gender*, 4 (September 2008), 393–425; Jane Mansbridge, "Should Blacks Represent Blacks and Women Represent Women? A Contingent 'Yes'," *The Journal of Politics*, 61 (August 1999), 628–57; Diana Z. O'Brien and Jennifer M. Piscopo, "The impact of Women in Parliament," in Mona Lena Krook, Netina Tan, and Susan Franceschet, eds., *The Palgrave Handbook of Women's Political Rights* (London: Palgrave Macmillan, 2019), 53–72; Anne Phillips, *The Politics of Presence* (Oxford: Oxford University Press, 1998); Piscopo.

7. Hinojosa, Carle, and Woodall, 2018; Tracy Osborn and Jeanette Morehouse Mendez, "Speaking as Women: Women and Floor Speeches in the Senate," *Journal of Women, Politics & Policy*, 31 (February 2010), 1–21; Piscopo, 2011; Kathryn Pearson and Logan Dancey, "Speaking for the Underrepresented in the House of Representatives: Voicing Women's Interests in a Partisan Era," *Politics & Gender*, 7 (December 2011), 493–519.

8. Schwindt-Bayer, 2010; Franceschet and Piscopo, 2008.

9. Pearson and Dancy, 2011a; Forrest Maltzman and Lee Sigelman, "The Politics of Talk: Unconstrained Floor Time in the US House of Representatives," *The Journal of Politics*, 58 (August 1996), 819–30; Lanny W. Martin and Georg Vanberg, "Coalition Government and Political Communication," *Political Research Quarterly*, 61 (October 2008), 502–16; Kevin M. Quinn, Burt L. Monroe, Michael Colaresi, Michael H. Crespin, and Dragomir R. Radev, "How to Analyze Political Attention with Minimal Assumptions and Costs," *American Journal of Political Science*, 54 (January 2010), 209–28.

10. Mayhew, 61.

11. Pearson and Dancey, 2011a; Tiffany D. Barnes and Victoria Beall, "Women in the Plenary: Verbal Participation in the Argentine Congress," in Roosmarijn de Geus, Erin Tolley, Elizabeth Goodyear-Grant, and Peter John Loewen, eds., *Women, Power, and Political Representation: Canadian and Comparative Perspectives* (Toronto: University of Toronto Press, 2021), 71–78.

12. Lotte Hargrave and Tone Langengen, "The Gendered Debate: Do Men and Women Communicate Differently in the House Of Commons?," *Politics & Gender*, 17 (December 2021), 580–606.

13. Bäck and Debus, 2019; Osborn and Mendez, 2010. Jorge M. Fernandes, Mariana Lopes da Fonseca, and Miguel Won, "Closing the Gender Gap in Legislative Debates: The Role of Gender Quotas," *Political Behavior*, 45 (September 2023), 897–921.

14. Jessica C. Gerrity, Tracy Osborn, and Jeanette Morehouse Mendez, "Women and Representation: A Different View of the District?," *Politics & Gender*, 3 (June 2007), 179–200. Pearson and Dancy, 2011a, 2011b.

15. Jack Blumenau, "The Effects of Female Leadership on Women's Voice in Political Debate," *British Journal of Political Science*, 51 (April 2021), 750–71.

16. Sarah Childs, "A Feminised Style of Politics? Women MPs in the House of Commons," *The British Journal of Politics and International Relations*, 6 (February 2004), 3–19.

17. Catherine Bochel and Jacqui Briggs, "Do Women Make a Difference?," *Politics*, 20 (May 2000), 63–68; but see Hargrave and Langengen, 2021.

18. Martin Haselmayer, Sarah C. Dingler, and Marcelo Jenny, "How Women Shape Negativity in Parliamentary Speeches—A Sentiment Analysis of Debates in the Austrian Parliament," *Parliamentary Affairs*, 75 (October 2022), 867–86.

19. Bäck and Debus, 2019; Osborn and Mendez.

20. Mansbridge.

21. Hinojosa, Carle, and Woodall; Piscopo.

22. Clayton, Josefsson, and Wang, 2017; Gerrity, Osborn, and Mendez, 2007; Pearson and Dancy, 2011b; Daniel Höhmann, "When Do Female MPs Represent Women's Interests? Electoral Systems and the Legislative Behavior of Women," *Political Research Quarterly*, 73 (December 2020), 834–47.

23. Schwindt-Bayer, 2010; Tiffany Barnes, *Gendering Legislative Behavior* (New York: Cambridge University Press, 2016).

24. Senk, 2021.

25. Morgan and Hinojosa, 2018; O'Brien, 2015; Kristin Wylie, "Taking Bread Off the Table: Race, Gender, Resources and Political Ambition in Brazil," *European Journal of Politics and Gender*, 3 (February 2020), 121–42.

26. Kerevel and Atkeson.

27. Senk, 2021.

28. Bäck and Debus, 2019.

29. Pearson and Dancey, 2011a.

30. Eduardo Alemán and Juan Pablo Micozzi, "Parliamentary Rules, Party Norms, and Legislative Speech," *International Political Science Review*, 43 (November 2022), 713–29.

31. Heath et al., 2005; Mimica and Navia, 2022.

32. Kerevel and Atkeson, 2013; Barnes, 2016.

33. Heath, Schwindt-Bayer, and Taylor-Robinson; Mimica and Navia; Schwindt-Bayer, 2010.

34. Keith Krehbiel, *Information and Legislative Organization* (Ann Arbor: University of Michigan Press, 1992), 136.

35. Michael P. Olson and Jon C. Rogowski, "Legislative Organization and Political Representation," *Quarterly Journal of Political Science*, 19 (June 2024), 275–305.

36. Thomas Gilligan and Keith Krehbiel, "Collective Decisionmaking and Standing Committees: An Informational Rationale for Restrictive Amendment Procedures," *The Journal of Law, Economics, and Organization*, 3 (October 1987), 287–335.

37. Herbert Döring, *Parliaments and Majority Rule in Western Europe* (Frankfurt: Campus, 1995).

38. Eduardo Alemán, Juan Pablo Micozzi, and Sebastián Vallejo Vera, "Congressional Committees, Electoral Connections, and Legislative Speech," *Political Research Quarterly*, 76 (June 2023), 994–1011.

39. Kevin Quinn, Burt L. Monroe, Michael Colaresi, Michael H. Crespin, and Dragomir R. Radev, "How to Analyze Political Attention with Minimal Assumptions and Costs," *American Journal of Political Science*, 54 (January 2010), 209–28.

40. Jorge Fernandes, Max Goplerud, and Miguel Won, "Legislative Bellwethers: The Role of Committee Membership in Parliamentary Debate," *Legislative Studies Quarterly*, 44 (May 2019), 307–43.

41. Bäck, Debus, and Müller.

42. Sven-Oliver Proksch and Jonathan B. Slapin, *The Politics of Parliamentary Debate* (Cambridge: Cambridge University Press, 2015).

43. Hanna Bäck, Marc Debus, and Jorge M. Fernandes, eds., *The Politics of Legislative Debates*, (Oxford: Oxford University Press, 2021).

44. Barbara Palmer and Dennis Simon, *Breaking the Political Glass Ceiling: Women and Congressional Elections* (New York: Routledge, 2010).

45. Wylie.

46. Schmidt.

47. Richard Cracknell, "The History and Geography of Women Mps Since 1918 in Numbers," *Insight*, House of Commons Library, UK Parliament [https://commonslibrary.parliament.uk/the-history-and-geography-of-women-mps-since-1918-in-numbers/], 2013; Gary Moncrief and Joel A. Thompson, "Urban and Rural Ridings and Women In Provincial Politics in Canada: A Research Note on Female MLAs," *Canadian Journal of Political Science/Revue canadienne de science politique*, 24 (December 1991), 831–37.

48. Jennifer Piscopo, Magda Hinojosa, Gwynn Thomas, and Peter M. Siavelis, "Follow the Money: Gender, Incumbency, and Campaign Funding in Chile," *Comparative Political Studies*, 55 (February 2022), 222–53.

49. Alemán, Micozzi, and Vallejo Vera; Bäck and Debus, 2018.

50. Alemán and Micozzi, 2021; Gamboa, Ricardo, and Sergio Y. Toro, "The Electoral Connection in Presidential Systems: Non-Legislative Actions Inside the Chilean Congress," *The Journal of Legislative Studies*, 24 (September 2018), 249–71.

51. Beall and Barnes.

52. Schwindt-Bayer, 2006.

53. Leslie A. Schwindt-Bayer and Renato Corbetta, "Gender Turnover and Roll-Call Voting in the US House of Representatives," *Legislative Studies Quarterly*, 29 (May 2004), 215–29; Arturo Vega and Juanita M. Firestone, "The Effects of Gender on Congressional Behavior and the Substantive Representation of Women," *Legislative Studies Quarterly* (May 1995), 213–22.

54. Nichole M. Bauer and Ivy AM Cargile, "Women Get the Job Done: Differences in Constituent Communication from Female and Male Lawmakers," *Politics & Gender*, 19 (May 2023), 1110–33; Danielle M. Thomsen and Bailey K. Sanders, "Gender Differences in Legislator Responsiveness," *Perspectives on Politics*, 18 (December 2020), 1017–30.

55. Mansbridge; Phillips.

56. Wendy Smooth, "Standing for Women? Which Women? The Substantive Representation of Women's Interests and the Research Imperative of Intersectionality," *Politics & Gender*, 7 (November 2011), 436–41; Laurel Weldon, "Perspectives against Interests: Sketch of a Feminist Political Theory of 'Women'," *Politics & Gender*, 7 (September 2011), 441–46.

57. Mansbridge; Phillips.

58. Christina Wolbrecht, *The Politics of Women's Rights: Parties, Positions, and Change* (Princeton: Princeton University Press, 2010), 214.

59. Lena Wängnerud, "Women in Parliaments: Descriptive and Substantive Representation," *Annual Review of Political Science*, 12 (June 2009), 51–69.

60. Mark Jones, "Legislator Gender and Legislator Policy Priorities in the Argentine Chamber of Deputies and the United States House of Representatives," *Policy Studies Journal*, 25 (December 1997), 613–29; Piscopo, 2011; Schwindt-Bayer, 2006.

61. Karen Celis, "Substantive Representation of Women and the Impact of Descriptive Representation. Case: The Belgian Lower House 1900–1979," *Journal of Women, Politics and Policy*, 28 (October 2006), 85–114.

62. Ana Catalano, "Women Acting for Women? An Analysis of Gender and Debate Participation in the British House of Commons 2005–2007," *Politics & Gender*, 5 (March 2009), 45–68.

63. Osborn and Morehouse Mendez.

64. Saadet Konak Unal, "The Role of Gender in Turkish Parliamentary Debates," *Turkish Studies*, 22 (October 2021), 530–57.

65. Clayton, Josefsson, and Wang.

66. For an exception, see Bäck and Debus, 2019.

67. Karen Celis, Sarah Childs, Johanna Kantola, and Mona Lena Krook, "Constituting Women's Interests through Representative Claims," *Politics & Gender*, 10 (June 2014), 149–74.

68. Osborn.

69. Schwindt-Bayer, 2006.

70. Lisa Baldez, "The UN Convention to Eliminate All Forms of Discrimination Against Women (CEDAW): A New Way to Measure Women's Interests," *Politics & Gender*, 7 (September 2011), 419–23.

71. Ana Catalano Weeks, *Making Gender Salient: From Gender Quota Laws to Policy* (New York: Cambridge University Press, 2022).

72. While useful for exploring various substantive questions, this approach, of course, prevents us from studying whether women engage in behaviors that promote women's issues.

73. Craig Volden, Alan E. Wiseman, and Dana E. Wittmer, "Women's Issues and Their Fates in the US Congress," *Political Science Research and Methods*, 6 (October 2018), 679–96.

74. We exclude from our analysis individual speeches delivered during the Hour of Incidents (*Hora de Incidentes*) where the topics of the debate depend on legislators' pure discretion.

75. Valeria Palanza, Carlos Scartascini, and Mariano Tommasi, "Congressional Institutionalization: A Cross-National Comparison," *Legislative Studies Quarterly*, 41 (February 2016), 7–34.

76. Carlos Huneeus, Fabiola Berríos, and Rodrigo Cordero, "Legislatures in Presidential Systems: The Latin American Experience," *The Journal of Legislative Studies*, 12 (December 2006), 404–25.

77. Mimica and Navia.

78. Lisa Baldez and John M. Carey, "Presidential Agenda Control and Spending Policy: Lessons from General Pinochet's Constitution," *American Journal of Political Science* (January 1999), 29–55.

79. https://radiopolar.com/noticia_99863.html.

80. https://elcachapoal.cl/2022/03/23/diputada-marta-gonzalez-expuso-en-la-camara-de-diputados-el-problema-que-viven-las-manipuladoras-y-el-precario-retorno-a-clases-del-programa-de-alimentacion/.

81. The remainder of the speeches given by lawmakers were delivered during interpellations, tributes, and occasional special sessions.

82. The speakers cannot belong to the same party bloc.

83. Eduardo Alemán, Margarita M. Ramirez, and Jonathan B. Slapin, "Party Strategies, Constituency Links, and Legislative Speech," *Legislative Studies Quarterly*, 42 (November 2017), 637–59.

84. Original data can be found at https://www.bcn.cl/historiapolitica/corporaciones/periodos_legislativos?periodo=1990-2026#diputados.

85. Pearson and Dancey, 2011a.

86. Bäck and Debus, 2016, 75–110; Sharon Broughton and Sonia Palmieri, "Gendered Contributions to Parliamentary Debates: The Case of Euthanasia," *Australian Journal of Political Science*, 34 (June 1999), 29–45; Michelle M. Taylor-Robinson, *Gender and Legislatures* (Oxford: Oxford University Press, 2014).

87. Bäck and Debus, 2019; Lyn Kathlene, "Power and Influence in State Legislative Policymaking: The Interaction of Gender and Position in Committee Hearing Debates," *American Political Science Review*, 88 (September 1994), 560–76; Sebastián Vallejo Vera and Analía Gómez Vidal, "The Politics of Interruptions: Gendered Disruptions of Legislative Speeches," *The Journal of Politics*, 84 (July 2022), 1384–402.

88. Joan C. Timoneda and Sebastian Vallejo Vera, "BERT, RoBERTa or DeBERTa? Comparing Performance Across Transformer Models in Political Science Text," *The Journal of Politics* (Forthcoming), https://doi.org/10.1086/730737.

89. Shaun Bevan, "The Creation of the Comparative Agendas Project Master Codebook," *Comparative Policy Agendas: Theory, Tools, Data 17* (2019).

90. The CAP categories are macroeconomics, civil rights, health, agriculture, labor, education, environment, energy, immigration, transportation, law and crime, social welfare, housing, domestic commerce, tourism, defense, technology, foreign trade, international affairs, government operations, public lands, and culture.

91. Categories related to territorial organization (33 percent) and culture (50 percent) were the least accurately predicted. Maintaining or removing these categories does not affect the results from our models.

92. Volden, Wiseman, and Wittmer.

93. In the appendix (see Table 2.B.), we show the results of a generalized linear model (GLM) with a binomial distribution and a logit link to analyze the data. The GLM model imposes an upper limit on the possible number of speeches. This upper limit, which enters the model as the number of trials, refers to the total number of speeches (on all topics) delivered by the legislator during the corresponding congressional term. Results are almost identical to those presented here. Due to space constraints, the Appendix is not in the print version of this article. It can be viewed in the online version, at https://www.ingentaconnect.com/content/cuny/cp.

94. During the last legislative period, the Communist Party joined the center-left coalition, which renamed itself *Nueva Mayoría*. The two bloc division that characterized legislative politics during the prior era continued throughout this period, although differences within the progressive camp intensified.

95. For example, see Volden et al., 2018; Hunt et al., 2013; Catalano, 2009.

96. Volden, Wiseman, and Wittmer.

97. Alper T. Bulut and T. Murat Yildirim, *Political Stability, Democracy and Agenda Dynamics in Turkey* (London: Palgrave Macmillan, 2020).

98. We use the following terms to identify family law: *familia*, *matrimonio*, *divorcio*, *custodia*, *maternidad*, *paternidad*, marital, *nupcia*, *pensi[oó]n alimenticia*, *pensiones alimenticias*, *patria potestad*, parental.

99. Mala Htun, Marina Lacalle, and Juan Pablo Micozzi, "Does Women's Presence Change Legislative Behavior? Evidence from Argentina, 1983–2007," *Journal of Politics in Latin America*, 5 (April 2013), 95–125.

100. Htun, Lacalle, and Micozzi.

101. Kathlene, 696.

102. Htun, Lacalle, and Micozzi.

103. Senk, 809.

104. Gerrity, Osborn, and Mendez.

105. Hargrave and Langengen; Dietrich, Hayes, and O'Brien.

106. For example, see Bäck, Debus, and Müller; Osborne and Mendez.

107. Dietrich, Hayes, and O'Brien.

APPENDIX

Online Appendix A

To carry out the classification task, we use XLM-RoBERTa, a state-of-the-art multilingual Transformer based context-understanding machine learning architecture for text classification. XLM-RoBERTa is pre-trained in more than 30 languages, including English and Spanish, and has been known to produce high accuracy scores in multilingual applications—for a review, see Timoneda and Vallejo Vera (2024).[1] To train our model, we sample 2,300 speeches and label them[2] following a modified version of the Comparative Agendas Project coding rules. (Bevan 2019).[3] To obtain a more balanced training set, our sampling procedure was not entirely random. We randomly sampled 1900 speeches. Once labeled, we sampled an additional 400 speeches that focused on underrepresented categories. To do this, we used keywords that could potentially identify a specific topic. For example, to sample additional speeches related to the territorial organization category, we query speeches containing the word "comuna"(municipality). Not every speech containing "comuna" refers to the territorial organization category. This allows the model to train on instances where the word "comuna" might appear, but the title refers to a topic other than territorial organization. For this second step, we focused on the following topics: defense, civil rights, territorial organization, sports, and technology. We also eliminate concatenated categories that are similar in nature and do not have enough occurrences in our dataset. Thus, we combine domestic commerce with macroeconomics and tourism, and foreign trade with international affairs. Furthermore, we add categories relevant to our corpus: local politics, a category that includes speeches referring to politicians (e.g., tributes to dead politicians) or political parties; territorial organization, a category that includes speeches referring to the creation of new territorial subdivisions; and sports, a category that includes speeches referring to sporting events or sport-related comments. This is the same procedure used in (Aleman et al. 2023).

Table A.1: Hyperparameters for training models

	Spanish
Learning-rate	2.5 e^-5
Epochs	5
Batch size	32
Warm-up steps	2
Max number of tokens	135
Model	xlm-roberta-large-finetuned-conll02-spanish

Figure A.1. Confusion Matrix
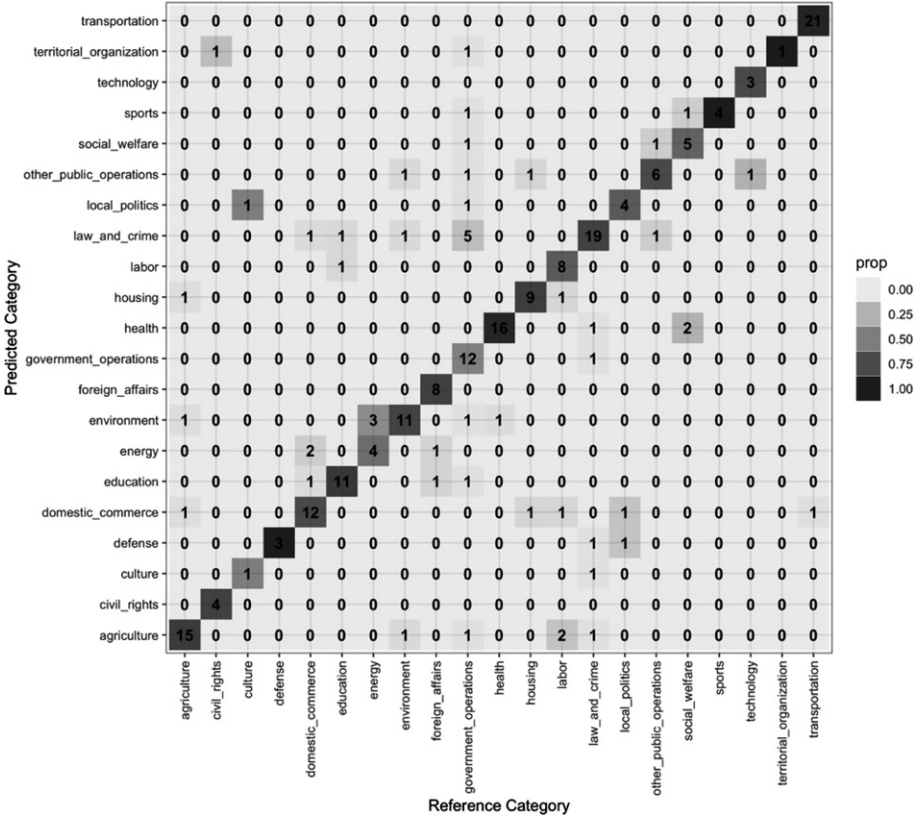
Further training a pre-trained model for a specific task is called fine-tuning. Using our labeled data, we fine-tune (separately) XLM-RoBERTa to predict labels.[4] We apply 10-times repeated 10-fold cross-validation, reporting out-of-sample performance averages for model testing.[5] We report the hyper-parametrization of the model in Table A.1. The overall out-of-sample accuracy of our model is 77%, a statistically significant difference from the no-information rate (11%). The worst performing categories were territorial organization (33%) and culture (50%). The confusion matrix, which summarizes the performance of our classification model, is presented in Figure A.1.

We use our model to predict the topics for the rest of the speeches. To validate our model, we sample 420 speeches and label them, and compare the hand-coded label with the topics produced by our model. The results show that the model is highly accurate. The overall distribution of the topics of the speeches delivered by legislators in Chile's Chamber of Deputies is presented in Figure A.3.

Figure A.2. Topics Distribution
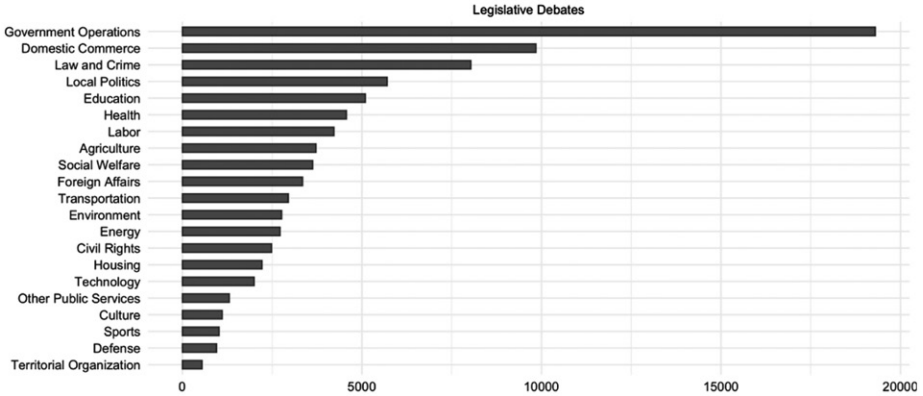
Online Appendix B

In Table 1.B, we present the complete results from our main model in the manuscript. The dependent variables used to analyze gender differences in speechmaking are counts of lawmaking speeches for each of the 21 topics previously classified using the multilingual machine-learning model XLMRoBERTa. For all categorie, we utilize a negative binomial model. The unit of analysis is the number of speeches per legislator on each topic during each legislative term. The key explanatory variable of interest is gender, measured by a categorical variable indicating whether the legislator is a *Woman*.

As detailed in the main manuscript, we include two variables to capture positions of authority within the chamber: the variable *Mesa Member* indicates whether the legislator was a member of the chamber directorate (*Mesa Directiva*), and the variable *Chair* indicates whether the legislator chaired the committee associated with the topic of the bill being discussed. In addition, we add a series of variables to control for *Committee Membership*. We also account for the legislator's seniority. More experienced representatives are more likely to access positions of power inside the chamber, and previous works have found that they are often more likely to speak on the floor of Congress. Thus, we created the variable *Tenure*, which indicates the number of terms the legislator has served in the chamber.

We also argued that the districts that elect women to office tend to differ from those that elect men. To capture these influences, we include a variable labeled *Rural Population* that indicates the share of rural inhabitants in the district, obtained from Chilean census information. Another variable labeled *Distance to Capital* measures the (logged) distance between the main town of the legislator's district and *La Moneda*, the presidential building located in Santiago, computed using Google Maps.

In addition to the factors discussed in our theoretical discussion, we include other variables likely to influence legislative speech. One is electoral vulnerability, labeled

Margin List, which measures the difference between the votes received by the legislator and her list's partner. Under Chile's open list PR with two seats per district, each of the two main lists would usually win one seat. Thus, an elected legislator's main competitor was typically her list partner. During this period, women typically had a larger positive vote margin over their list partner than men. The second and third controls indicate the coalition membership of the legislator. During the period studied, most legislators belonged to one of the two dominant coalitions, the center-left *Concertación* and the center-right *Alianza*, which alternated in government. As these coalitions were divided by ideological concerns, the topics covered in their speeches were likely to differ. To account for these differences, we created two categorical variables. One indicates whether the legislator belonged to the *Alianza* coalition, and the other indicates whether it was part of another coalition (*Other*). The baseline, left-out category, refers to legislators who belonged to the *Concertación* coalition, the largest of the two.

In Table 2.B, we show the results of a generalized linear model (GLM) with a binomial distribution and a logit link to analyze the data. The GLM model imposes an upper limit on the possible number of speeches. This upper limit, which enters the model as the number of trials, refers to the total number of speeches (on all topics) delivered by the legislator during the corresponding congressional term. Results are almost identical to those presented in Table 1.B.

Table 1.B. Determinants of speech topic – Negative binomial model.

	Agriculture	Civil Rights	Culture	Defense	Domestic Commerce	Education	Energy	Environment	Foreign Affairs	Government Operations	Health	Housing	Labor	Law and Crime	Local Politics	Social Welfare	Sports	Technology	Territory	Transportation
Intercept	-0.030	0.012	-0.852***	-2.067***	1.032***	-0.252*	-0.399**	-0.513***	0.167	1.966***	-0.281*	-0.007	-0.311**	0.774***	0.795***	-0.099	-0.872***	0.153	0.153	-2.725***
	(0.174)	(0.173)	(0.243)	(0.279)	(0.112)	(0.152)	(0.188)	(0.178)	(0.166)	(0.100)	(0.156)	(0.185)	(0.157)	(0.134)	(0.134)	(0.169)	(0.260)	(0.216)	(0.216)	(0.343)
Women	**-0.018**	**0.375***	**0.010**	**-0.175**	**0.058**	**0.149**	**-0.207**	**-0.012**	**-0.121**	**-0.131***	**0.382***	**0.155**	**0.111**	**0.251***	**-0.041**	**0.353***	**-0.358***	**-0.083**	**-0.083**	**-0.299**
	(0.126)	**(0.115)**	**(0.163)**	**(0.199)**	**(0.076)**	**(0.097)**	**(0.135)**	**(0.121)**	**(0.121)**	**(0.071)**	**(0.100)**	**(0.126)**	**(0.099)**	**(0.089)**	**(0.094)**	**(0.109)**	**(0.184)**	**(0.165)**	**(0.165)**	**(0.251)**
Chair	0.536***	0.451***	0.393*	0.491**	0.286**	0.268*	0.528***	0.804***	0.333*	0.054	0.408**	0.680***	0.172	0.291		0.232*	-0.153	0.365**	0.365**	0.221
	(0.147)	(0.149)	(0.220)	(0.245)	(0.121)	(0.154)	(0.193)	(0.170)	(0.175)	(0.144)	(0.162)	(0.193)	(0.167)	(0.237)		(0.140)	(0.279)	(0.165)	(0.165)	(0.335)
Alianza	0.043	-0.174*	-0.274**	-0.051	0.008	0.026	-0.109	-0.053	-0.040	-0.061	-0.243***	-0.015	-0.069	-0.091	-0.077	0.136	0.105	-0.063	-0.063	-0.128
	(0.088)	(0.093)	(0.122)	(0.132)	(0.056)	(0.075)	(0.097)	(0.089)	(0.085)	(0.052)	(0.078)	(0.097)	(0.076)	(0.067)	(0.071)	(0.085)	(0.134)	(0.115)	(0.115)	(0.178)
Other	0.355	-0.175	0.770*	-0.168	0.041	0.460*	0.016	0.295	0.565*	0.066	-0.084	0.037	0.305	-0.046	-0.036	0.218	-0.642	-0.337	-0.337	0.771
	(0.330)	(0.348)	(0.394)	(0.530)	(0.201)	(0.252)	(0.332)	(0.298)	(0.305)	(0.196)	(0.272)	(0.336)	(0.257)	(0.255)	(0.233)	(0.299)	(0.494)	(0.437)	(0.437)	(0.688)
Tenure	0.083***	0.013	0.027	0.051	-0.016	-0.003	-0.025	0.025	0.100***	0.013	0.013	0.021	-0.025	-0.024	0.024	0.051*	-0.126***	0.003	0.003	0.103*
	(0.032)	(0.032)	(0.042)	(0.046)	(0.019)	(0.026)	(0.033)	(0.030)	(0.030)	(0.018)	(0.027)	(0.034)	(0.026)	(0.024)	(0.024)	(0.029)	(0.045)	(0.041)	(0.041)	(0.060)
Distance to Capital	0.136***	-0.021	0.040	0.012	0.020	0.047***	0.029	0.065***	-0.025	-0.019	0.017	-0.044**	0.004	-0.009	-0.006	-0.001	-0.003	-0.045*	-0.045*	0.162***
	(0.022)	(0.021)	(0.029)	(0.031)	(0.014)	(0.018)	(0.022)	(0.021)	(0.020)	(0.012)	(0.019)	(0.023)	(0.018)	(0.016)	(0.017)	(0.020)	(0.031)	(0.027)	(0.027)	(0.040)
% Rural	0.011***	-0.001	-0.007**	-0.002	0.000	-0.005**	0.001	0.000	0.003	-0.002	0.002	0.001	-0.002	0.000	0.001	-0.003	-0.003	-0.002	-0.002	0.000
	(0.002)	(0.002)	(0.002)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)	(0.004)
List Margin	-0.013	-0.184	0.055	-0.138	-0.267*	-0.059	-0.131	-0.280	-0.163	-0.145	-0.104	-0.279	-0.150	-0.074	-0.469**	0.209	0.225	0.073	0.073	-0.180
	(0.228)	(0.230)	(0.321)	(0.340)	(0.147)	(0.196)	(0.248)	(0.228)	(0.220)	(0.133)	(0.203)	(0.249)	(0.196)	(0.172)	(0.183)	(0.216)	(0.344)	(0.290)	(0.290)	(0.451)
Mesa	0.070	0.111	-0.265*	0.074	0.032	-0.083	-0.133	0.139	0.158	-0.073	0.024	0.103	0.051	-0.031	0.069	0.062	-0.092	0.030	0.030	0.070
	(0.105)	(0.105)	(0.152)	(0.150)	(0.068)	(0.093)	(0.115)	(0.105)	(0.098)	(0.063)	(0.094)	(0.115)	(0.091)	(0.082)	(0.084)	(0.101)	(0.166)	(0.135)	(0.135)	(0.105)
Committee Membership:																				
Constitution	-0.514***	0.425***	-0.473***	-0.102	-0.170**	-0.460***	-0.619***	-0.371***	-0.103	0.272***	-0.174*	0.045	-0.228**	0.876***	0.042	-0.482***	-0.317*	0.218	0.218	-0.514***
	(0.119)	(0.105)	(0.162)	(0.162)	(0.071)	(0.100)	(0.127)	(0.116)	(0.105)	(0.063)	(0.100)	(0.119)	(0.097)	(0.079)	(0.086)	(0.112)	(0.168)	(0.140)	(0.140)	(0.119)
Public Works	0.055	-0.227*	-0.060	-0.477***	-0.034	-0.211**	-0.112	0.236**	-0.226**	-0.143**	0.157	0.311***	-0.109	-0.091	0.003	-0.093	-0.158	0.593***	0.593***	0.055
	(0.104)	(0.118)	(0.156)	(0.186)	(0.071)	(0.097)	(0.120)	(0.106)	(0.109)	(0.065)	(0.099)	(0.115)	(0.098)	(0.086)	(0.087)	(0.107)	(0.168)	(0.136)	(0.136)	(0.104)
Science and Tech	-0.127	0.057	-0.004	0.033	0.143**	-0.076	-0.288**	-0.372***	0.034	0.022	0.116	-0.220*	-0.109	-0.039	-0.026	0.082	0.160	0.708***	0.708***	-0.127
	(0.106)	(0.109)	(0.141)	(0.152)	(0.066)	(0.086)	(0.116)	(0.110)	(0.100)	(0.061)	(0.090)	(0.123)	(0.090)	(0.081)	(0.084)	(0.098)	(0.154)	(0.129)	(0.129)	(0.106)
Human Rights	-0.385***	0.650***	0.019	0.177	0.079	-0.017	-0.045	-0.266**	0.137	0.088	0.119	0.041	0.042	0.374***	0.145*	0.006	-0.035	-0.016	-0.016	-0.385***
	(0.103)	(0.098)	(0.139)	(0.148)	(0.064)	(0.085)	(0.110)	(0.105)	(0.095)	(0.058)	(0.087)	(0.111)	(0.085)	(0.074)	(0.078)	(0.095)	(0.151)	(0.134)	(0.134)	(0.103)
Environment	0.169*	0.227**	-0.248*	-0.058	-0.131*	-0.151*	0.135	0.574***	0.040	-0.155**	0.037	-0.032	-0.156*	-0.167**	-0.031	-0.069	0.095	0.119	0.119	0.169**
	(0.099)	(0.104)	(0.149)	(0.161)	(0.068)	(0.089)	(0.110)	(0.101)	(0.101)	(0.062)	(0.091)	(0.116)	(0.093)	(0.082)	(0.083)	(0.101)	(0.152)	(0.135)	(0.135)	(0.099)

(Continued)

Table 1.B. (continued)

	Agriculture	Civil Rights	Culture	Defense	Domestic Commerce	Education	Energy	Environment	Foreign Affairs	Government Operations	Health	Housing	Labor	Law and Crime	Local Politics	Social Welfare	Sports	Technology	Territory	Transportation
RREE	-0.120 (0.104)	0.466*** (0.098)	-0.066 (0.147)	0.219 (0.146)	-0.128* (0.068)	-0.004 (0.090)	0.104 (0.107)	0.088 (0.101)	1.304*** (0.096)	-0.161*** (0.062)	0.047 (0.092)	-0.144 (0.117)	-0.148 (0.092)	0.035 (0.079)	0.147* (0.080)	-0.125 (0.102)	-0.321* (0.167)	0.122 (0.133)	0.122 (0.133)	-0.120 (0.104)
Hacienda	-0.107 (0.103)	-0.235** (0.109)	-0.212 (0.150)	-0.274* (0.155)	0.587*** (0.064)	0.156* (0.087)	0.193* (0.109)	-0.094 (0.105)	0.379*** (0.096)	0.077 (0.061)	-0.064 (0.094)	-0.012 (0.114)	0.107 (0.089)	-0.333*** (0.082)	-0.017 (0.082)	0.139 (0.099)	-0.510*** (0.164)	0.014 (0.134)	0.014 (0.134)	-0.107 (0.103)
Labor	-0.200* (0.108)	0.025 (0.108)	-0.096 (0.152)	-0.173 (0.173)	0.081 (0.068)	-0.122 (0.091)	0.094 (0.114)	-0.169 (0.110)	-0.089 (0.104)	-0.094 (0.063)	0.191** (0.094)	-0.063 (0.118)	1.238*** (0.087)	-0.108 (0.082)	-0.011 (0.085)	0.385*** (0.098)	-0.125 (0.164)	-0.182 (0.144)	-0.182 (0.144)	-0.200* (0.108)
Mining	-0.207* (0.109)	0.031 (0.111)	-0.029 (0.148)	-0.076 (0.164)	-0.101 (0.071)	-0.220** (0.094)	1.405*** (0.110)	0.045 (0.107)	0.045 (0.104)	0.055 (0.064)	0.087 (0.097)	0.054 (0.121)	0.164* (0.093)	-0.060 (0.084)	-0.019 (0.087)	-0.158 (0.108)	-0.193 (0.168)	0.063 (0.140)	0.063 (0.140)	-0.207* (0.109)
Economy	-0.142 (0.097)	-0.077 (0.105)	0.028 (0.139)	0.073 (0.148)	0.283*** (0.065)	-0.111 (0.085)	0.040 (0.106)	0.008 (0.099)	0.153* (0.092)	-0.002 (0.059)	-0.002 (0.092)	0.085 (0.109)	0.000 (0.087)	0.086 (0.076)	0.045 (0.080)	-0.140 (0.098)	-0.056 (0.154)	0.081 (0.127)	0.081 (0.127)	-0.142 (0.097)
Health	-0.133 (0.112)	0.141 (0.109)	-0.232 (0.165)	-0.090 (0.177)	-0.029 (0.072)	-0.145 (0.093)	-0.122 (0.123)	0.003 (0.111)	-0.156 (0.110)	-0.231*** (0.067)	1.643*** (0.093)	-0.095 (0.127)	-0.139 (0.099)	-0.113 (0.086)	-0.086 (0.087)	0.030 (0.105)	-0.267 (0.171)	-0.348** (0.158)	-0.348** (0.158)	-0.133 (0.112)
Education	-0.392*** (0.109)	-0.040 (0.106)	0.489*** (0.138)	-0.016 (0.156)	-0.208*** (0.068)	1.528*** (0.082)	-0.430*** (0.119)	-0.344*** (0.109)	-0.127 (0.105)	-0.082 (0.061)	-0.067 (0.090)	-0.108 (0.115)	-0.007 (0.090)	-0.107 (0.080)	0.241*** (0.080)	-0.117 (0.099)	0.423*** (0.152)	-0.323** (0.143)	-0.323** (0.143)	-0.392*** (0.109)
Defense	-0.077 (0.104)	0.073 (0.106)	-0.006 (0.153)	1.483*** (0.138)	0.034 (0.068)	-0.256*** (0.092)	0.189* (0.111)	-0.029 (0.107)	0.196** (0.097)	-0.002 (0.062)	0.107 (0.095)	0.042 (0.117)	-0.186* (0.096)	0.272*** (0.079)	-0.020 (0.083)	-0.040 (0.103)	-0.069 (0.164)	0.160 (0.136)	0.160 (0.136)	-0.077 (0.104)
Interior	-0.381*** (0.107)	0.190* (0.102)	0.214 (0.142)	-0.059 (0.161)	0.053 (0.068)	-0.079 (0.088)	-0.326*** (0.118)	0.021 (0.103)	-0.198* (0.104)	0.528*** (0.059)	0.149 (0.093)	0.344*** (0.111)	-0.048 (0.092)	0.047 (0.080)	0.050 (0.082)	0.075 (0.100)	0.183 (0.150)	0.137 (0.136)	0.137 (0.136)	-0.381*** (0.107)
Family	-0.034 (0.117)	0.389*** (0.111)	-0.107 (0.158)	-0.144 (0.176)	-0.092 (0.075)	-0.039 (0.096)	-0.137 (0.130)	-0.024 (0.116)	0.052 (0.111)	-0.085 (0.068)	-0.014 (0.101)	-0.012 (0.127)	-0.005 (0.097)	0.163* (0.086)	-0.050 (0.093)	0.009 (0.110)	0.106 (0.173)	-0.230 (0.163)	-0.230 (0.163)	-0.034 (0.117)
Housing	-0.153 (0.105)	0.090 (0.111)	-0.098 (0.150)	-0.321* (0.179)	0.024 (0.067)	-0.002 (0.089)	-0.005 (0.116)	0.018 (0.105)	-0.153 (0.105)	0.141** (0.061)	-0.006 (0.095)	0.780*** (0.115)	-0.063 (0.092)	0.038 (0.081)	-0.033 (0.084)	0.050 (0.100)	0.040 (0.160)	0.120 (0.134)	0.120 (0.134)	-0.153 (0.105)
Agriculture	0.848*** (0.100)	0.034 (0.115)	-0.471*** (0.173)	-0.137 (0.174)	0.023 (0.070)	-0.064 (0.096)	-0.088 (0.119)	0.270*** (0.104)	0.276*** (0.105)	-0.155*** (0.066)	-0.025 (0.098)	-0.189 (0.127)	-0.204** (0.099)	-0.153* (0.088)	0.002 (0.087)	-0.029 (0.107)	-0.131 (0.173)	-0.209 (0.150)	-0.209 (0.150)	0.848*** (0.100)
Regimen Int.	0.026 (0.112)	0.131 (0.119)	-0.453** (0.190)	-0.187 (0.178)	-0.032 (0.082)	0.105 (0.106)	-0.109 (0.134)	-0.243* (0.126)	0.004 (0.114)	-0.042 (0.072)	-0.125 (0.113)	0.054 (0.131)	-0.125 (0.111)	0.027 (0.092)	-0.031 (0.100)	0.110 (0.113)	-0.203 (0.207)	-0.192 (0.159)	-0.192 (0.159)	0.026 (0.112)
Zonas Extremas	0.664*** (0.237)	0.222 (0.212)	0.443* (0.235)	0.695** (0.296)	-0.189 (0.124)	0.091 (0.153)	-0.046 (0.208)	0.141 (0.192)	-0.128 (0.210)	0.169 (0.121)	-0.124 (0.163)	0.497*** (0.205)	-0.061 (0.159)	0.207 (0.159)	0.377*** (0.141)	0.071 (0.180)	0.137 (0.281)	0.327 (0.248)	0.327 (0.248)	0.664*** (0.237)
Culture	-0.178 (0.237)	-0.086 (0.212)	1.029*** (0.235)	0.236 (0.321)	-0.300** (0.124)	0.107 (0.153)	-0.261 (0.208)	0.072 (0.192)	0.012 (0.210)	0.015 (0.121)	-0.097 (0.163)	0.394* (0.205)	0.156 (0.159)	-0.181 (0.159)	0.060 (0.141)	-0.027 (0.180)	-0.368 (0.281)	0.540** (0.248)	0.540** (0.248)	-0.178 (0.237)
Small Business	0.160 (0.263)	-0.224 (0.362)	0.055 (0.332)	0.255 (0.371)	-0.043 (0.161)	0.009 (0.211)	-0.689** (0.284)	-0.137 (0.256)	0.018 (0.279)	-0.241 (0.172)	0.019 (0.221)	0.176 (0.297)	-0.242 (0.220)	-0.218 (0.220)	-0.213 (0.233)	0.088 (0.235)	-0.199 (0.427)	0.456 (0.322)	0.456 (0.322)	0.160 (0.263)
Security	-0.031 (0.224)	0.188 (0.188)	-0.207 (0.260)	-0.172 (0.320)	0.156 (0.110)	-0.190 (0.149)	-0.100 (0.199)	-0.186 (0.190)	0.099 (0.191)	0.079 (0.109)	-0.079 (0.152)	0.455** (0.190)	-0.329** (0.156)	0.345** (0.141)	-0.073 (0.133)	-0.031 (0.168)	0.601** (0.235)	-0.395 (0.264)	-0.395 (0.264)	-0.031 (0.224)

Poverty	0.226	-0.173	-0.098	0.040	0.010	0.010	0.287	0.070	-0.304	-0.191*	-0.144	0.190	0.009	-0.048	0.040	0.460***	-0.261	-0.574**	-0.574**	0.226
	(0.189)	(0.192)	(0.244)	(0.291)	(0.109)	(0.141)	(0.182)	(0.171)	(0.185)	(0.113)	(0.148)	(0.191)	(0.147)	(0.140)	(0.130)	(0.157)	(0.257)	(0.266)	(0.266)	(0.189)
Ethics	0.195	-0.272	-0.551	-0.229	0.048	-0.100	0.222	0.035	-0.045	-0.246*	-0.088	-0.627**	-0.104	-0.088	-0.091	-0.230	-0.143	-0.152	-0.152	0.195
	(0.237)	(0.269)	(0.342)	(0.382)	(0.134)	(0.182)	(0.219)	(0.213)	(0.225)	(0.144)	(0.184)	(0.299)	(0.186)	(0.176)	(0.164)	(0.214)	(0.329)	(0.316)	(0.316)	(0.237)
Revisora de Cuentas	-0.215	-0.216	-0.783**	-0.114	-0.094	-0.330*	-0.039	0.359*	-0.093	-0.036	-0.126	-0.093	0.139	-0.008	-0.077	-0.054	-0.075	-0.473	-0.473	-0.215
	(0.245)	(0.260)	(0.357)	(0.386)	(0.146)	(0.194)	(0.241)	(0.215)	(0.238)	(0.146)	(0.200)	(0.271)	(0.191)	(0.191)	(0.170)	(0.218)	(0.341)	(0.341)	(0.341)	(0.245)
Hydric Resources	0.197	-0.085	-0.391	-0.638	0.335**	0.193	0.110	0.556**	-0.368	0.028	0.178	0.594**	-0.029	-0.255	0.183	-0.077	0.146	0.169	0.169	0.197
	(0.319)	(0.276)	(0.457)	(0.816)	(0.171)	(0.221)	(0.290)	(0.251)	(0.326)	(0.177)	(0.226)	(0.292)	(0.237)	(0.231)	(0.176)	(0.290)	(0.347)	(0.432)	(0.432)	(0.319)
Sports	0.292	-0.159	-1.332**	0.307	0.103	0.255	-0.144	0.297	-0.321	0.053	-0.049	-0.014	0.121	0.016	0.136	-0.086	0.154	0.125	0.125	0.292
	(0.301)	(0.273)	(0.591)	(0.468)	(0.167)	(0.211)	(0.294)	(0.260)	(0.289)	(0.166)	(0.236)	(0.297)	(0.224)	(0.215)	(0.171)	(0.267)	(0.339)	(0.425)	(0.425)	(0.301)
Intelligence	0.371	0.078	-1.496	0.266	-0.296	-0.117	0.093	0.152	0.510	-0.195	-0.307	-0.289	-0.124	0.128	-0.058	-0.795*	0.029	0.013	0.013	0.371
	(0.409)	(0.358)	(1.103)	(0.668)	(0.227)	(0.316)	(0.375)	(0.351)	(0.362)	(0.233)	(0.299)	(0.428)	(0.316)	(0.296)	(0.230)	(0.435)	(0.455)	(0.584)	(0.584)	(0.409)
Firefighters	0.153	0.255	-0.208	-0.031	-0.126	-0.578**	0.110	-0.112	0.052	-0.150	-0.137	-0.599*	-0.206	0.480**	-0.079	-0.243	0.036	0.073	0.073	0.153
	(0.312)	(0.257)	(0.404)	(0.528)	(0.173)	(0.226)	(0.290)	(0.266)	(0.277)	(0.172)	(0.228)	(0.307)	(0.233)	(0.213)	(0.178)	(0.274)	(0.346)	(0.401)	(0.401)	(0.312)
Observations	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Legislative period fixed-effects estimated but not included.

Table 2.B. Determinants of speech topic – Generalized linear model (GLM) with a binomial distribution and a logit link

	Agri-culture	Civil Rights	Culture	Defense	Domestic Comm-erce	Edu-cation	Energy	Environ-ment	Foreign Affairs	Govern-ment Oper-ations	Health	Housing	Labor	Law and Crime	Local Politics	Social Welfare	Sports	Tech-nology	Territory	Transport-ation
Intercept	-3.351*** (0.165)	-3.555*** (0.138)	-4.506*** (0.202)	-5.517*** (0.240)	-2.175*** (0.086)	-3.322*** (0.130)	-3.839*** (0.152)	-4.116*** (0.153)	-3.589*** (0.139)	-1.149*** (0.072)	-3.589*** (0.146)	-3.324*** (0.143)	-3.594*** (0.128)	-2.323*** (0.098)	-2.843*** (0.113)	-3.909*** (0.149)	-4.383*** (0.210)	-3.056*** (0.157)	-6.453*** (0.346)	-3.512*** (0.124)
Women	**-0.154** **(0.149)**	**0.324*** (0.107)**	**-0.001** **(0.157)**	**-0.279** **(0.214)**	**0.021** **(0.073)**	**0.050** **(0.096)**	**-0.251*** **(0.138)**	**-0.045** **(0.117)**	**-0.182** **(0.132)**	**-0.219*** (0.070)**	**0.215** (0.107)**	**0.098** **(0.120)**	**-0.083** **(0.091)**	**0.180** (0.084)**	**-0.110** **(0.095)**	**0.310*** (0.105)**	**-0.303*** **(0.174)**	**-0.246** **(0.180)**	**-0.228** **(0.288)**	**-0.142** **(0.115)**
Chair	0.404*** (0.124)	0.443*** (0.128)	0.344** (0.174)	0.433** (0.170)	0.309*** (0.087)	0.170 (0.107)	0.362*** (0.129)	0.701*** (0.133)	0.463*** (0.126)	-0.021 (0.127)	0.501*** (0.131)	0.626*** (0.137)	0.214* (0.112)	0.298 (0.213)		0.199 (0.123)	-0.064 (0.237)	0.291** (0.145)	0.047 (0.303)	-0.149 (0.190)
Alianza	0.160* (0.093)	-0.078 (0.089)	-0.184 (0.115)	0.018 (0.126)	0.083* (0.050)	0.096 (0.074)	0.026 (0.093)	0.068 (0.086)	0.076 (0.085)	-0.023 (0.047)	-0.222*** (0.085)	-0.049 (0.094)	-0.048 (0.069)	-0.017 (0.059)	-0.062 (0.073)	0.253*** (0.083)	0.145 (0.124)	0.017 (0.106)	-0.062 (0.201)	0.016 (0.075)
Other	0.144 (0.338)	-0.127 (0.319)	0.795*** (0.298)	-0.216 (0.458)	0.102 (0.144)	0.456** (0.191)	-0.208 (0.275)	0.125 (0.221)	0.466 (0.296)	0.017 (0.168)	-0.201 (0.253)	-0.113 (0.295)	0.190 (0.180)	-0.101 (0.208)	-0.324* (0.174)	0.196 (0.241)	-1.002** (0.453)	-0.253 (0.409)	0.514 (0.822)	0.072 (0.260)
Tenure	0.072** (0.035)	-0.025 (0.031)	0.024 (0.039)	0.044 (0.043)	-0.024 (0.016)	-0.008 (0.024)	-0.015 (0.030)	0.022 (0.028)	0.092*** (0.030)	-0.008 (0.016)	-0.033 (0.028)	0.008 (0.032)	-0.024 (0.022)	-0.024 (0.022)	0.004 (0.023)	0.037 (0.027)	-0.084** (0.042)	0.008 (0.039)	0.006 (0.064)	0.045* (0.025)
Distance to Capital	0.094*** (0.023)	-0.008 (0.020)	0.047* (0.027)	0.017 (0.029)	-0.005 (0.012)	0.021 (0.017)	0.009 (0.020)	0.061*** (0.021)	-0.028 (0.020)	-0.021** (0.010)	0.025 (0.020)	-0.070*** (0.022)	-0.025 (0.016)	-0.010 (0.014)	0.010 (0.016)	0.005 (0.020)	-0.005 (0.030)	-0.050** (0.023)	0.150*** (0.043)	-0.006 (0.017)
% Rural	0.011*** (0.002)	-0.002 (0.002)	-0.009*** (0.003)	-0.003 (0.003)	0.002 (0.001)	-0.004* (0.002)	-0.001 (0.002)	0.000 (0.002)	0.006*** (0.002)	-0.001 (0.001)	0.004 (0.002)	0.003 (0.003)	-0.002 (0.002)	0.000 (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.003 (0.004)	0.004 (0.003)	-0.002 (0.004)	-0.001 (0.002)
List Margin	0.042 (0.239)	0.123 (0.218)	0.267 (0.302)	-0.012 (0.314)	-0.125 (0.132)	0.140 (0.194)	0.146 (0.229)	-0.025 (0.218)	-0.218 (0.216)	-0.014 (0.117)	-0.014 (0.221)	-0.319 (0.232)	-0.251 (0.175)	0.309** (0.153)	-0.428** (0.184)	0.434** (0.210)	0.543* (0.320)	0.038 (0.264)	-0.282 (0.489)	-0.182 (0.193)
Mesa	0.059 (0.103)	0.116 (0.091)	-0.339** (0.142)	0.104 (0.133)	-0.024 (0.057)	-0.131 (0.088)	-0.095 (0.099)	0.245*** (0.089)	-0.034 (0.088)	-0.083 (0.051)	0.185** (0.089)	0.100 (0.100)	-0.052 (0.076)	-0.009 (0.067)	0.298*** (0.069)	0.002 (0.092)	-0.097 (0.147)	-0.055 (0.117)	0.019 (0.206)	-0.168* (0.089)
Committee Membership:																				
Constitution	-0.624*** (0.135)	0.254*** (0.093)	-0.553*** (0.163)	-0.253* (0.149)	-0.162*** (0.061)	-0.587*** (0.107)	-0.701*** (0.123)	-0.386*** (0.113)	-0.061 (0.097)	0.199*** (0.052)	-0.379*** (0.110)	-0.068 (0.114)	-0.268*** (0.089)	0.849*** (0.063)	0.070 (0.078)	-0.468*** (0.116)	-0.147 (0.153)	0.551*** (0.114)	-0.553*** (0.257)	-0.199** (0.096)
Public Works	0.027 (0.105)	-0.284** (0.119)	-0.085 (0.154)	-0.324* (0.192)	-0.100 (0.064)	-0.227** (0.091)	-0.016 (0.114)	0.162 (0.102)	-0.289** (0.116)	-0.140** (0.056)	0.024 (0.111)	0.360*** (0.097)	-0.078 (0.091)	-0.148* (0.082)	0.169** (0.078)	-0.073 (0.106)	0.037 (0.153)	0.428*** (0.114)	0.043 (0.217)	0.996*** (0.075)
Science and Tech	-0.128 (0.120)	-0.003 (0.111)	0.007 (0.133)	-0.075 (0.149)	0.138** (0.059)	-0.174** (0.082)	-0.262** (0.111)	-0.390*** (0.113)	-0.004 (0.101)	0.015 (0.057)	0.243*** (0.092)	-0.250* (0.132)	-0.106 (0.082)	-0.058 (0.079)	0.093 (0.086)	0.060 (0.096)	0.154 (0.148)	0.712*** (0.119)	-0.002 (0.195)	0.048 (0.089)
Human Rights	-0.465*** (0.113)	0.480*** (0.087)	-0.036 (0.133)	0.054 (0.144)	-0.003 (0.058)	-0.125 (0.086)	-0.026 (0.107)	-0.297*** (0.106)	-0.046 (0.095)	-0.002 (0.052)	-0.021 (0.090)	-0.054 (0.111)	-0.066 (0.076)	0.368*** (0.062)	0.032 (0.073)	-0.105 (0.096)	-0.016 (0.138)	-0.024 (0.118)	0.188 (0.202)	-0.120 (0.089)
Environment	0.196* (0.103)	0.186* (0.102)	-0.194 (0.144)	0.058 (0.163)	-0.090 (0.064)	-0.120 (0.087)	0.201* (0.105)	0.634*** (0.090)	0.069 (0.108)	-0.095* (0.058)	0.145 (0.093)	0.029 (0.118)	-0.199** (0.091)	-0.101 (0.082)	0.018 (0.082)	-0.053 (0.105)	0.109 (0.140)	0.041 (0.130)	-0.073 (0.219)	-0.071 (0.092)
RREE	-0.171 (0.112)	0.463*** (0.088)	0.001 (0.141)	0.208 (0.140)	-0.171*** (0.065)	-0.214** (0.099)	0.138 (0.101)	0.042 (0.097)	1.241*** (0.085)	-0.154*** (0.056)	-0.048 (0.102)	-0.046 (0.116)	-0.240*** (0.089)	-0.121* (0.073)	0.063 (0.081)	-0.123 (0.105)	-0.292* (0.167)	-0.037 (0.124)	0.329 (0.201)	0.055 (0.090)

Hacienda	-0.307***	-0.337***	-0.239*	-0.336**	0.547***	0.112	0.068	-0.264***	0.226**	0.032	-0.233**	0.064	-0.044	-0.449***	0.120*	0.036	-0.300**	-0.063	0.255	-0.228***
	(0.102)	(0.102)	(0.140)	(0.145)	(0.051)	(0.080)	(0.095)	(0.097)	(0.090)	(0.049)	(0.098)	(0.101)	(0.077)	(0.072)	(0.070)	(0.092)	(0.143)	(0.113)	(0.178)	(0.083)
Labor	-0.244**	-0.027	-0.059	-0.382**	-0.023	-0.295***	-0.139	-0.249**	-0.134	-0.254***	0.181*	-0.105	1.152***	-0.319***	-0.007	0.271***	-0.122	-0.240**	-0.501**	0.033
	(0.117)	(0.104)	(0.141)	(0.185)	(0.062)	(0.095)	(0.110)	(0.107)	(0.108)	(0.060)	(0.098)	(0.121)	(0.070)	(0.081)	(0.083)	(0.093)	(0.154)	(0.143)	(0.255)	(0.089)
Mining	-0.318**	-0.124	-0.053	-0.054	-0.179***	-0.273***	1.354***	-0.038	0.069	0.028	-0.025	0.056	0.169**	-0.204**	-0.122	-0.220**	-0.079	0.122	-0.061	-0.193**
	(0.125)	(0.109)	(0.140)	(0.155)	(0.068)	(0.096)	(0.090)	(0.103)	(0.102)	(0.057)	(0.107)	(0.119)	(0.083)	(0.081)	(0.089)	(0.111)	(0.158)	(0.125)	(0.219)	(0.097)
Economy	-0.223**	-0.126	0.017	0.008	0.211***	-0.098	-0.013	-0.002	0.213**	-0.042	-0.153	-0.025	0.033	0.025	-0.014	-0.090	-0.113	-0.003	-0.051	0.104
	(0.102)	(0.106)	(0.130)	(0.144)	(0.058)	(0.082)	(0.097)	(0.095)	(0.088)	(0.053)	(0.108)	(0.109)	(0.078)	(0.071)	(0.081)	(0.097)	(0.150)	(0.121)	(0.195)	(0.081)
Health	-0.033	0.034	-0.330**	-0.150	-0.134*	-0.214**	-0.294**	-0.028	-0.065	-0.301***	1.555***	-0.115	-0.223**	-0.226**	-0.086	0.043	-0.245	-0.340**	-0.241	-0.075
	(0.116)	(0.105)	(0.170)	(0.175)	(0.070)	(0.095)	(0.128)	(0.110)	(0.114)	(0.064)	(0.088)	(0.121)	(0.099)	(0.085)	(0.089)	(0.107)	(0.167)	(0.152)	(0.241)	(0.103)
Education	-0.535***	-0.152	0.502***	-0.133	-0.264***	1.512***	-0.589***	-0.491***	-0.269**	-0.177***	-0.198**	-0.166	-0.145*	-0.319***	0.261***	-0.171*	0.402***	-0.363**	-0.333	-0.230**
	(0.130)	(0.108)	(0.124)	(0.151)	(0.066)	(0.071)	(0.122)	(0.113)	(0.120)	(0.057)	(0.098)	(0.119)	(0.086)	(0.081)	(0.077)	(0.100)	(0.139)	(0.144)	(0.218)	(0.102)
Defense	-0.116	0.095	-0.068	1.429***	-0.008	-0.328***	0.162	-0.061	0.211**	-0.035	0.007	0.035	-0.245**	0.245**	-0.059	-0.105	-0.012	-0.065	0.005	0.005
	(0.114)	(0.101)	(0.155)	(0.122)	(0.065)	(0.097)	(0.106)	(0.109)	(0.096)	(0.055)	(0.111)	(0.118)	(0.096)	(0.067)	(0.085)	(0.107)	(0.157)	(0.126)	(0.211)	(0.092)
Interior	-0.554***	0.117	0.096	-0.077	-0.019	-0.151*	-0.306***	-0.037	-0.204*	0.478***	-0.108	0.299***	-0.136	-0.003	-0.016	0.038	0.196	-0.016	0.525***	-0.070
	(0.117)	(0.095)	(0.130)	(0.161)	(0.063)	(0.086)	(0.114)	(0.097)	(0.105)	(0.050)	(0.106)	(0.099)	(0.088)	(0.074)	(0.081)	(0.099)	(0.137)	(0.127)	(0.194)	(0.093)
Family	0.160	0.297***	-0.154	-0.106	-0.089	-0.045	-0.211	-0.014	-0.090	-0.118*	-0.112	0.003	0.070	0.195**	-0.143	0.146	0.038	-0.167	0.058	-0.132
	(0.124)	(0.105)	(0.151)	(0.179)	(0.063)	(0.096)	(0.133)	(0.113)	(0.119)	(0.067)	(0.111)	(0.134)	(0.087)	(0.079)	(0.096)	(0.105)	(0.164)	(0.179)	(0.232)	(0.110)
Housing	-0.217*	-0.016	-0.072	-0.480**	0.017	-0.123	-0.148	-0.082	-0.218*	0.142**	-0.165	0.790***	-0.102	-0.117	-0.081	0.034	0.032	0.148	0.126	0.070
	(0.116)	(0.113)	(0.149)	(0.198)	(0.063)	(0.093)	(0.117)	(0.105)	(0.118)	(0.055)	(0.106)	(0.103)	(0.089)	(0.081)	(0.087)	(0.103)	(0.152)	(0.124)	(0.211)	(0.083)
Agriculture	0.986***	0.002	-0.328*	-0.133	0.001	-0.092	0.038	0.228**	0.144	-0.225***	-0.150	-0.204	-0.137	-0.222**	0.096	-0.019	0.022	-0.260*	0.090	-0.184*
	(0.093)	(0.111)	(0.181)	(0.178)	(0.063)	(0.099)	(0.111)	(0.096)	(0.106)	(0.063)	(0.104)	(0.131)	(0.090)	(0.088)	(0.087)	(0.105)	(0.167)	(0.149)	(0.192)	(0.096)
Regimen Int.	0.019	0.239***	-0.460**	-0.110	0.003	0.111	0.033	-0.117	0.135	-0.098	0.081	0.067	-0.014	0.016	0.113	0.169	-0.208	0.166	0.194	-0.094
	(0.108)	(0.107)	(0.192)	(0.163)	(0.076)	(0.109)	(0.120)	(0.124)	(0.111)	(0.060)	(0.121)	(0.119)	(0.109)	(0.080)	(0.102)	(0.109)	(0.209)	(0.120)	(0.218)	(0.100)
Zonas Extremas	0.650***	0.086	0.312	0.553***	-0.287***	-0.032	-0.034	0.088	-0.188	0.002	-0.477***	0.357*	-0.030	0.154	0.191	0.037	0.394*	0.111	0.585	0.322**
	(0.208)	(0.206)	(0.233)	(0.272)	(0.111)	(0.144)	(0.168)	(0.155)	(0.240)	(0.117)	(0.168)	(0.209)	(0.133)	(0.147)	(0.119)	(0.167)	(0.224)	(0.283)	(0.604)	(0.186)
Culture	-0.047	-0.182	1.021***	0.233	-0.347***	0.159	-0.116	0.117	-0.096	-0.044	-0.069	0.031	0.247*	-0.128	-0.020	0.033	-0.292	0.624***	0.621	0.122
	(0.300)	(0.205)	(0.198)	(0.322)	(0.112)	(0.134)	(0.174)	(0.163)	(0.241)	(0.115)	(0.158)	(0.202)	(0.133)	(0.148)	(0.120)	(0.164)	(0.239)	(0.230)	(0.595)	(0.198)
Small Business	-0.169	0.080	0.161	0.298	-0.060	0.108	-0.393*	-0.116	0.305	-0.029	0.041	0.197	-0.096	-0.110	-0.163	0.255	0.009	0.569**	-0.856	0.206
	(0.318)	(0.407)	(0.285)	(0.342)	(0.130)	(0.180)	(0.231)	(0.219)	(0.269)	(0.163)	(0.224)	(0.292)	(0.168)	(0.221)	(0.276)	(0.191)	(0.409)	(0.298)	(1.108)	(0.214)
Security	0.059	0.399**	-0.368	-0.053	0.101	-0.226	-0.114	-0.088	0.063	0.029	-0.320*	0.369***	-0.384***	0.413***	-0.133	0.072	0.579***	-0.341	-0.185	-0.045
	(0.295)	(0.180)	(0.241)	(0.315)	(0.092)	(0.140)	(0.195)	(0.184)	(0.217)	(0.106)	(0.159)	(0.182)	(0.144)	(0.126)	(0.122)	(0.149)	(0.204)	(0.263)	(0.811)	(0.189)
Poverty	0.092	-0.271	-0.166	0.111	-0.028	0.233**	0.186	0.187	-0.172	-0.195*	-0.174	0.296*	0.163	0.007	-0.051	0.498***	-0.043	-0.392	0.195	0.187
	(0.217)	(0.185)	(0.236)	(0.291)	(0.085)	(0.116)	(0.155)	(0.141)	(0.182)	(0.107)	(0.136)	(0.177)	(0.122)	(0.125)	(0.103)	(0.127)	(0.216)	(0.276)	(0.583)	(0.166)
Ethics	0.390	-0.106	-0.441	-0.338	0.061	0.019	0.344*	0.342*	-0.067	-0.238	-0.028	-0.623*	0.112	-0.112	0.021	-0.103	-0.150	-0.126	-1.491	-0.367
	(0.291)	(0.294)	(0.362)	(0.442)	(0.124)	(0.170)	(0.191)	(0.178)	(0.250)	(0.162)	(0.192)	(0.369)	(0.168)	(0.199)	(0.155)	(0.216)	(0.322)	(0.350)	(1.494)	(0.285)
Revisora de Cuentas	-0.205	-0.195	-0.607**	0.215	-0.053	-0.167	0.137	0.444***	-0.013	0.071	-0.014	-0.102	0.308**	0.210	-0.068	-0.008	0.049	-0.247	0.034	-0.038
	(0.281)	(0.252)	(0.326)	(0.352)	(0.107)	(0.163)	(0.191)	(0.165)	(0.222)	(0.129)	(0.183)	(0.257)	(0.137)	(0.170)	(0.132)	(0.176)	(0.295)	(0.318)	(0.699)	(0.209)
Hydric Resources	0.093	-0.153	-0.539	-0.752	0.283*	0.057	-0.019	0.456***	-0.595	-0.177	-0.523***	0.536*	0.194	-0.346	0.036	-0.187	0.127	-0.116	0.944	0.381
	(0.424)	(0.263)	(0.507)	(0.997)	(0.155)	(0.186)	(0.259)	(0.216)	(0.419)	(0.190)	(0.235)	(0.288)	(0.223)	(0.251)	(0.142)	(0.320)	(0.293)	(0.535)	(0.897)	(0.334)

(Continued)

Table 2.B. (continued)

	Agriculture	Civil Rights	Culture	Defense	Domestic Commerce	Education	Energy	Environment	Foreign Affairs	Government Operations	Health	Housing	Labor	Law and Crime	Local Politics	Social Welfare	Sports	Technology	Territory	Transportation
Sports	0.415	-0.276	-1.454**	0.146	0.017	0.096	0.001	0.302	-0.410	0.013	-0.192	-0.149	0.275	0.168	-0.007	0.002	0.126	0.132	0.037	-0.489
	(0.337)	(0.267)	(0.727)	(0.528)	(0.135)	(0.174)	(0.275)	(0.228)	(0.335)	(0.151)	(0.246)	(0.277)	(0.179)	(0.203)	(0.123)	(0.245)	(0.264)	(0.502)	(0.973)	(0.412)
Intelligence	0.877*	0.100	-1.419	0.433	-0.196	-0.050	0.426	0.330	0.501	-0.083	-0.285	-0.226	-0.170	0.153	-0.049	-0.569	0.100	0.057	0.287	0.388
	(0.499)	(0.322)	(1.412)	(0.629)	(0.216)	(0.351)	(0.323)	(0.312)	(0.378)	(0.225)	(0.339)	(0.444)	(0.294)	(0.283)	(0.182)	(0.517)	(0.374)	(0.696)	(1.149)	(0.447)
Firefighters	-0.262	0.475**	-0.101	0.116	-0.067	-0.467***	0.194	-0.018	0.186	0.017	-0.062	-0.328	-0.039	0.548***	0.174	-0.343	0.351	0.145	0.675	-0.062
	(0.367)	(0.206)	(0.368)	(0.561)	(0.129)	(0.172)	(0.235)	(0.205)	(0.253)	(0.148)	(0.205)	(0.284)	(0.184)	(0.176)	(0.118)	(0.236)	(0.256)	(0.446)	(0.707)	(0.318)
Observations	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839	839

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Legislative period fixed-effects estimated but not included.

NOTES

1. Transformer-based machine learning models are pre-trained using immense quantities of text. Each word fed into the model is transformed into a vector representation (i.e., word embedding). These vectors have useful algebraic properties. For example, the vector for *king* subtracted from the vector for *man* and added the vector for *woman* will be close to the vector for *queen.* Each vector is embedded with (lexical) meaning. For a complete explanation of Transformer-based models, including XLM-RoBERTa, and their application in social science, see Timoneda and Vallejo Vera (2024).

2. Rather than labeling the speeches, we label the titles that describe the topics of the speeches. Before each speech or block of speeches, the journals include a title describing the topic of the speech. The title of the speeches will reference the bill debated or a particular topic up for discussion. By using the titles, we avoid incorrectly labeling speeches when, for example, legislators momentarily stir off topic.

3. The CAP categories are macroeconomics, civil rights, health, agriculture, labor, education, environment, energy, immigration, transportation, law and crime, social welfare, housing, domestic commerce, tourism, defense, technology, foreign trade, international affairs, government operations, public lands, and culture.

4. We use a version of XLM-R that is further pretrained in Spanish named entity recognition. The model's name is 'xlm-roberta-large-finetuned-conll02-spanish'. The pre-trained model can be found at *huggingface.io*.

5. Out-of-sample tests use unseen data from the model and test its accuracy.