

Stop, Collaborate, and Listen: Women's Caucuses, Collaboration, and Policy Making in
U.S. State Legislatures

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Abstract: Collaboration plays a key role in the crafting of good public policy. Certain individual and institutional characteristics are associated with higher levels of collaboration; in particular, women are more likely to work with others and collaboration is more likely to occur in environments where collaboration is less costly. We use a new dataset of all pieces of legislation considered in 2015 in U.S. state legislatures to examine the factors associated with women's collaboration with each other. We leverage the diversity of caucuses in U.S. states to examine the collaboration between female legislators in caucus and non-caucus states. The analysis demonstrates that the power of women's caucuses to connect women within legislatures is predicated on their representation and the party in power. While caucuses do not have an independent effect on women's collaboration with each other, they are effective in Democratically controlled bodies and when interacted with the level of women's representation. We find that all types of women's caucuses can increase co-sponsorship rates, but in interaction with higher levels of women's representation in the body. Our findings speak to the long-term consequences of electing women to political office, the importance of women's organizations, and the institutionalization of gender in politics.

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In February 2017, Louisiana State Senator Sharon Hewitt (R) and Representative Helena Moreno (D) discussed equal pay with Louisiana advocates. Moreno, who had championed equal pay legislation in 2016 only to see the bill killed in committee, was eager in the next session to change the message and the trajectory of the proposal. Hewitt argued that success was more likely to come from a focus on the effects of unequal pay on the larger economy. The collaboration between these two legislators, both members of the Louisiana Legislative Women's Caucus, would lead to a repackaging of the proposal away from gender inequality to the impact on Louisiana families. Such a collaboration demonstrates the possibilities when women legislators work together to represent women's interests. But what conditions facilitate women working together on legislation?

Collaboration, or the act of working with other legislators within a political body to produce policy, has many benefits, including creating better policy, increasing the probability of the legislation passing, and reducing polarization. Some individuals (women, minority party members, and those excluded from governing coalitions) may be more likely to collaborate than others (Barnes 2016; Swers 1998). Institutional characteristics can also facilitate collaboration; for example, increased polarization may reduce collaboration, or organizations like caucuses may increase collaborative work by their members.

Under what circumstances do legislators with marginalized identities collaborate with each other? In this paper, women's collaboration with each other is evaluated through a new, unique dataset of all bill activity in U.S. state legislatures in 2015. Using this dataset of over 160,000 pieces of legislation, we evaluate under which conditions women legislators work

together by co-sponsoring legislation to solve public problems. Drawing on the literature on critical mass, institutional feminism, and gendered policy making, we argue that institutional and individual characteristics interact to shape women's collaboration on legislation.

We focus on the presence of a woman's caucus, arguing that these organizations should increase co-sponsorship between women. These sub-institutional organizations, which are found in 23 states across the United States and in a variety of partisan circumstances, reduce the information costs for collaboration among members by facilitating relationships, increasing interpersonal trust, and establishing policy position alignment. The uneven distribution of women's caucuses across state legislative bodies allows us to examine both how institutional contexts, including party control, legislative characteristics, and the proportion of women in the body shape women's ability to collaborate with each other and how women's caucuses interact with these institutional features to facilitate collaboration.

We find little evidence that caucuses are independently effective at fostering women's collaboration. Instead, these women's organizations increase women's co-sponsorship and bipartisan co-sponsorship in an interactive fashion. Consistent with theories of critical mass and gendered institutions, we find that caucuses – in all their forms – increase women's collaborative behavior as the share of women in the body increases. Partisan control also matters: caucuses have a positive effect on women's co-sponsorship in Democratically controlled chambers, while the interactive effect between women's representation and the presence of a caucus persists in both Republican and Democratic controlled chambers, but is particularly substantively meaningful in Republican controlled chambers. Our findings thus build upon research that finds that women's strategy and influence is a function of women's presence and party control (Bratton 2002; Dodson 2006; Osborn 2012; Swers 2002).

This research – the first to examine questions of collaboration with such a large and comprehensive dataset of legislative action – contributes to the literature that examines the influence of women’s presence within legislatures and the mechanisms by which women shape institutions and their processes. Building on research on how women adapt to gendered institutional patterns, our findings have important practical implications for women’s ability to make policy in U.S. states.

Collaboration and Co-sponsorships in Legislatures

Public policy within state legislatures is the product of interaction between many actors including legislators, lobbyists, staffers, governmental agencies, constituents, and governors (Treadway 1985). State legislatures (largely) have two chambers,¹ have staff members, choose their leaders from among their members and are organized both by party caucuses and committees (Hamm and Moncrief 2008). Beyond these consistencies, state legislative bodies vary widely in terms of professionalization and chamber size, rules and procedures for how bills will be considered, and the characteristics of who serves in the bodies. Party polarization in state legislatures, which is both heightened in recent years and unevenly distributed, brings questions about the circumstances that compel collaboration to the fore (Schor and McCarty 2011).

One common factor across legislative bodies is the importance of collaboration in crafting good public policy, where “compromise is difficult, but governing a democracy without compromise is impossible” (Gutmann and Thompson 2012, 1). Although collaboration comes in many forms, co-sponsorship of legislative is one of the principal means of collaboration between legislators (Barnes 2016). There are many benefits to attracting a wide set of co-sponsors on bills: these contain better public policy and have a higher likelihood of passage (Hibbing and Theiss-Morse 2002; Adler and Wilkerson 2013; Gutmann and Thompson 2012). This is

¹ Except Nebraska, which is unicameral.

particularly true of bills co-sponsored by perceived experts in an area (Wilson and Young 1997). Legislators sponsor bills to signal expertise, engage in policy action on issues of importance, and credit claim to constituents and donors. Co-sponsorship rates among legislators indicate how connected members are to each other. Higher levels of co-sponsorship may indicate a greater degree of connectedness, which may improve information sharing improving the output of not only individual legislators but the institutions themselves (Barnes 2016). Networks among legislators mean more communication, trust, and creativity leading to a more effective and productive legislative body (Tam Cho and Fowler 2010).

At the same time, collaboration is also costly (Kanthak and Krause 2012), particularly when it involves bipartisan work. Co-sponsorship means sharing credit when legislators may prefer to distinguish themselves as the leader on an issue. Further, collaboration requires coordination of staff, research, time, and turf. It may taint legislators as traitors to their party in more polarized legislatures – putting them at a disadvantage indicating that caucus impact on co-sponsoring is tempered by other institutional factors like party polarization, competition and state political culture. To counteract these obstacles, women’s caucuses have coordinated to facilitate legislation sponsored by minority party women for whom the pressure to conform is lessened (Johnson and Josefsson 2016). This indicates that women’s strategies respond to institutional features while capitalizing on individual characteristics to achieve their goals. We seek to determine how the presence and type of a women’s caucus mediates these costs for women in state legislatures.

Influences on Legislative Collaboration

We focus on co-sponsorship of legislation as a key measure of collaboration. Co-sponsorship represents an inclusive and broad measure of collaboration, representing “not an

individualistic but a collaborative process” whereby legislators come together to craft legislation (Bratton and Rouse 2012). Co-sponsorship serves as a cue to other legislators about the importance of legislation (Kessler and Krehbiel 1996; Krutz 2005), reducing information costs and increasing the likelihood of a bill passing (Kessler and Krehbiel 1996; Campbell 1982; Rocca and Sanchez 2008). Studies have considered both individual and institutional level variables associated with this type of collaboration; however, caucus presence and type, particularly women’s organizations, have not yet been analyzed, nor have there been comprehensive, large-n studies of women’s collaboration with each other.

Some legislator characteristics are associated with higher rates of co-sponsorship (Koger 2003; Swers 2002). The strongest connections between legislators are those with institutional, regional, issues, or friendship ties (Fowler 2006). At the federal level, in addition to individual characteristics like electoral vulnerability, urban population, ideology, and committee and/or party leadership status, co-sponsorship rates are also influenced by institutional conditions like minority party status and delegation size (Koger 2003; Swers 2005). Garland and Burke (2006) find that the tendency to co-sponsor legislation generally declines with seniority. In state legislatures, ideological distance, geographic location of districts, and shared descriptive characteristics (race, and gender) all predict co-sponsorship among members (Bratton and Rouse 2011). Additionally, Bratton and Rouse (2011) find evidence of transitivity whereby co-sponsors are likely to collaborate on future unrelated bills as a consequence of the initial co-sponsoring creating cliques within states.

Political party affiliation and ideology play an important role in co-sponsorship. In their examination of collaboration across chamber in select U.S. states, Kirkland and Williams (2014) find that political party predicts collaboration. As legislators’ conservatism increases, their

likelihood to co-sponsor decreases (Grand and Burke 2006). Minority party members are more likely than majority party members to co-sponsor legislation (Barnes 2016; Koger 2003) because they are in a position of institutional weakness. Thus, collaboration gives minority party members an opportunity to influence legislation. This is also true for women, who are more likely to collaborate across a variety of settings (Barnes 2016).

A legislator's gender can play a role in co-sponsorship patterns. Women are more likely to collaborate because of gendered socialization patterns, shared policy interests among women, and to overcome gendered structures of power. Conventional gendered socialization patterns reinforce the idea that women should have traits associated with childbearing and raising, such as strong interpersonal skills and working well with others (Cassese and Holman 2017; Holman, Merolla, and Zechmeister 2016; Diekman, Eagly, and Kulesa 2002). These patterns generate expectations for some behavior for women and different behavior for men (Eagly and Karau 2002; Bauer, Yong, and Krupnikov 2016; Krupnikov and Bauer 2014); these expectations are often internalized and socially reinforced, rewarding women for having stereotypic strengths (Schneider 2014; Eagly and Karau 2002). These expectations also shape women's policy interests; scholars consistently find that women in political office consistently work on "women's issues" more than men do (Holman 2014; Osborn 2014). These shared interests and traits produce a group of individuals who may be more inclined to collaborate overall and to collaborate with each other.

When women reach the legislative bodies, they may face additional barriers that promote collaboration. Women are less likely to be placed on powerful committees, hold fewer leadership positions in legislative bodies, and rarely preside over committees (Thomas 1994; Towns 2003). Women may also be excluded from informal networks of power, not invited to important social

events, or provided with strategic information at a time when it may be useful (Mahoney 2013; Rosenthal 1998). Because of these exclusions, as Barnes (2016) demonstrates in Argentina, women may collaborate more frequently because they otherwise face a variety of disadvantages in their ability to lead – high co-sponsorship rates are thus an effort to overcome the gendered patterns of governing that advantage men in legislative bodies.

We focus on women's collaboration with each other for several reasons (Barnes 2016). Women can overcome many of the structural and informal barriers they face in political institutions by working with each other. These "women's" networks can substitute for access to the networks of power, including providing necessary information for legislative success (Forret and Dougherty 2004; Timberlake 2005; Clark and Caro 2013). And, while there is some evidence that women in legislative bodies may face backlash from men who are resistant to their incorporation (Heath, Schwindt-Bayer, and Taylor-Robinson 2005; Kathlene 1994), women can work with other women without this concern. Finally, research suggests that the tendency of women to collaborate more can escalate work between women (Jewell and Whicker 1993; Holman 2014).

While women may collaborate more than men do, it is reasonable to expect that some institutional characteristics may decrease the costs or increase the benefits of collaboration between women. First, the share of women in the body may have a direct effect on the ability of women to work with other women. Gender politics scholars have long debated whether women must first reach a critical mass of representation, or pass some threshold prior to being able to enact policy changes (Dahlerup; Beckwith 2007; Holman 2014; Kanter 1977). Other scholars have called for a more institutional approach to understanding women's presence and their impact on legislatures indicating that more is not always better (Bratton 2005; Crowley 2004) or

that women's presence in conjunction with other factors may provide more explanatory power (Beckwith 2007; Carroll 2006). We expect that *women's collaboration will increase with women's representation in the legislative body*, but are agnostic as to whether the effect will be linear or exponential.

Another key institutional feature that may promote collaboration between women is the presence of a woman's caucus in the state. Women's caucuses shape their member's experiences within gendered institutions by providing an explicitly women's space within male dominated legislatures. Figure 1 demonstrates the range of caucus types across the 50 states in 2011. A women's caucus is a bi-partisan, institutionalized association of legislators who seek to improve women's lives.² Caucus membership allows legislators to develop relationships and therefore trust, which is currency within legislatures. Caucuses offer women legislators a framework for overcoming uniquely gendered obstacles by connecting them across party divides, providing possible entry to legislative leadership, and relieving them of the individual responsibility of addressing every gendered issue independently. Further, institutionalized organizations like caucuses can concentrate collaboration with women's advocates outside the legislature in ways that promote efficiency (Johnson and Josefsson 2016). Some scholars have also begun to consider how organizations within legislatures like these affect co-sponsorships specifically, but no analysis to date considers them within a US state context (Barnes 2016). And, unlike other identity caucuses, women's caucuses consistently have Republican members enabling bipartisan cooperation.³ Thus, we expect that *women's collaboration overall will increase in legislatures*

² By institutionalized, we mean the organization has an identifiable leader and has met at least once in the last year. For a further discussion of these criteria and the methodology for the following categorization, please see Mahoney (2013).

³ Members of a black caucus are almost always Democrats (King-Meadows and Schaller 2006). The same is true for LGBT and Latino caucuses. Of these three state identity caucuses, there is one lone Republican member of the New York Black, Puerto Rican, Hispanic & Asian Legislative Caucus, Rep. Peter Lopez R-AD22.

with women's caucuses; we also expect caucuses will be associated with higher levels of bipartisan collaboration between women.

Insert Figure 1 about here.

Not all caucuses have an equal role in legislative bodies. Women's legislative caucuses engage in agenda-setting, position-taking (ad hoc), and social activities in half of U.S. state legislatures (Mahoney 2013) (see Figure 1). While they do not establish a policy agenda, social women's caucuses do facilitate relationships that may result in co-sponsorships by generating trust and engagement between women. Thus, we expect that *social caucuses will have a weak, positive effect on women's collaboration and bipartisan collaboration.* Ad-hoc policy caucuses take issue positions as a group as they emerge, but do not set a session-long legislative agenda. These *ad-hoc policy caucuses should increase collaboration generally.* Finally, the strongest form of a caucus, the agenda-setting caucus, meets to set a legislative agenda for the entirety of the session. These *agenda-setting caucuses should have the strongest positive effect on women's collaboration,*

Despite the theoretical power behind the expectation that a woman's caucus will promote collaboration between women, evidence is mixed as to whether women's caucuses directly influence policy in the states. As legislative organizations, Osborn et al. (2002, 24) find that minority caucuses, both black and women's, "are effective as voting blocs...and thus are successful in holding a certain amount of power in the legislatures" although this is tempered by political party cohesion. Additionally, Thomas (1991) finds that the presence of women's caucuses is linked with successful passage of bills in state legislatures dealing with issues of women, children, and families, suggesting that the power of women's caucuses is connected to party cohesion. She states, "When a caucus bands together, the result is political clout – a

weapon with the potential to overcome skewed groups” (973). The implication here is that a caucus is an institutional feature that interacts with women’s numbers to enhance their legislative power. Notwithstanding the evidence suggesting a connection between women’s caucuses and substantive representation, Osborn’s (2012) analysis of vote cohesion among women legislators fails to identify a relationship between a woman’s caucus and a unified group of women’s legislative votes, nor do Reingold and Schneider (2001) find evidence of caucuses affecting the outcome of women’s issues legislation. Taken together, this research on caucuses suggests that they may not promote collaboration in isolation, but rather when they are present in conjunction with other institutional features.

Knowing that the creation of women’s caucuses within legislatures is conditioned by institutional factors like political party, we would also expect caucuses’ influence on women’s co-sponsorship behavior to be moderated by context. Constraints like rules and procedures and, importantly, political party as the primary organizers of legislatures may limit any legislator’s attempt at women’s substantive representation. While we expect women’s caucuses to have an independent effect on co-sponsorship rates, many scholars have found party majority to influence the strategies and impact of women in office (Bratton 2002; Dodson 2006; Osborn 2012; Swers 2002). The Democratic Party’s ownership of women’s issues and the larger share of women in the party (as compared to their representation in the Republican Party) suggests that women’s organizing coalitions will be more effective in bodies governed by the Democratic Party. Thus, women’s’ ability to shape the policy agenda may increase, under Democratic control increasing the likelihood of co-sponsorship among women under similar conditions. In addition, between 2006-2010, all women’s caucuses created in the US occurred in Democratically controlled legislatures (Mahoney 2013), suggesting Democratically-controlled

bodies may be more friendly to collaborative work by women. Consequently, *we expect that women's caucuses within Democratically-controlled legislatures will have a positive effect on the rate of co-sponsorship among women.* Likewise, we expect Republican women within Democratically-controlled legislatures to have more freedom to co-sponsor bills with Democratic women (Swers 2002) due to their position in the minority, therefore *increasing the bipartisan co-sponsorship rate among women.*

Recent criticism of critical mass theory has indicated that mere women's presence may not be enough to expect women's substantive representation (Bratton 2005; Childs and Krook 2006; Crowder-Meyer 2010). While some scholars have found that women need to meet a "critical mass" of representation prior to achieving change (Beckwith 2007; Holman 2014; Kanter 1977), a gender institutionalist framework suggests that numbers do not guarantee success due to challenges embedded in rules and norms (Bratton 2005; Crowley 2004) and that women's presence in conjunction with other factors may better explain women's influence (Beckwith 2007; Carroll 2006). For example, considering women's proportions in relationship to other conditions like their incorporation into the body, their access to power, or their participation in political parties may better explain women's legislative behavior and impact (Bolzendahl 2014; Osborn 2014).⁴ Thus, it may be that women's representation in a body interacts with the presence of a caucus *and* party control. In this circumstance, women's representation may facilitate collaboration – particularly bipartisan collaboration more so in a "hostile" environment, or when the Republican party is in control.

⁴ Some scholars argue to shift focus from women's critical mass to those 'critical actors' advocating for women to best determine the origins of women's substantive representation (Childs and Krook 2006).

Data and Methods

To evaluate the effect of women's caucuses on women's collaboration, we use individual-bill level sponsorship information for all bills considered in regular sessions of state legislatures in 2015.⁵ We retrieved this data from Legiscan,⁶ a website that tracks bills in state legislatures. The website provides, for each legislative session, five data files: a) information on bills considered in that legislative session, b) the legislative history of each bill, c) rollcall votes on each bill, d) sponsors on each bill, and e) the legislators (including their district, chamber, and nickname) in the body. A research assistant then combined the Legiscan data with individual-level gender information from the Center for American Women in Politics. We then merged in sponsorship information with the bill data to generate a dataset that has bill information, along with aggregated sponsor information (percent of female sponsors, number of female sponsors, party sponsors). This information is then paired with a variety of data on the legislative chamber and the state. This dataset allows for comparative analysis across political institutions, which contributes to the literature that, at present, largely considers only case studies.

Dependent variables: We focus on two indicators as dependent variables which examine the probability that a bill involves collaboration between: a) *multiple women*, or b) *bipartisan women*. Details of these variables are available in Table 1.

Key Independent variables: Our explanatory variables of interest focus on the presence or absence of a women's caucus, the types of women's caucuses present in state legislative body, the partisan control of the body, and the percentage of women in the body.

Agenda-setting caucuses meet during or outside of the session to agree upon a legislative agenda that is presented to legislative leadership or published more broadly. Ad-hoc policy

⁵ Two states did not hold legislative sessions in 2015: New Jersey and Alaska. We used 2016 information for both these states.

⁶ <https://legiscan.com/>

caucuses are those in which issue positions are taken by the group as they emerge, but there is no legislative agenda for the session.⁷ A social caucus meets intermittently during the session or outside of session to be social or discuss politics. Women members of these caucuses identify relationship building as their primary objective. On occasion, they may ask about how a bill they have put forth has been received by the other party. This points to the second function of these groups – information sharing. These groups do not seek consensus or pressure members to vote together. States that do not meet the criteria of identifiable leadership and activities to improve the lives of women are considered to have no gender organization. In five states, including California, the purpose for the women’s caucus is to collectively pursue an adopted legislative agenda (“agenda-setting”), 12 states have caucuses that take ad hoc policy positions as they emerge throughout the session without a preordained strategy (“ad hoc”), and six women’s caucuses do not engage the policy process directly at all, but prioritize social support for women legislators (“social”). We argue that some organization is better for women than none for facilitating bill co-sponsorships; as such, even social women’s caucuses will have an indirect influence on the public policy process.

Control variables: We include a variety of controls, including percent women of each party, margin of party control, number of seats in the chamber⁸; political culture, term limits, professionalization, status of women, and general political ideology of the state.

Key Interactions: To account for the gendered patterns of institutions, we also interact the presence of a woman’s caucus with the level of women’s representation in the chamber, as well as the party in control in the chamber.

⁷ A sub-group within this category is Gender Open Caucuses. These groups include women and men but are not included within this analysis.

⁸ For those bills that are single-house sponsored, chamber level information is used; for those bills with both house and senate sponsors, information on both chambers is aggregated.

Results

We first evaluate whether the presence of a women's caucus increases co-sponsorship rates between women generally and in specifically bipartisan ways. We anticipate that caucuses will facilitate collaborative behavior between women, but especially between women from different political parties. We find little to no evidence of this – caucuses do not increase the probability of multiple women as co-sponsors on a piece of legislation nor do they increase bipartisan female co-sponsorship. They also are not associated with a higher overall number of female co-sponsors on a piece of legislation. Thus, we find little evidence in support of hypothesis 1.

Insert Table 2 about here.

We next evaluate whether the type of women's caucus matters, with the expectation that agenda-setting and ad hoc caucuses will be more impactful in promoting women's collaborative behavior overall, but that social caucuses may be particularly important for increasing the likelihood of bipartisan collaboration between women. Again, we find little evidence in support of hypothesis 2 – ad hoc and agenda-setting caucuses do not increase women's rates of co-sponsorship and social caucuses do not increase bipartisan co-sponsorships.

Insert Table 3 about here.

As we have previously discussed, extensive research suggests that women's behavior is constrained by the institutional arrangements in which they lead; the share of women in a body may have an independent effect on women's collaboration, or an interactive effect on how successful caucuses are at providing opportunities for collaboration, or both. Thus, we estimate the effect of the presence of a caucus on women's collaboration by the share of women in the body. Here, we estimate the effects with a full control model (available in the appendix) and

estimate the effects of the interaction between the percent of women in the body and the presence of a caucus at the difference levels of women's representation. Figure 2 provides the effect of the share of women in a body on the probability of multiple female co-sponsors on a piece of legislation or bipartisan women co-sponsors, by the presence of any form of a woman's caucus. Calculations for Effects are calculated and visualized using margins and marginsplot in Stata.

Insert Figure 2 about here.

We next engage in an examination of the effect of women's caucuses overall, in conjunction with women's representation, on our two dependent variables. In evaluating these effects, two separate comparisons are appropriate: what is the difference between the predicted effect of women's overall representation with the presence of a caucus (red, dashed line) and without a caucus (blue, solid line). Here, the effect of the caucus is clear – in those chambers with any form of a woman's caucus, the share of women in the body has a positive and large effect on the probability that a bill will have multiple women cosponsors or bipartisan women cosponsors. The second comparison is an evaluation of the left side of the slope (when women's representation is low) to the middle and right sides of the slope (where women's representation increases; the rate of change is a useful evaluation, as if there are overlapping confidence intervals at the beginning, middle, and end of the slope. Here, we can see that increases in women's representation very quickly has a positive effect on both co-sponsorships overall and bipartisan co-sponsorships with the presence of a caucus. At the same time, women's representation has a flat, if not negative, effect on collaboration in legislative bodies without a woman's caucus.

How does each form of the women's caucus influence collaboration in conjunction with women's representation? The effect of all caucuses is calculated independently from the

subtypes of caucuses, but all subtypes of caucuses are calculated in the same model. Thus, the baseline of ‘no caucus’ in these models is *no caucus overall*. We find similar patterns – women’s representation interacts positively with all forms of caucuses – social, agenda-setting, or ad hoc – to increase women’s collaboration, but has a null or slightly negative effect absent the caucuses.

Insert Figure 3 about here.

We next evaluate the degree to which party control shapes the effectiveness of the caucus. Recall that we expected that caucuses will be more effective at promoting women’s collaboration under Democratic Party control. We find significant evidence of this – the interaction of any woman’s caucus and Democratic Party control of the chamber is significant and positive (see Table 4). In Figure 4 also see that both social and agenda-setting caucuses are effective at increasing women’s collaboration (and bipartisan collaboration). Contrary to our expectations, the ad-hoc policy caucuses do not increase collaboration under Democratic control, nor are the agenda-setting caucuses the most effective at promoting collaboration.

Insert Table 4 about here.

Insert Figure 4 about here.

Finally, we anticipated that the proportion of women in the body would also operate in conjunction with the party in power *and* the presence of a woman’s caucus. Specifically, we expect that the marginalization of women in Republican-governed bodies may increase the utility of a caucus for collaboration, particularly bipartisan collaboration. At the same time, it may be that Democratic control interacts positively with a woman’s caucus and the proportion of women in the body to increase women’s collaboration. To ease with interpretation, we run separate regressions for states with Democratic and Republican control. We find evidence of the former, but not the later. In Figure 5, we show that the share of women in a body interacts positively with

the presence of a woman's caucus in Republican-controlled legislative bodies to increase bipartisan collaboration. The same is not true for the effect of the share of women in Democratic-controlled bodies – while the share of women in the body rises generally has a positive effect on bipartisan collaboration in the presence of a woman's caucus, there is a negative relationship absent the caucus. These findings suggest that caucuses' effects are in creating opportunities for collaboration where collaboration is difficult; when collaboration is easy, the caucus is less useful to women.

Conclusion

In October 2011, three members of the California Legislative Women's Caucus co-authored the Abolition of Child Commerce, Exploitation, and Sexual Slavery (ACCESS) Act which would be signed into law by Governor Jerry Brown. Senator Jean Fuller (R) and Assemblywomen Linda Halderman (R) and Bonnie Lowenthal (D) signaled bipartisan support for this legislation that would increase fines for those convicted of sex trafficking and direct those funds to survivor services. This legislation aligns with one of the eight established policy priorities of the Caucus which is to prevent sexual assault and domestic violence. According to its bylaws, the purpose of the Caucus is to "encourage collegiality, participation in and cooperation among elected women in California government and to promote the interests of women, children and families through legislation" (California Legislative Women's Caucus 2011). Co-sponsorship of legislation, like the ACCESS law, is one of the most obvious manifestations of this mission.

In this paper, we ask: how do women collaborate with others in their legislative bodies? How do institutional factors shape this collaboration? And, does the presence of a women's caucus (and the form it takes) increase women's collaboration in the body? Our findings indicate

that the presence of a caucus alone does not increase co-sponsorships rates among women but rather is an institutional feature which enhances the power of women's numbers in institutions. Further, the impact on co-sponsorship rates exists whether the caucus has an explicit policy focus or not. This indicates that even when women must tailor their collective action to suit their environment, they may still gain the benefits of a policy focused caucus without the political costs.

While our research takes advantage of a new and expansive dataset, further research would deepen our understanding of the role women's caucuses play in collaboration among women. Case studies would further illuminate the processes by which a caucus facilitates co-sponsorships among women. Likewise, research should be conducted which considers the specific bill types that feature multiple and bipartisan women co-sponsors at the state level and whether they reflect the reported priorities of women's agenda-setting and ad hoc caucuses.

The role women's caucuses play in state legislatures is vital to our understanding of women's influence within institutions. Collaboration may increase women legislators' influence in the institution and may more broadly affect the collegiality and partisanship within legislatures. In many instances, women's caucuses are playing long ball and keeping women's issues on the agenda – particularly in states otherwise hostile to these issues. In this way, women's caucuses that develop co-sponsorships could be playing a vital role in women's issues policy incubation. Likewise, by considering the interplay between women's caucuses and women's presence in legislatures, we are undertaking the scholarly call “to systematically assess partisan and institutional variation across these legislative chambers...going a long way toward understanding the conditional effects of electing women to public office” (Osborn 2014 152).

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Table 1: Variables of Interest

Variable	Measurement	Source	Average
Multiple Female Sponsors	1 = more than one female sponsor 0 = any other sponsorship arrangement	Legiscan, CAWP	0.285
Bipartisan Female Sponsor	1 = at least one female sponsor from each party 0 = any other sponsorship arrangement	Legiscan, CAWP	0.174
Any type of women's caucus 2011	1 = any form of a women's caucus in the state	Mahoney 2015	
Social women's caucus 2011	1 = a social caucus is present in the state	Mahoney 2015	
Ad hoc women's caucus 2011	1 = a ad hoc caucus is present in the state	Mahoney 2015	
Agenda-setting women's caucus 2011	1 = an agenda-setting caucus is present in the state	Mahoney 2015	
% Women in Dem. Party	Percent of women in the Democratic party in the chamber	NCSL	0.299
% Women in Rep. Party	Percent of women in the Republican party in the chamber	NCSL	.178
Democratic control of chamber	1 = Democratic control of chamber	NCSL	0.427
Difference in seats controlled by party	Difference in the absolute number of seats controlled by Democrats, chamber adjusted	NCSL	29.9
% republican sponsors	Percent of the bill's sponsors who are Republican	Legiscan	.465
Term Limits	1 = Term limited for either chamber in the state		0.17
Black caucus	1 = presence of a Black caucus		0.8
Elazar	Elazar's political culture score		0.9
Professionalism	Squire's professionalism score	Squire 2003	0.24
Econ Status of Women	Institute for Women's Policy Research score of economic status of women in state	Institute for Women's Policy Research	4.05
Dem. pres share of state vote	The share of the state's presidential vote received by the Democratic candidate in 2012 and 2016, averaged	David Leip's Presidential Atlas	50.16

Table 2: Effect of Caucuses on Female Co-sponsorship

	(1) Multiple female sponsors of bill	(2) Bipartisan female sponsors of bill
<hr/>		
main		
Any type of women's caucus 2011	-0.00 (0.06)	-0.01 (0.05)
% Women in Dem. Party	-0.48^ (0.29)	-0.37^ (0.22)
% Women in Rep. Party	0.32 (0.42)	0.12 (0.32)
% Republican sponsors	-0.06*** (0.00)	0.01*** (0.00)
Term Limits	-0.00 (0.07)	-0.01 (0.05)
Black caucus	-0.11 (0.08)	-0.09 (0.06)
Elazar	-0.00 (0.04)	-0.01 (0.03)
Democratic control of chamber	0.10*** (0.00)	0.06*** (0.00)
Difference in seats controlled by party	0.00*** (0.00)	0.00*** (0.00)
Professionalism (Squire 2003)	0.28 (0.33)	0.15 (0.25)
IWPR Composite Econ Status of Women	0.09 (0.21)	-0.00 (0.16)
Dem. pres share of state vote	0.00 (0.01)	0.00 (0.00)
Constant	0.03 (0.66)	0.26 (0.50)
<hr/>		
lns1_1_1		
Constant	-1.63*** (0.10)	-1.91*** (0.10)
<hr/>		
lnsig_e		
Constant	-0.90*** (0.00)	-1.05*** (0.00)
<hr/>		
Observations	161870	161870
Standard errors in parentheses; ^ p<.10, * p<.05, ** p<.01, *** p<.001		

Table 3: Effect of Types of Caucuses on Female Co-sponsorship

	(1) Multiple female sponsors of bill	(2) Bipartisan female sponsors of bill
<hr/>		
main		
Social Caucus	-0.05 (0.09)	-0.07 (0.07)
Ad hoc Caucus	0.02 (0.08)	0.01 (0.06)
Agenda-setting Caucus	-0.07 (0.12)	-0.03 (0.09)
% Women in Dem. Party	-0.56^ (0.29)	-0.43* (0.22)
% Women in Rep. Party	0.39 (0.42)	0.18 (0.32)
Dem. control of chamber	0.01** (0.00)	0.01** (0.00)
Diff in seats controlled by party	0.00*** (0.00)	0.00*** (0.00)
% republican sponsors	-0.06*** (0.00)	0.01*** (0.00)
Term Limits	0.01 (0.07)	0.01 (0.05)
Black caucus	-0.12^ (0.07)	-0.09 (0.06)
Elazar	-0.00 (0.04)	-0.02 (0.03)
Professionalism (Squire 2003)	0.29 (0.35)	0.13 (0.26)
IWPR Composite Econ Status of Women	0.05 (0.21)	-0.04 (0.16)
Dem. pres share of state vote	0.00 (0.01)	0.00 (0.00)
Constant	-0.02 (0.67)	0.28 (0.50)
<hr/>		
lns1_1_1		
Constant	-1.65*** (0.10)	-1.93*** (0.10)
<hr/>		
Insig_e		
Constant	-0.91*** (0.00)	-1.05*** (0.00)
<hr/>		
Observations	161277	161277
Standard errors in parentheses; ^ p<.10, * p<.05, ** p<.01, *** p<.001		

Table 4: Interactions: Effect of Caucuses on Female Co-sponsorship in Democratic controlled Legislatures

	(1) Multiple female sponsors of bill	(2) Bipartisan female sponsors of bill
<hr/>		
main		
Any type of women's caucus 2011	-0.10 (0.07)	-0.08 (0.05)
Any women's caucus * Democratic party control	0.31*** (0.01)	0.22*** (0.01)
Democratic control of chamber	-0.06*** (0.01)	-0.05*** (0.01)
% Women in Dem. Party	-0.53^ (0.31)	-0.41^ (0.24)
% Women in Rep. Party	0.38 (0.45)	0.16 (0.34)
% Republican sponsors	-0.06*** (0.00)	0.01*** (0.00)
Term Limits	-0.02 (0.08)	-0.02 (0.06)
Black caucus	-0.07 (0.08)	-0.06 (0.06)
Elazar	-0.01 (0.05)	-0.02 (0.04)
Difference in seats controlled by party	0.00*** (0.00)	0.00* (0.00)
Professionalism (Squire 2003)	0.13 (0.35)	0.04 (0.27)
IWPR Composite Econ Status of Women	0.03 (0.22)	-0.05 (0.17)
Dem. pres share of state vote	0.00 (0.01)	0.00 (0.01)
Constant	0.34 (0.71)	0.48 (0.53)
<hr/>		
lns1_1_1		
Constant	-1.57*** (0.10)	-1.84*** (0.10)
<hr/>		
lnsig_e		
Constant	-0.91*** (0.00)	-1.05*** (0.00)
<hr/>		
Observations	161870	161870

Standard errors in parentheses

^ p<.10, * p<.05, ** p<.01, *** p<.001

Figure 1: Presence and Type of Women's Caucus in U.S. States

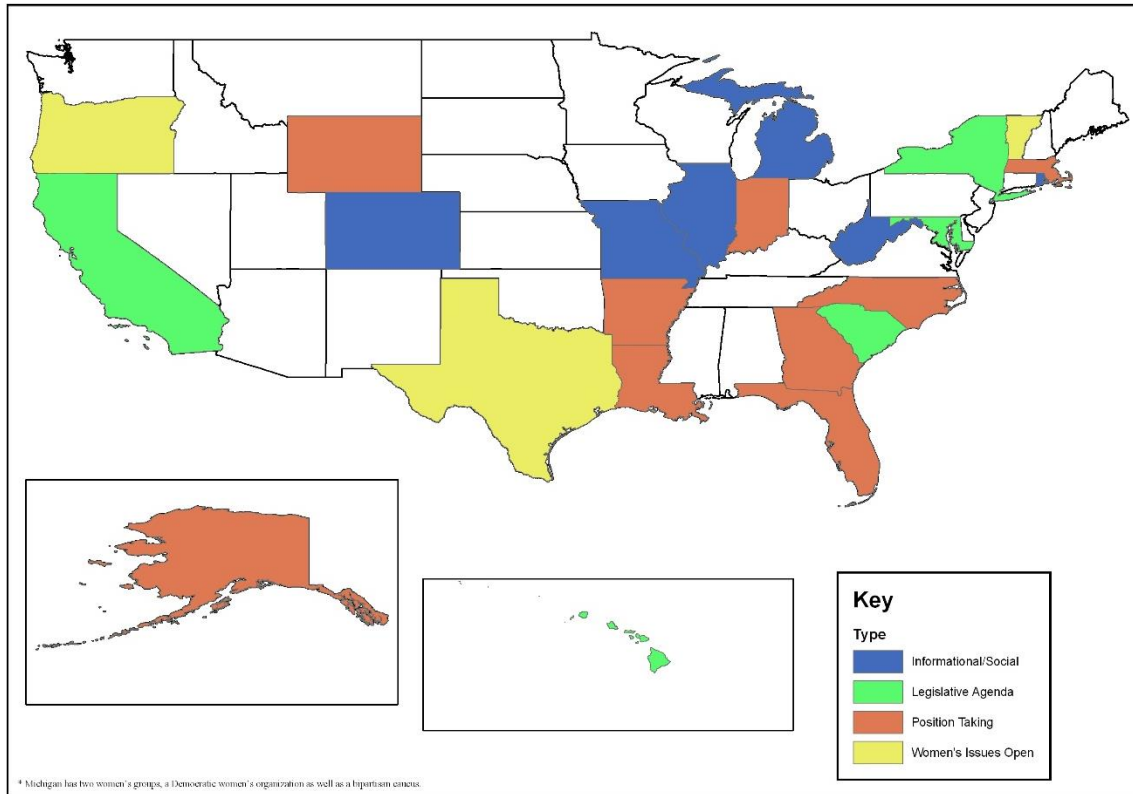


Figure 2: Women's Collaboration by Women's Representation and Women's Caucus

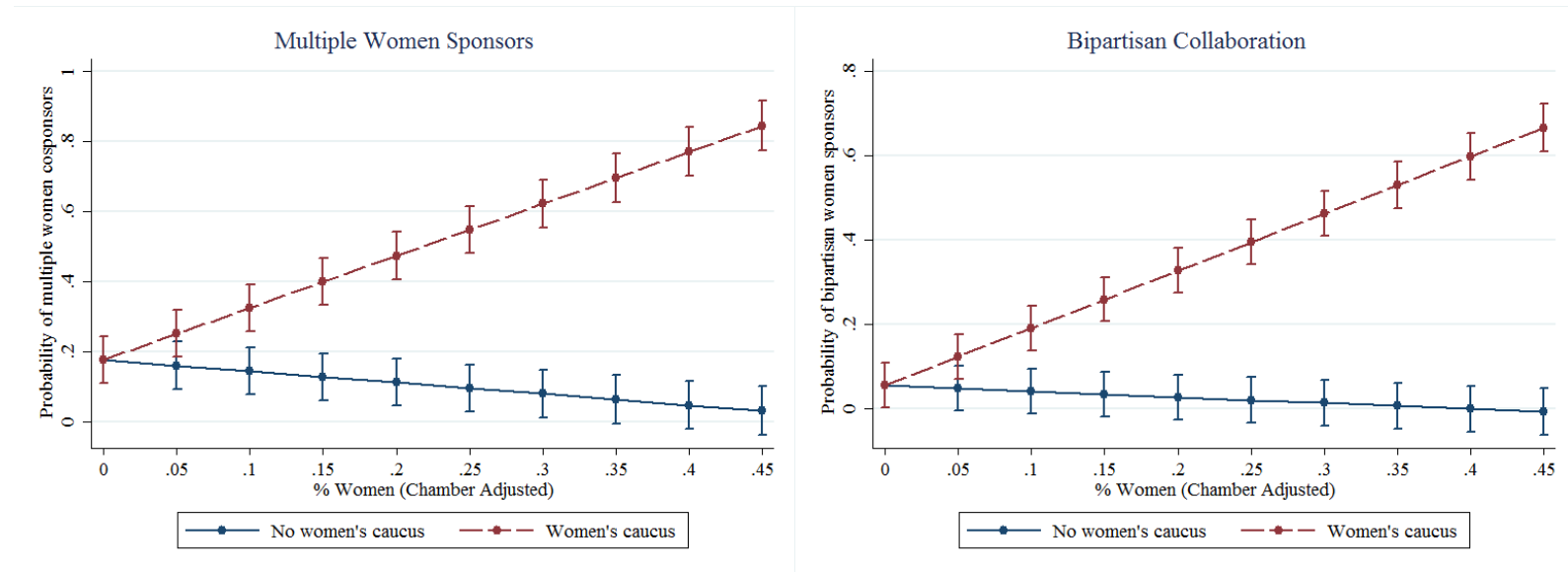


Figure 3: Women's collaboration, by type of Caucus and Women's Representation

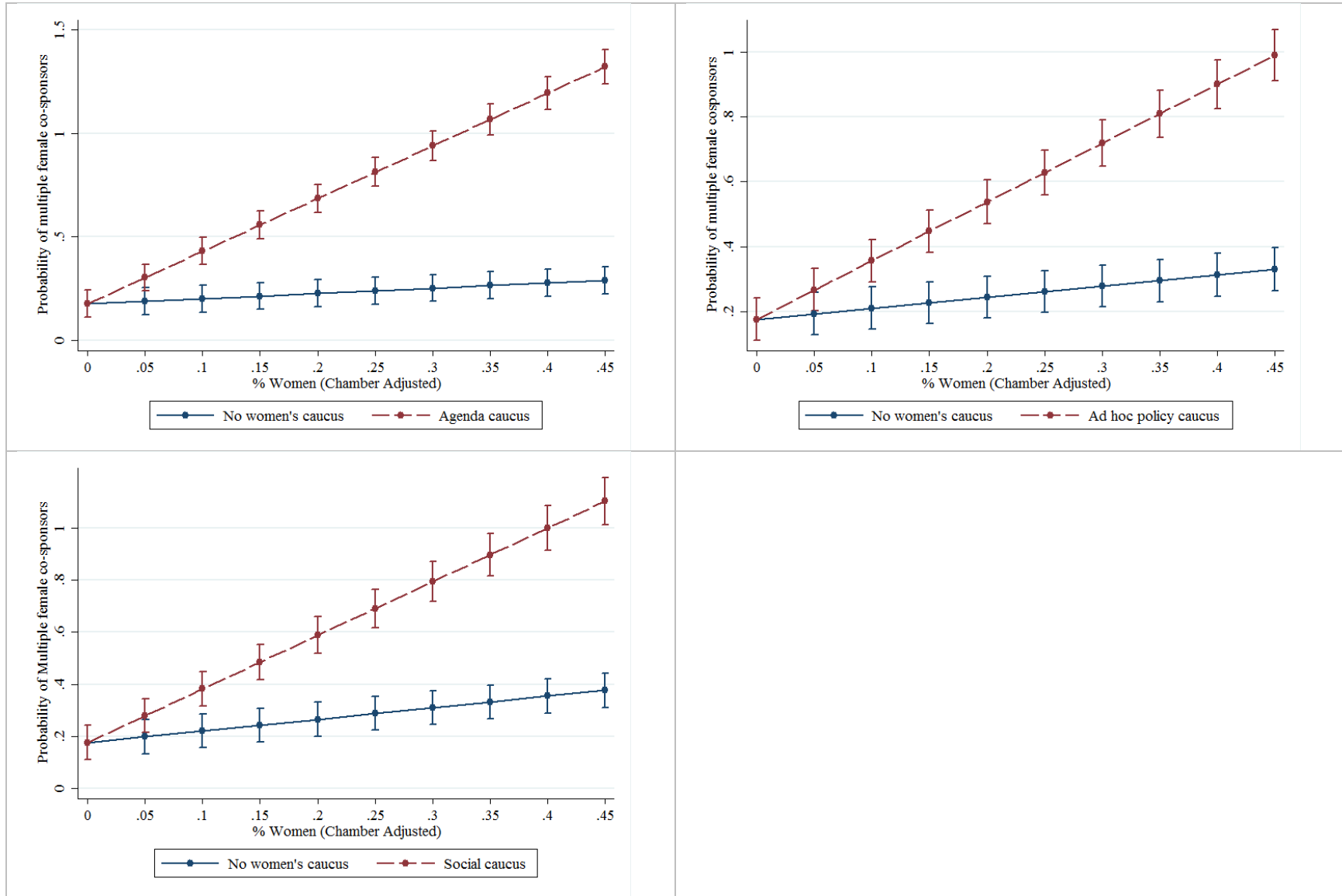


Figure 4: Collaborative behavior in Democratically-controlled Legislatures

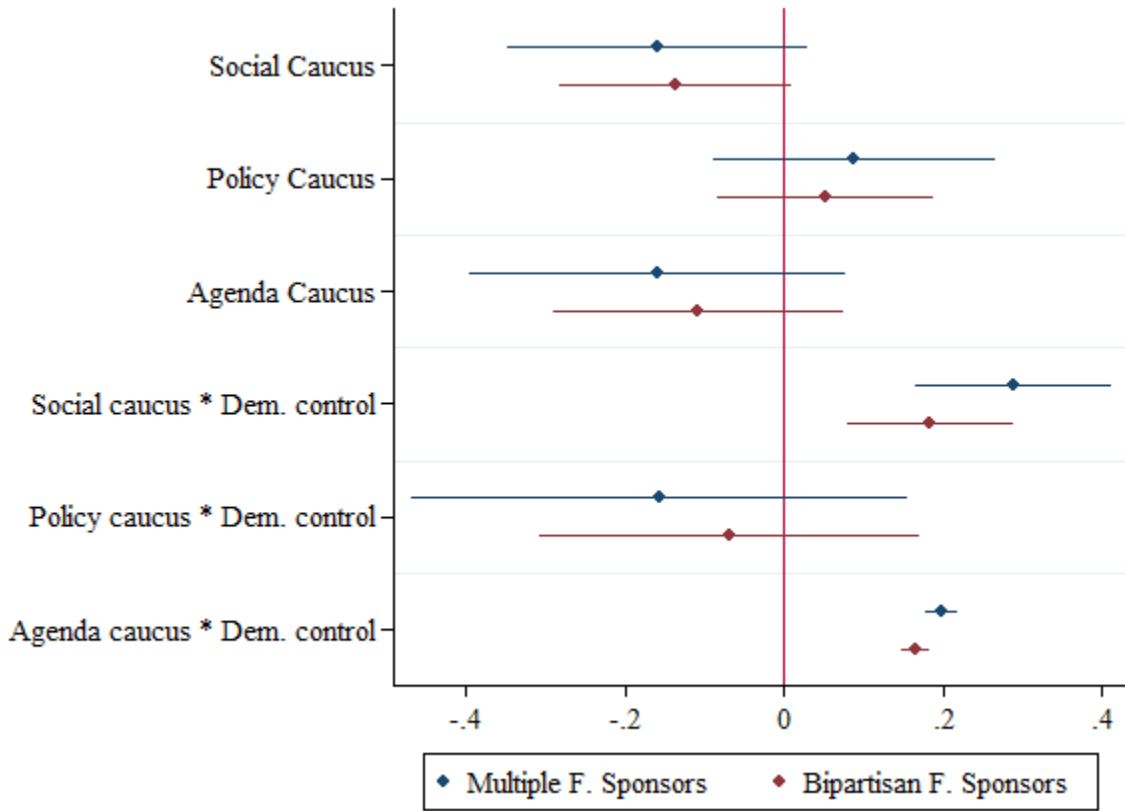
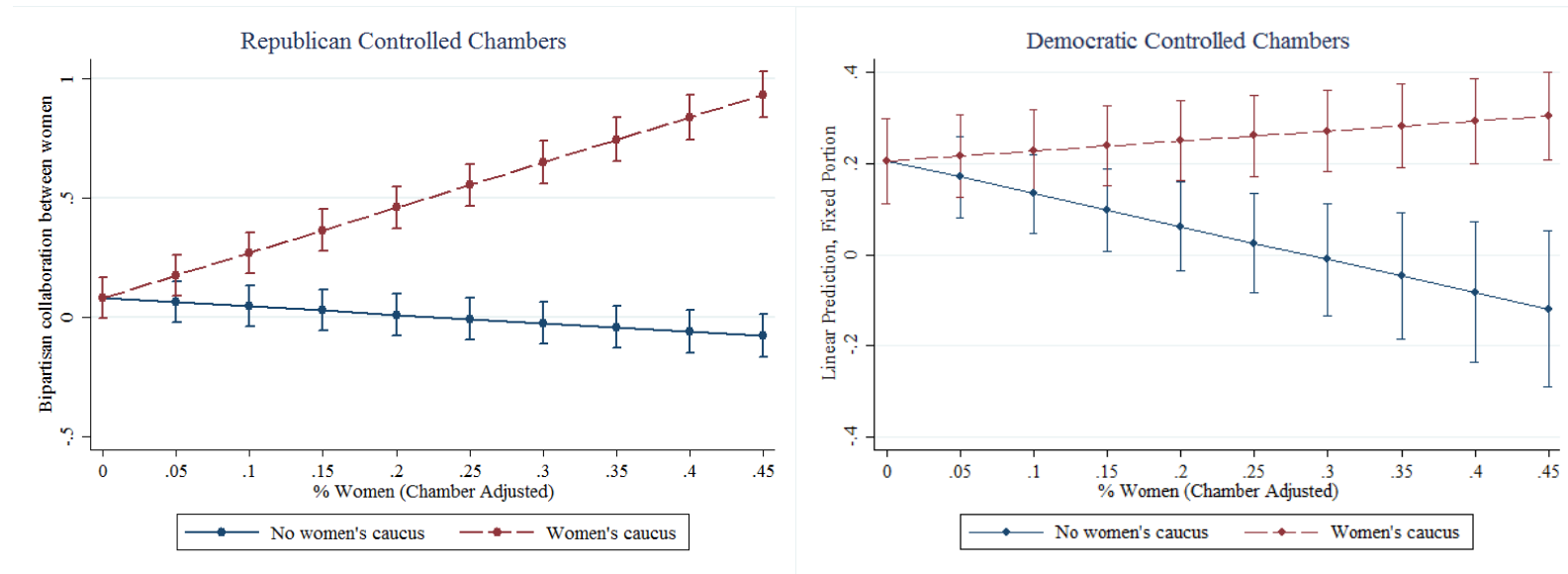


Figure 5: Women’s Bipartisan Collaboration in Republican and Democratic Controlled Chambers, by Women’s Representation



Appendix:

Table to accompany Figure 3: Effect of Caucuses by Type of Caucus on Female Co-sponsorship in Democratic controlled Legislatures

	(1) Multiple female sponsors of bill	(2) Bipartisan female sponsors of bill
main		
Social women's caucus 2011	-0.15 (0.10)	-0.13 [^] (0.07)
Ad hoc women's caucus 2011	0.10 (0.09)	0.06 (0.07)
Agenda-setting women's caucus 2011	-0.20 [^] (0.12)	-0.13 (0.09)
Social women's caucus * Democratic party control	0.29*** (0.06)	0.18*** (0.05)
Ad hoc women's caucus * Democratic party control	-0.12 (0.16)	-0.05 (0.12)
Agenda-setting women's caucus * Democratic party control	0.31*** (0.01)	0.22*** (0.01)
Democratic control of chamber	-0.06*** (0.01)	-0.05*** (0.01)
% Women in Dem. Party	-0.73* (0.29)	-0.54* (0.22)
% Women in Rep. Party	0.36 (0.41)	0.18 (0.32)
Difference in seats controlled by party	0.00*** (0.00)	0.00* (0.00)
% republican sponsors	-0.06*** (0.00)	0.01*** (0.00)
Term Limits	-0.02 (0.07)	-0.01 (0.05)
Black caucus	-0.15 [^] (0.08)	-0.11 [^] (0.06)
Elazar	-0.01 (0.04)	-0.03 (0.03)
Professionalism (Squire 2003)	0.32 (0.35)	0.13 (0.27)
IWPR Composite Econ Status of Women	0.12 (0.21)	-0.00 (0.16)
Dem. pres share of state vote	0.00 (0.01)	0.00 (0.00)
Constant	-0.01 (0.68)	0.30 (0.52)

lns1_1_1		
Constant	-1.66*** (0.10)	-1.93*** (0.10)
lnsig_e		
Constant	-0.91*** (0.00)	-1.05*** (0.00)
Observations	161870	161870
R^2		

Standard errors in parentheses

^ p<.10, * p<.05, ** p<.01, *** p<.001