



Center for Effective Lawmaking

Gendered Perceptions of Legislative Influence

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Abstract

Women legislators often report that they must work harder than men to achieve the same outcomes and recognition. Existing research supports this argument in their interactions with voters, yet little previous scholarship has examined whether this expectations gap also exists among legislative insiders. If legislative insiders systematically under-value women's work, this indicates that women will have a harder time gaining influence within the chamber; alternatively, those working in and with the legislature may be more perceptive of women's accomplishments. In this paper, we ask whether legislative and electoral accomplishments translate into perceived influence differently for women and men. To examine this question, we combine peer evaluations of legislators from the North Carolina General Assembly with data on committee assignments, legislative effectiveness, electoral performance, and more. We find little systematic evidence that women legislators' accomplishments are valued less than those of the men with whom they serve.

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In 2018, Congresswoman Rashida Tlaib told the *New York Times* that “Women work it...We work twice as hard. At some point that may change, but we have to work twice as hard.”¹ While Congresswoman Tlaib was referencing the difficulty she and her fellow women candidates face raising campaign funds, the idea that women have to work twice as hard as men to reach and remain in Congress is widely supported by both firsthand accounts² and an impressive array of work in political science (e.g. [Anzia and Berry 2011](#); [Lazarus and Steigerwalt 2018](#)). Although women win congressional elections at similar rates to men, they have to be more qualified to do so ([Milyo and Schosberg 2000](#)). Once in office, they bring home more federal funds to the district ([Lazarus and Steigerwalt 2018](#)), are more successful at sponsoring bills when in the minority party ([Volden, Wiseman, and Wittmer 2013](#)), and receive more issue requests from their constituents ([Butler, Naurin, and Öhberg 2022](#)). While straightforward descriptive statistics paint a portrait of gender equality in the electoral arena, a deeper look suggests that these equal outcomes mask substantial inequities in effort and talent.

Notably, almost all of the work explaining these gendered differences focuses on how voters and other actors in the electoral arena expect more from women candidates and legislators, and how these expectations promote a sense of “gendered vulnerability” for women in office ([Lazarus and Steigerwalt 2018](#)). In this paper, we ask: does a similar gendered expectations gap also exist among women legislators’ peers? Legislatures are social environments which, in the United States, have overwhelmingly been comprised of men. Interviews with women legislators and their staffers suggest that women feel a pressure to overachieve in order to demonstrate to their men colleagues that they are competent ([Swers 2013](#); [Dittmar, Sanbonmatsu, and Carroll 2018](#)). Thus, it could be that legislators hold similar gender biases as the population at large, presenting numerous obstacles to women’s influence, and consequently the influence of their constituents, inside the chamber.

¹Zernike, Kate. “Female Candidates Break Barriers, Except When It Comes to Money.” *The New York Times*, Oct. 30, 2018.

²For example, see [Astor, Maggie](#). “Women Are Held to a Higher Standard, Klobuchar Says at Debate.” *The New York Times*, Nov. 20, 2019. and [Ma, Fiona](#). 2018. “Life As A Woman Politician, We Have To Work Harder”, [fionama.com](#), Feb. 15, 2018.

Alternatively, legislators and those who work closely with them may be uniquely aware of the effort that goes into representational activities and can observe the work that their women colleagues perform firsthand. It may be the case that elites are better situated than voters to appropriately value women's work.

In order to examine whether women's accomplishments are noticed and appreciated by their peers, we explore how legislative and electoral accomplishments translate into peer evaluations, and whether that translation differs between men and women. Following [Haynie's \(2002\)](#) exploration of the relationship between race and perceived legislative effectiveness, we leverage data on effectiveness rankings of North Carolina state legislators from the North Carolina Center for Public Policy Research from 1993 to 2015. These scores are valuable in that they are created by having current state legislators and other legislative insiders rank the effectiveness of sitting legislators. We combine this subjective measure of effectiveness with a variety of measures that ought to capture in a more objective way whether a legislator is influential; these measures include bill sponsorship, committee assignments, and leadership positions ([Bucchianeri, Volden, and Wiseman 2024](#)). These data allow us to compare how the effectiveness of similarly situated men and women state legislators is evaluated by their colleagues. If men and women with comparable fundraising abilities, bill sponsorship patterns, and committee assignments are evaluated differently this would suggest the persistence of the gender gap in expectations within the bounds of the legislature. On the other hand, if men and women legislators are ranked similarly this would provide at least suggestive evidence that women legislators' peers are better able to assess their effectiveness than are voters.

After developing our theoretical expectations and introducing our data, we first descriptively explore the evolution of subjective influence over men's and women's legislative careers. We ask whether men's and women's perceived influence evolve similarly as they gain seniority, and whether their paths to valuable institutional positions such as committee chairs and chamber leadership are similar. Following this, we use a regression-based approach to examine whether within-

legislator changes in accomplishments – becoming a committee chair, for example, or accruing seniority, or being in the majority party – lead to a different “bump” in subjective evaluations for men and women. We conduct a within-legislator comparison that allows us to control for unobservable legislator characteristics such as effort or charisma, providing a credible test of whether men and women’s comparable accomplishments are perceived comparably by legislative peers.

Across our analyses, we find little evidence that women are discriminated against by legislative peers. First term men and women legislators appear to enter the chamber on an equal footing and have relatively similar career arcs. Holding fixed a variety of legislative and electoral accomplishments, we find little evidence that women are evaluated in a systematically worse way than men. And when men and women ascend to institutional positions or have similar success in the electoral arena, their peers adjust their evaluations similarly. We emphasize, however, that biases at earlier stages of women’s political careers – selection into political careers (e.g. [Fox and Lawless 2005](#)), candidate recruitment by parties and interest groups (e.g. [Fox and Lawless 2010](#)), and vote choice at the ballot box (e.g. [Ono and Burden 2019](#)) – indelibly color our findings. Because a woman may need to be more capable than a counterfactual man in order to overcome these barriers, our null findings may in fact provide indirect evidence that bias *is* occurring ([Knox, Lowe, and Mummolo 2020](#)). Nevertheless, we present these results as having cautiously optimistic implications for women’s abilities to climb the ranks in legislatures and achieve influence among their peers.

Gendered Expectations Outside and Inside the Legislature

Research in gender and politics establishes that women and men candidates win elected office at similar rates ([Seltzer, Newman, and Leighton 1997](#); [Sanbonmatsu 2006](#)). However, this does not mean that the electoral playing field is equal for all candidates. Women pursuing a career in politics still face significant gender-related barriers on the campaign trail. There is overwhelming evidence that women candidates tend to be more qualified and have additional years of political experience

than men running for the same position (Milyo and Schosberg 2000). For instance, women who choose to run for federal office often have stronger professional profiles than do men, are better educated, and have spent more time serving at the state and local level (Anzia and Berry 2011; Fulton 2012). This finding holds across both parties, with Democratic and Republican women alike facing high barriers to entry (Pearson and McGhee 2013), and extends into the sphere of campaign fundraising (Jenkins 2007; Crespin and Deitz 2010). In particular, recent work shows that Republican women (Thomsen and Swers 2017) and women of color (Sorensen and Chen 2022) have a more difficult time securing financial support than men.

These barriers have important consequences for legislative behavior and effectiveness inside the chamber (Lazarus and Steigerwalt 2018). Anzia and Berry (2011) argue that the gender disparity in candidate qualification standards allows only the most capable and hard-working women to win their elections. As a result, they hypothesize that this over-qualified group of women should out-work the men they serve with once in office. The extant work supports this hypothesis, consistently finding that women sponsor and cosponsor significantly more bills than do congressmen (Bratton 2005; Atkinson and Windett 2019). Further, it also appears that women have a higher incentive to demonstrate competency on a wider variety of issue areas than men: Atkinson and Windett (2019) demonstrate that women members must introduce twice as much legislation in order to see their average number of challengers drop to the number typically faced by men. Heightened levels of electoral threat in combination with gendered differences in voter qualification standards appear to motivate women representatives to have a high legislative output.

Beyond legislation, the pressures to over-perform also seem to influence women's district-oriented behaviors. For example, it has been shown that women legislators are more successful at securing federal funding for their districts (Anzia and Berry 2011), and that women city council members spend more time serving their districts (Thomas 1992). State legislative scholars have shown a similar relationship when looking at casework performance (Richardson and Freeman 1995; Thomsen and Sanders 2020). Overall, the gendered "expectations gap" appears to put addi-

tional pressure on women to go above and beyond both at the candidate emergence stage and after they enter political office.

Women and politics scholars have pointed to a variety of factors, both external and internal, to explain what drives these gendered expectations. External factors, such as voter biases and lack of support from party elites, are one potential source of the unequal expectations placed on women politicians. Empirical research shows that voters hold women candidates to a higher standard when evaluating their credentials and competency. For example, using a series of survey experiments [Bauer \(2020\)](#) finds that voters use more stringent criteria to assess the political readiness of women. Other work demonstrates that citizens spend more time searching for competence-related information about women running for office than they do for men ([Ditonto, Hamilton, and Redlawsk 2014](#)), that constituents ask women to perform more casework ([Richardson and Freeman 1995](#)), and that women are expected to cover more issue areas ([Butler, Naurin, and Öhberg 2022](#)). Therefore, it is possible that anticipation of gender bias from voters has led women to think that they must work harder to credibly demonstrate competence and satisfy constituents' needs.

Women may also be perceived, both by challengers and party leaders, as being more electorally vulnerable than men. Numerous studies have found that when women run for office they have a significantly greater probability of facing a challenger both during the primary process ([Lawless and Pearson 2008](#)) and in the general election ([Fulton 2012](#)). Their political opponents are also more likely to be higher quality ([Milyo and Schosberg 2000](#)). The increased likelihood of facing a credible challenger could certainly be an additional factor causing the gender disparity in candidate experience, insofar as women may think they have to be more qualified in order to fend off quality competitors. Women may also need better credentials than men in order to be recruited as candidates. Women are not as likely to be asked to run by local party networks and recruiters ([Carroll 1994](#); [Fox and Lawless 2010](#)) and party leaders tend to be more uncertain about women's ability to achieve electoral success ([Niven 1998](#); [Sanbonmatsu 2006](#)). As such, women candidates and legislators appear to face additional pressures to excel from party elites.

Internal factors, such as women candidates' perceptions of their own abilities, may also be driving the gender gap in candidate caliber and legislative effectiveness. In a national survey comparing women and men in "pipeline" professions for politics (i.e. business, law), [Fox and Lawless \(2005\)](#) demonstrate that there is a gender difference in political ambition that, in part, comes from gaps in self-perceived readiness for politics. They find that women are significantly less likely to think that they are qualified to campaign for public office than are men with similar professional and personal backgrounds. It is then unsurprising that women tend to be more hesitant to take the leap and run for office and are more concerned about their electoral viability than men ([Pearson and McGhee 2013](#)). Women also tend to have more doubt that their party will support them financially during their campaign, which worsens the ambition gap ([Fowler and McClure 1989](#)). As a result, only the most ambitious, experienced, and well-positioned women end up emerging as candidates and winning political races.

Thus far, we have turned to a robust literature on women and politics to present evidence that both voters and party elites have set a high bar for women candidates and elected officials. A large body of work also demonstrates that women tend to doubt their own ability to run a successful political campaign. Each of these factors are sources of women's continuing underrepresentation in U.S. political institutions. However, it is our understanding that no research has empirically tested whether or not these higher standards are also placed on women by their peers in the legislature.³ To theoretically and empirically explore this question, we build on previous work in political science that has used elite surveys to get a quantitative measure of a legislator's influence in the chamber. [Meyer \(1980\)](#) uses a reputational measure of influence that was based on North Carolina state legislator's answers to the question, "Who are the five most influential members of the house?". Other researchers subsequently expanded on this work using a survey administered starting in 1979 by the North Carolina Center for Public Policy Research (NCCPPR) that asks

³For a related question, see [Dhima \(2022\)](#), who shows that Canadian legislators are more likely to respond to requests for help from woman political aspirants.

legislators, journalists, and lobbyists to rank the effectiveness of each member of the House and Senate (Padró i Miquel and Snyder 2006; Weissert 1991). In the paper most closely related to our own, Haynie (2002) leverages these rankings to show that African American legislators are perceived to be less effective by their colleagues. In this paper, we use this underutilized data set of legislative effectiveness rankings to assess whether or not the work of women representatives is undervalued by their fellow legislators and other legislative insiders.

Our main hypothesis builds on these rich previous literatures on women's officeseeking and officeholding and legislative influence. Existing qualitative research supports the expectation that legislative insiders will behave similarly to voters and other party elites. Political scientists' current knowledge of the intra-institutional pressures felt by women members comes primarily from in-depth interviews with women officeholders. These studies have found that women representatives regularly express feeling that their talents are undervalued and underestimated by the men in the legislature. Early interviews with members serving in state legislatures indicate that women are more likely to report difficulties in developing collegial bonds, particularly in settings with low levels of women's representation (Blair and Stanley 1991). Women representatives frequently cite feeling hyper-aware of their surroundings and are more cognizant of the impression that their actions could be sending to other members. For instance, congresswomen describe feeling they must project "toughness" and "deny their femininity" to fit in with the men they serve with and avoid drawing negative attention (Thomas and Welch 2001).

Women legislators have also reported feeling that they must work harder to prove that they belong in men-dominated spaces (Lazarus and Steigerwalt 2018; Dolan, Deckman, and Swers 2021). In one interview, former senator Barbara Mikulski (D-MD) explains that the "whole architecture" of the Senate was designed with men in mind (Dittmar, Sanbonmatsu, and Carroll 2018). As a result, women who make it into public office feel they must actively work to combat stereotypes that they are not suited for political life. Swers (2013) finds that staffers for women members felt that Democratic women senators had to do more than similarly situated men and believed that they

were taken less seriously by Pentagon officials.

Taken as a whole, descriptive evidence suggests that women face additional scrutiny from their fellow legislators and feel pressured to excel in their positions to prove their competence. If true, legislators' evaluations of the effectiveness of their women colleagues should fall short of what objective measures call for.

Hypothesis: Women legislators' accomplishments will translate into smaller gains in peer evaluations than comparable accomplishments by their men colleagues.

We acknowledge, however, that there are also theoretical reasons to expect that this hypothesis may not bear out in data. It is possible that women's peers in the legislature will have a more accurate perception of the work that women perform than do members of the general public. There is reason to believe that fellow legislators, who have direct experience working with women to develop policy and serve constituents, will evaluate women's work differently than the average citizen. Because they interact with their women colleagues on a day-to-day basis, legislators are better positioned to assess women's contributions. If this is the case, legislators' evaluations of the effectiveness of their women colleagues should meet or surpass what objective measures call for. It is also possible that the "Jackie Robinson Effect" ([Anzia and Berry 2011](#)) means that the women who serve in the chamber are generally more capable than men, possibly offsetting or masking bias within the chamber ([Knox, Lowe, and Mummolo 2020](#)).

Data on Legislative Influence

To measure subjective perceptions of legislators' influence, we use an underutilized data set of peer legislative effectiveness rankings collected by the North Carolina Center for Public Policy Research (NCCPPR) from 1993 to 2015. The NCCPPR's website provides the following description of their survey procedures:

“The Center’s effectiveness rankings are based on surveys completed by the legislators themselves, by registered lobbyists who are based in North Carolina and who regularly work in the General Assembly, and by capital news reporters. These three groups are asked to rate each legislator’s effectiveness on the basis of participation in committee work, skill at guiding bills through committees and in floor debates, and general knowledge or expertise in specific fields. The survey respondents are also asked to consider the respect that legislators command from their peers, as well as his or her ethics, the political power they hold (by virtue of office, longevity, or personal skills), their ability to sway the opinions of fellow legislators, and their aptitude for the overall legislative process.”⁴

Each survey respondent was asked to rank the members of the North Carolina General Assembly on a scale from one to ten, though legislators were only asked to evaluate members of their own chamber. After the survey is completed, members in the House and Senate are ranked from least to most effective in their chamber. As a result, in the original data a *lower* score indicates that a member is *more effective*. However, for the sake of interpretability, we subtract each legislator’s score from the maximum in each year (plus 1) so that a higher score indicates that a member is more effective. For most of our analyses, we then transform the scores to take on a value between 0 and 1 for ease of comparability across chambers, such that 1 is the most and 0 the least effective member in a particular chamber-year. These NCCPPR legislative rankings provide us with rare insight into how those most involved and invested in legislative politics, including legislators themselves, perceive legislators’ effectiveness.⁵ While ideally we would be able to examine the raw survey data in order to examine relationships conditional on the profession (as in

⁴“Rankings of Effectiveness, Attendance and Roll Call Voting Participation for the 2015 North Carolina General Assembly.” nccppr.org, April 21, 2016.

⁵Survey response rates across the years we consider ranged from a high of 57% in 1993 to a low of 39% in 2007. Response rates were generally highest among legislators, although there were more legislative liaisons and lobbyists in the sampling frame. See Table A.1 in the Supplementary Materials for complete sampling frames, numbers of responses, and response rates by class of respondent and survey year.

Haynie 2002) or gender of the respondents, we have been unable to access such data.⁶ Fortunately, Padró i Miquel and Snyder (2006) report that for earlier years when rankings were released by respondent type, correlations across legislator, lobbyist, and reporter respondents were extremely high (the lowest such pairwise correlation was 0.89) (353). Moreover, these evaluations correspond closely to legislators' success at passing legislation in the chamber (Edwards 2018; Bucchianeri, Volden, and Wiseman 2024), making them an ideal measure with which to evaluate how that relationship varies with legislator gender. While these facts assuage our concerns about pooling across respondent types, we nevertheless hope that future work will be able to parse our findings by respondent gender, in particular.

With this measure of subjective influence in hand, we also need measures of legislative and electoral accomplishments and activities that should be associated with influence. We primarily draw on a variety of data collected by Bucchianeri, Volden, and Wiseman (2024) that captures legislators' institutional positions and their productivity in the legislative process. Generally speaking, prestigious legislative roles such as leadership roles or committee chairs both reflect and confer institutional prestige. As such, we include measures for whether legislators in our sample served as legislative leaders, served as the chair of a committee, or served on the Rules Committee in a given session.⁷ Over the period we study, forty-four percent of members in a session held committee chairmanships, six percent were party leaders, and twenty-three percent were on the Rules Committee.

Another way that legislators can signal effectiveness and influence is through legislative productivity (Volden and Wiseman 2014). This was also an explicit criterion given to NCCPPR

⁶We reached out to the Center in an effort to obtain a copy of the survey or any original underlying data, and were informed that all data and information related to the project was likely to have been discarded when the Center closed in 2021.

⁷Scholarship on the U.S. House of Representatives highlights the importance of the Rules Committee (e.g. Dion and Huber 1996). Newspaper accounts from North Carolina suggest that the same is true in that state's legislature: "Important committees include Appropriations, Finance, and Education, but the most powerful committee of all is the Rules Committee" ("These are the most powerful people deciding what bills become law in NC," *The Herald Sun* (Durham, NC), January 22, 2023, p. 6A).

survey-takers, and [Edwards \(2018\)](#) shows that these evaluations are strongly associated with legislators’ “hit rates” – the proportion of introduced bills ultimately passed. As such, we consider legislators’ involvement in the legislative process using the comprehensive measure of state legislative effectiveness developed by [Bucchianeri, Volden, and Wiseman \(2024\)](#). Over the course of the entire time period, the average member in a given session sponsored 19.1 pieces of legislation and shepherded 4 of these into law. Like [Volden and Wiseman’s \(2014\)](#) congressional legislative effectiveness scores, these state legislative effectiveness scores (SLES) are normalized to take a mean value of one within each chamber-session. We also include members’ seniority and majority/minority status, which are known to impact legislators’ influence in the chamber ([Volden and Wiseman 2014](#)).

Finally, we also consider members’ accomplishments outside the chamber. We include legislators’ previous general election vote share: higher vote shares may directly convey competence (at campaigning, for example), may reflect constituents’ appreciation of the legislator’s effectiveness ([Padró i Miquel and Snyder 2006](#)), or may offer legislators leeway and political capital. In addition, members can demonstrate effectiveness through their fundraising efforts. It could be that legislators who contribute money to their party, a caucus committee, or other legislators are deemed more effective. In some analyses, we incorporate fundraising data collected by [Kistner \(2022\)](#) that includes a variable for the total amount of such money contributed by each member from 2000 to 2012. The average member contributed about \$39,000.⁸ We combine these various measures with the NCCPPR legislative effectiveness rankings in order to determine whether or not objective influence translates into perceived influence in the chamber.

Table 1 shows the average value of each of the covariates by legislator gender.⁹ Men tend to be slightly more represented on the powerful Rules Committee, with twenty-four percent of men serv-

⁸As incorporating this data substantially limits our time frame of analysis, we only include it in supplemental analyses. See Figure F.2.

⁹Legislator gender is from [Bucchianeri, Volden, and Wiseman \(2024\)](#). To the best of our knowledge, no non-binary individuals served in the North Carolina General Assembly during this time.

ing on the Rules Committee in a given session compared to nineteen percent of women. Women also have lower legislative effectiveness scores on average during the entire time period, and men in the legislature gave nearly twice as many contributions to peers as women legislators with about \$45,000 given compared to \$21,000. Women and men tended to have similar average levels of seniority, previous general election vote shares, and time spent as a majority party member.

Table 1: Mean of Covariates by Legislator Gender

	Men	Women
Rules Committee Member	0.24	0.19
SLES	1.05	0.94
Committee Chair	0.44	0.42
Total Member Contributions	44749.76	20866.02
Seniority	3.95	3.72
Majority Party Member	0.56	0.54
Previous General Election Vote Share	0.71	0.72

Before commencing our analyses, we first provide some context on the North Carolina General Assembly. While our study represents a strength of using state legislatures to study general theories in the ability to draw on novel data sources, it is also potentially limited by our focus on a single, possibly distinctive state legislature. In Figure 1, we contextualize North Carolina relative to other state legislatures across the United States in four ways. Across the figures, we plot values for all (or nearly all) states during the period we study; we plot North Carolina in a darker shade. First, in Figure 1a, we plot the size of all state legislatures, combining the two chambers (except for the unicameral Nebraska legislature). In Figure 1b we plot each state’s legislative professionalism, using [Squire’s \(2017\)](#) familiar index. In Figure 1c, we plot the average margin of victory in single-winner general elections. Finally, in Figure 1d, we plot the proportion of state legislators who are women. Broadly speaking, Figure 1 suggests that the North Carolina General Assembly is exceedingly average. It is moderately sized, moderately professionalized, and its legislators experience a typical amount of electoral competition. Despite being a southern state, North Carolina is

generally more professional and more competitive than most southern states, assuaging concerns that our results will disproportionately reflect the South's uniqueness. While the legislature is disproportionately Democratic in the earliest years we consider and disproportionately Republican in the latest, the minority party never holds less than 30% of seats during our period of study. Perhaps most important for our purposes, North Carolina has a relatively typical proportion of women legislators. Nevertheless, recent history in the state suggests that the state's politics may be biased against women: in 2008 Bev Perdue became the state's first elected woman governor – “no mean feat in a state with a legendary old boys' political network” – but faced declining popularity throughout her term and ultimately chose not to pursue reelection.¹⁰ This notwithstanding, in the aggregate North Carolina seems to be a reasonably average state in which to test our expectations.

Men's and Women's Legislative Careers

We begin our empirical exploration by descriptively examining how potential gender discrimination manifests at various stages of legislators' careers in the North Carolina legislature. While our subsequent analysis attempts to address potential discrimination by controlling for legislator-specific attributes and examining whether subjective evaluations respond to legislator's accomplishments differently for men and women, here we begin by simply establishing whether women and men progress through their legislative careers similarly or differently. To do so, we examine how the arc of perceived influence varies as legislators gain seniority. Existing scholarship emphasizes the importance of seniority for establishing the institutional expertise and gaining the institutional positions that afford legislators influence (Volden and Wiseman 2014). We also explore whether women and men gain access to important institutional positions at similar points, on average, in their legislative careers.

¹⁰Jones, Jessica. “Governor Perdue Leaves Mixed Legacy.” *WUNC*, Jan. 4, 2013.

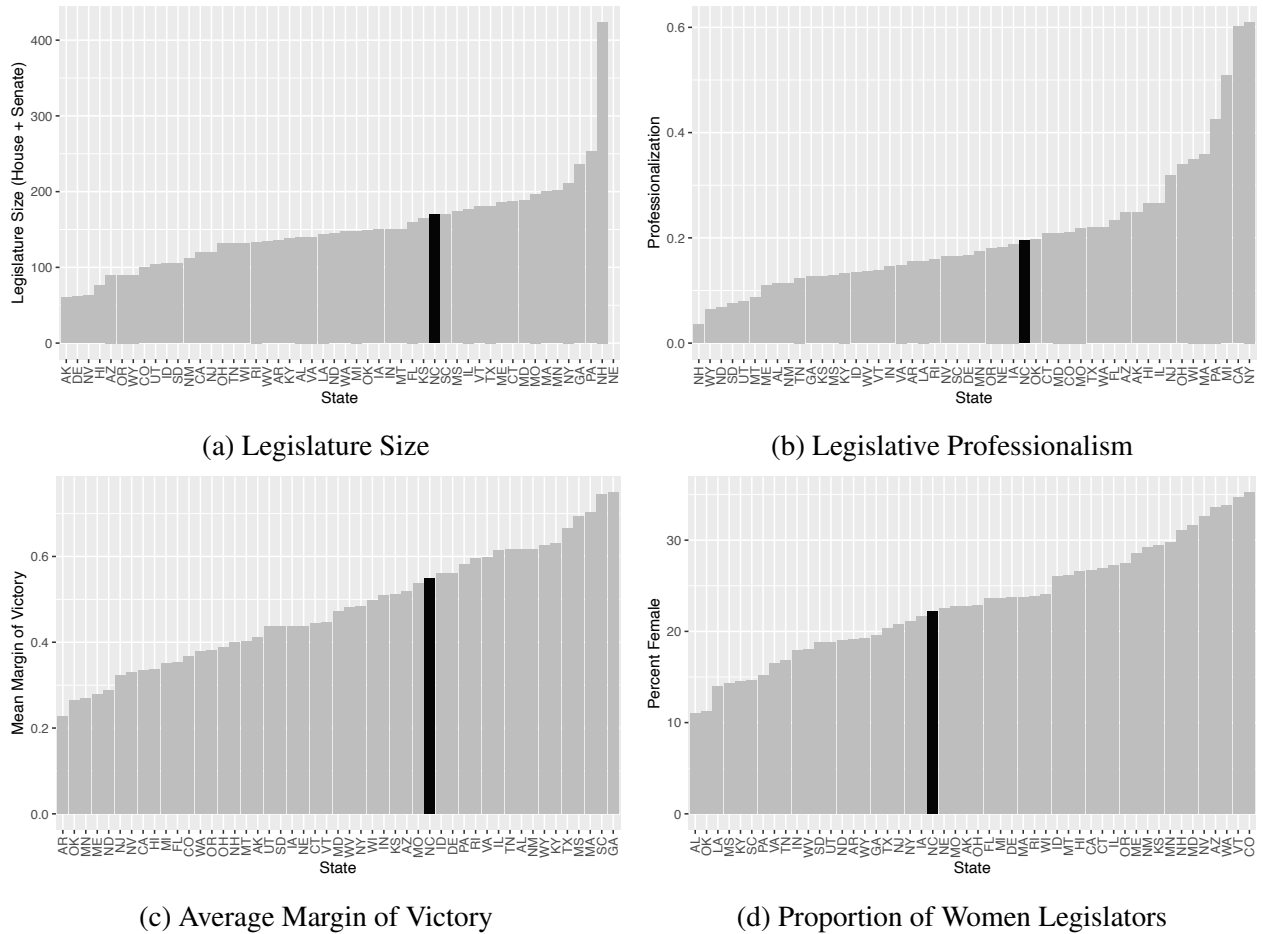


Figure 1: The North Carolina General Assembly in Context

Note: Figure plots average values within state for four characteristics of state legislatures, with North Carolina emphasized in a darker shade. Legislature size is measured between 1992 and 2006 and is sourced from [Dubin \(2015\)](#). Legislative professionalism averages [Squire Index \(Squire 2017\)](#) values from 1996, 2003, 2009, and 2015. Average margin of victory is based on election data from [Klarner \(2018\)](#), and limits data to single-winner general elections; it includes uncontested elections. Proportion of women legislators is based on the full period 1992 to 2014 and is based on data from [Payson, Fournaies, and Hall \(2023\)](#).

Evolution of Influence over Careers

What does a legislator’s effectiveness trajectory look like? As an example, we can track the career of Deborah K. Ross. Ross was a member of the North Carolina House of Representatives from 2003 - 2013. During her first term in the chamber she was ranked as the 41st most effective member

of the chamber. This is impressive considering she was a in the minority for her first term. In the following term, she became a member of the majority and received a committee chairmanship. Her legislative effectiveness score rose accordingly, and in that and the next two terms she was ranked as a top-15 most-effective legislator. Subsequently she fell out of the majority and lost her status as a committee chair in her last two terms, and her peers' perception of her effectiveness dropped accordingly, putting her as the fiftieth and fifty-sixth most effective legislator in those two terms.

We next consider more generally whether the evolution of men's and women's influence in the North Carolina General Assembly progress similarly over the course of their careers. Seniority has historically been associated with increased influence in legislative politics (Padró i Miquel and Snyder 2006). In part this is due to enhanced opportunities to hold valuable institutional positions, such as prestigious committee assignments, committee chairs, or leadership positions, but others have found that legislators are more effective later in their careers even controlling for such institutional positions (Volden and Wiseman 2014). To explore whether men and women have similar career arcs, we simply plot the mean ranking by gender by seniority year, separately by chamber. For purposes of this analysis, this relationship that we document is explicitly *unconditional* – the patterns we document here may be due to differential access to valuable legislative positions, differential credit for similar accomplishments, or any other number of possible mechanisms. We explore the mechanisms in more detail below, but emphasize that the descriptive, unconditional pattern here is normatively important for descriptive representation (Mansbridge 1999).

We document legislative influence over careers in Figure 2. The patterns we identify are striking. First, we find little difference in effectiveness between first-term men and women, indicated by the leftmost points for each chamber. We view this as particularly important because first-term legislators have little access to institutional perquisites – such as leadership positions or committee assignments – that may skew perceptions of their influence. We show in Appendix Table B.1 that this parity in evaluations of first-term men and women also holds after controlling for a variety of first term-relevant covariates and year-specific effects.

This similarity between men and women persists over approximately the first six terms that a legislator serves. In the House, legislators of both genders enjoy a bump in perceived influence in their first few terms, particularly their second, and then appear to plateau after the third or fourth term served. In the Senate, legislators of both genders are evaluated consistently more positively through their fifth or sixth term. While we find that men remain similarly or more-positively evaluated beyond the sixth term in both chambers, women appear to fall off. This pattern, however, appears to be attributable to a combination of low numbers of women and minority party status; the single woman remaining after eight terms in the Senate was in the minority, and the six women who make it to their tenth term in the House are all in the minority, as well. Majority party status is worth about a thirty-ranking bump in the House and a fifteen-ranking bump in the Senate, on average, which suggests that this pattern likely represents the idiosyncrasies of the sample rather than a meaningful pattern.

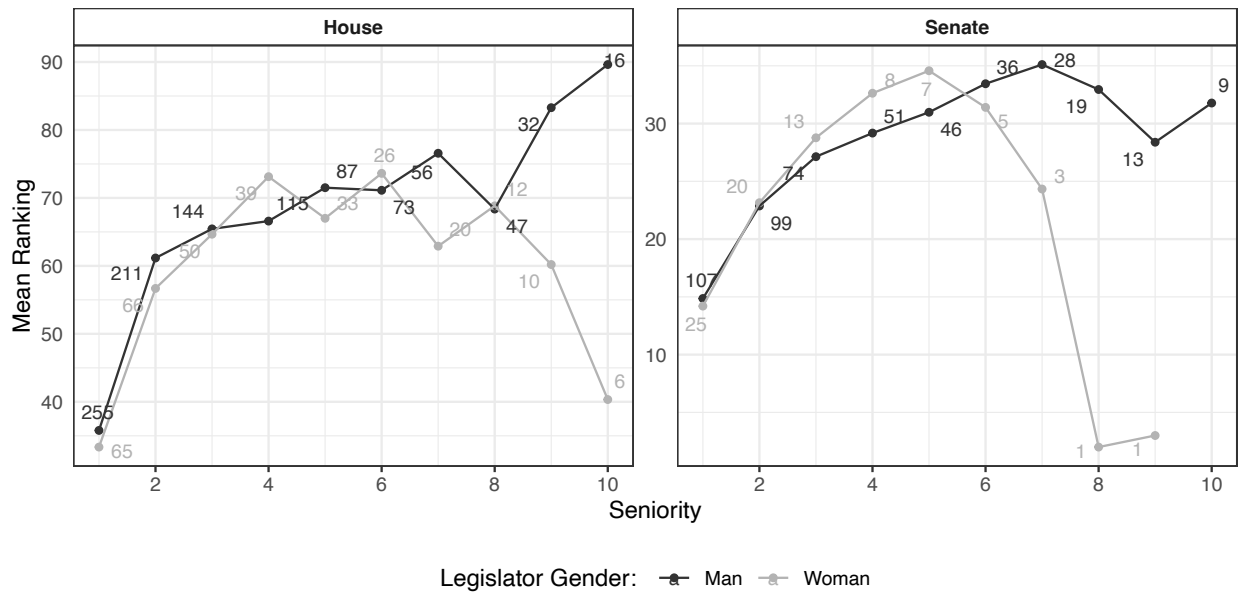


Figure 2: Mean Legislator Influence by Gender, Chamber, and Seniority

Figure plots the mean ranking of legislators by seniority, separately by chamber. Seniority is chamber-specific. Plotted numbers indicate the number of legislators included in the plotted mean. Seniority years over ten are omitted due to the small number of legislators serving that long.

Ascent to Institutional Positions

Second, we explore whether and when legislators of different genders achieve valuable institutional positions. This analysis helps us to parse the patterns documented in Figure 2 by considering whether legislators of different genders have different access to valuable institutional positions, and whether they must show greater subjective influence before being handed the keys to these positions.

We begin by exploring committee chair positions. In the aggregate, we find little evidence of gender discrimination in whether legislators at some point serve as a committee chair: sixty-eight percent of men will do so, and sixty-six percent of women. This masks important variation by chamber, however, as relative parity in the House (sixty-seven percent for men and sixty-eight percent for women) is matched by stark differences in the Senate (sixty-eight percent and fifty percent, respectively). Women are therefore notably less likely to hold this important institutional position during the course of their Senate careers than men. This may, however, be a product of the relatively small number of women in the chamber. When exploring the standing required of men and women before being asked to ascend to chair positions, we find relatively few differences between men and women. In the House, men who become chairs do so with an average seniority of 3 terms and with a mean ranking (in the previous term) of 44.48 (with higher scores being more effective); women do so with a seniority of 3.1 terms and a mean ranking of 47.11 (out of 120 members). In the Senate, men become chairs after 2.8 terms compared to women's 2.3, and men have an average previous term ranking of 15.94 relative to women's 19.83 (out of 50 members, again with higher scores representing greater effectiveness). These relatively small differences provide little evidence of institutional gender discrimination.

We find somewhat different patterns when considering ascent to leadership positions. In the aggregate, women are substantially less likely to become leaders: eight percent of men and five percent of women in the House at some point serve as leaders, and sixteen percent of men and nine percent of women in the Senate. These are substantial differences. Conditional upon becoming

a leader at some point, women enter House leadership in the same term as men (4.5 versus 4.5) on average, but with a substantially lower level of prior term perceived effectiveness (62 versus 88.82 for men). In the Senate, we find little evidence of different patterns of ascent between men and women. These differences – both between the apparent discrimination in achieving leadership positions and across chambers – may reflect different leadership positions.

Overall, we find relatively limited evidence of gender discrimination in the aggregate patterns of legislative careers in the North Carolina General Assembly. Men and women legislators start their careers on a relatively even footing, their careers evolve similarly, and they generally, but not always, appear to ascend to important institutional positions at similar rates and speeds. Late-career women and leadership positions appear to be two important exceptions where we find potential evidence of discrimination. While these patterns are descriptively important, they may mask differences in women’s legislative effort – that is, women may be keeping up with men in their perceived influence, but may be working harder to earn those perceptions. To further explore whether reality matches perception in the same way for man and woman legislators, we next explore whether legislators of these two genders receive similar “credit” for their objective legislative accomplishments.

Women and Men’s Accomplishments Are Perceived Similarly

We next undertake our main regression analyses. We deviate from many analyses in previous literature on discrimination in our approach; rather than exploring whether gender remains a relevant consideration after controlling for legislator characteristics and actions,¹¹ we ask whether within-legislator changes in those characteristics and actions correspond to similar changes in peer evaluations for men and women legislators. While this approach does not completely allow us to circumvent the issues generated by potentially biased selection procedures ([Knox, Lowe, and](#)

¹¹We do estimate this more-familiar model and find no evidence that the men and women who are in the legislature are systematically ranked differently by their peers on account of gender; see [Table C.1](#).

Mummolo 2020), it does allow us to hold fixed legislator-specific characteristics – such as ambition, talent, or gender itself – that may have affected a legislator’s presence in the chamber to begin with.

To investigate whether objective influence translates into subjective influence similarly for men and women legislators, we examine a model interacting gender with our measures of party leadership status, committee chairmanship, Rules Committee membership, seniority, majority party status, legislative effectiveness, and previous general election vote share.¹² We include legislator fixed effects, which control for time-invariant factors specific to each legislator, and year fixed effects, which account for year-specific trends. Standard errors are clustered on legislator. For these analyses, our outcome variable is oriented such that higher scores represent greater perceived effectiveness, with scores ranging from zero to one.

The results from this analysis are presented in Figure 3. We present the marginal effect of each covariate for men and for women and the p-values of the interaction estimate; a more-positive coefficient estimate for women, relative to men, indicates that women get “more credit” for that particular covariate, while a less-positive coefficient estimate for women than men suggests that women get less credit for that achievement. The top panel of Figure 3 displays findings for the House and the bottom panel displays findings for the Senate. We present full regression estimates for the models that these estimates are based on in Table D.1 in the Supplementary Materials. This table includes point estimates and standard errors for the *interaction* between legislator gender and these characteristics, the *p*-value for which is included in Figure 3.

The results demonstrate that, overall, there appear to be very few differences between the rankings of men and women legislators; most of the marginal effects for gender are not significantly different from each other. Leadership status, committee chairmanship, and effectiveness all appear to work similarly for men and women across the two chambers. However, a few variables do stand out. First, focusing on the House, women are ranked as significantly *more effective* when they re-

¹²All continuous measures are scaled for ease of comparison.

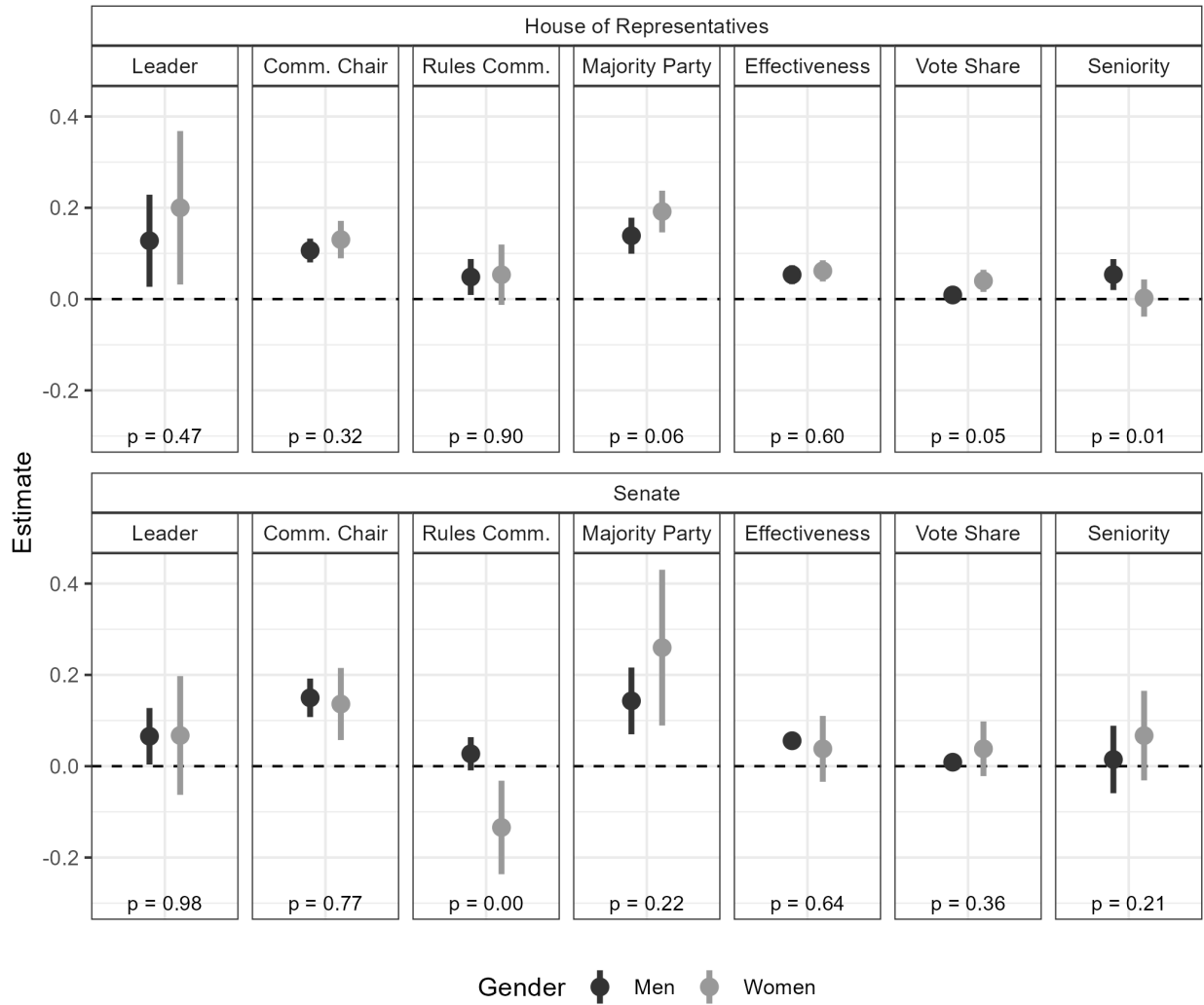


Figure 3: Perceptions of Legislative Influence, Within-Legislator Models

Note: “Men” and “Women” estimates are based on a single model that interacts the included covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. House model has 1,364 observations; Senate model has 561 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison.

ceive higher vote shares in comparison to men. The interaction on *Woman x Vote Share*, which captures the difference in the marginal effects between men and women, takes on a value of 0.031, indicating that women gain about 4 additional ranking positions when *Vote Share* increases by one standard deviation than men do. Alternatively, women in the House are ranked as significantly *less effective* than men when they accumulate additional years of seniority. In the Senate, women on the Rules Committee are ranked as less effective than their men peers. Taken together, we believe these analyses largely suggest that women are ranked similarly to men by their peers. While certain coefficients suggest differences, they point in opposing directions and do not indicate a clear pattern at work.

Importantly, the variables we consider vary in the degree of discretion or effort that underlie them. While we cannot rule out that women must work harder for high-quality committee assignments or leadership positions, for example, the fact that women are rewarded similarly to men for being in the majority – something relatively outside of their control – is heartening. Similarly, while we cannot rule out that women are producing higher-quality bills, the fact that the marginal effect of legislative effectiveness is similar for men and women suggests that a simple version of effort – sponsoring and passing bills – is similarly rewarded. Finally, we note that even if we cannot rule out that women have to work harder to achieve the same objective accomplishments, those accomplishments seem not to be devalued by their peers – rather, women and men appear to receive generally similar “bumps” in peer perception as a function of objective accomplishments. In short, while we cannot rule out that women have to work twice as hard to get into leadership or onto the Rules Committee, we can rule out that they have to achieve more such feats in order to get the same bump in peer evaluations as men.

Additional Analyses and Robustness Checks

It may be the case that these results are masking heterogeneity by party. In order to explore this possibility, we break down the analyses by party and present the results in Figures [E.1](#) and [E.2](#) in

the Supplementary Materials. Generally, while the results appear to be similar by party, the results also reveal that the impact of seniority appears to be largely driven by Democrats. Across both parties, women in the Senate seem to get less credit for Rules Committee membership, though as with our other analyses the smaller number of observations (and women) in the Senate must be borne in mind. Women Republicans in the House appear to receive more credit than men for committee chairmanships and previous general election vote share. Women Republicans in the Senate appear to receive less credit for legislative effectiveness but more for vote share.

There may also be heterogeneity by time period. Gendered expectations of women have evolved over time, and biases may have abated in the more modern period. To test this idea, we present results broken down by decade in Figures E.3 and E.4. Results for election years 1992 to 2002 are presented in the top panels, and results for election years 2004 to 2014 are presented in the bottom panels of these figures. When parsed this way, the results still largely suggest that there are not significant differences between the effectiveness evaluations of men and women legislators for either period. However, there are a couple of findings worth mentioning. For the time period from 1992 - 2002, there are no significant differences for women in the House and women in the Senate appear to be given more credit for leadership positions and achieving additional years of seniority. For the time period from 2004 - 2014, women in the House appear to be given more credit when they are a member of the majority party and receive a higher previous vote share, and less when they accumulate additional years of seniority. Women in the Senate appear to be given less credit for rules committee membership. Overall, it does not appear to be the case that gendered expectations have changed substantially over time in the North Carolina General Assembly.

Finally, we run two additional analyses probing the strength of our results. First, we replace our within-legislator model with a lagged dependent variable specification. The results, presented in Figure F.1, are substantively similar to those presented in the text. While we do find some large positive and negative coefficients in the Senate, we expect that this is due to overfitting as a result of our substantially reduced number of observations. Second, we rerun our main regressions

while also including logged contributions from [Kistner \(2022\)](#), as described above, as an additional independent variable; this results in a substantially reduced sample size due to the shorter time frame for which we have campaign contribution data and missing data.¹³ The results are presented in [Figure F.2](#). There do not appear to be any significant differences between the effectiveness rankings of men and women based on contributions.

Taken together, these findings provide suggestive evidence that objective influence translates into subjective influence similarly for women and men. Though there are some results that indicate there are differences between the evaluations of men and women legislators, these results trend in conflicting directions and are not enough to demonstrate a consistent pattern. Importantly, we note that these analyses do not account for the intersectional nature of race and gender. Existing work demonstrates the unique challenges women of color face in state legislatures ([Brown 2014](#)). Unfortunately, the limited number of Black women in our dataset (85) precludes us from including an interaction in our regressions.

Conclusion

Extant work indicates that women legislators face a unique experience in office, going above and beyond the men they serve with to work against stereotypes and prove their competence to voters ([Swers 2013](#)). This feeling of “gendered vulnerability” has important consequences for legislator behavior, leading women to sponsor more legislation and allocate more resources towards the district ([Lazarus and Steigerwalt 2018](#)). Although much existing work has examined the presence and consequences of gender biases in the electorate ([Bauer 2020](#); [Lawless and Pearson 2008](#)) and among party elites in the recruitment process ([Niven 1998](#); [Sanbonmatsu 2006](#)), surprisingly little is known about the biases women legislators face among their colleagues inside the chamber. This question has important implications for women’s success in government, as legislatures are

¹³We thank Michael Kistner for sharing campaign finance data.

ultimately social institutions; making public policy and gaining power inside the legislature are dependent on one's ability to work with other legislators and receive credit for one's work.

We take a first step at exploring gender biases among actual legislators by leveraging a unique dataset of legislative effectiveness rankings. Covering more than 20 years, we test how North Carolina elites rank their colleagues. In summary, we observe limited indications of gender bias within the North Carolina state legislature. Both men and women lawmakers experience similar career progressions (at least until the later stages), attain many key roles at comparable rates, and seem to receive similar amounts of credit for objective measures of influence inside the chamber. Although some coefficients in our within-legislator analyses do reach traditional levels of significance, the models do not tell a cohesive story; coefficients frequently point in opposing directions and do not indicate a clear pattern.

While these trends offer valuable insights, they certainly do not offer dispositive evidence that women do not have to work "twice as hard." This study has important limitations that should be addressed in future work. We focus on a single legislature, limiting our ability to generalize to settings beyond the North Carolina General Assembly. Exploring similar data for other legislatures would allow both greater generalizability and enhanced ability to explore legislators' intersectional experiences, such as the intersection of gender with race and class. Further, in this paper we are unable to separate out peer evaluations by gender. Future work could, for example, examine if women legislators rate women legislators differently than men. Scholars could also incorporate alternative measures of influence, such as media presence and outside connections. Finally, and perhaps most importantly, our study does not account for the fact that, because of bias in the process that leads women to the legislature, comparing women and men legislators is not necessarily comparing like to like. As emphasized by [Knox, Lowe, and Mummolo \(2020\)](#), bias affecting selection into a sample can produce situations where bias within that sample is under-estimated. While the complex set of steps at which bias may stand in a woman's way before reaching the legislature would make it difficult to accurately account for those biases when considering intra-legislature bias, such an

endeavor would be valuable in the future to more completely capture the barriers that women face to making an impact in legislative politics.

References

- Anzia, Sarah F., and Christopher R. Berry. 2011. "The Jackie (and Jill) Robinson Effect: Why Do Congresswomen Outperform Congressmen?" *American Journal of Political Science* 55 (3): 478–493.
- Atkinson, Mary Layton, and Jason Harold Windett. 2019. "Gender Stereotypes and The Policy Priorities of Women in Congress." *Political Behavior* 41 (3): 769–789.
- Bauer, Nichole M. 2020. "Shifting Standards: How Voters Evaluate the Qualifications of Female and Male Candidates." *The Journal of Politics* 82 (1): 1–12.
- Blair, Diane D., and Jeanie R. Stanley. 1991. "Personal Relationships and Legislative Power: Male and Female Perceptions." *Legislative Studies Quarterly* 16 (4): 495–507.
- Bratton, Kathleen A. 2005. "Critical Mass Theory Revisited: The Behavior and Success of Token Women in State Legislatures." *Politics & Gender* 1 (1): 97–125.
- Brown, Nadia E. 2014. *Sisters in the Statehouse: Black Women and Legislative Decision Making*. New York: Oxford University Press.
- Bucchianeri, Peter, Craig Volden, and Alan E. Wiseman. 2024. "Legislative Effectiveness in the American States." *American Political Science Review* FirstView.
- Butler, Daniel M., Elin Naurin, and Patrik Öhberg. 2022. "Constituents Ask Female Legislators to Do More." *The Journal of Politics* 84 (4): 2278–2282.

- Carroll, Susan J. 1994. *Women as Candidates in American Politics*. Bloomington: Indiana University Press.
- Crespin, Michael H., and Janna L. Deitz. 2010. "If you Can't Join'em, Beat'em: The Gender Gap in Individual Donations to Congressional Candidates." *Political Research Quarterly* 63 (3): 581–593.
- Dhima, Kostanca. 2022. "Do Elites Discriminate Against Female Political Aspirants? Evidence from a Field Experiment." *Politics & Gender* 18 (1): 126–157.
- Dion, Douglas, and John D. Huber. 1996. "Procedural Choice and the House Committee on Rules." *The Journal of Politics* 58 (1): 25–53.
- Ditonto, Tessa M., Allison J. Hamilton, and David P. Redlawsk. 2014. "Gender Stereotypes, Information Search, and Voting Behavior in Political Campaigns." *Political Behavior* 36: 335–358.
- Dittmar, Kelly, Kira Sanbonmatsu, and Susan J. Carroll. 2018. *A Seat at The Table: Congresswomen's Perspectives on Why Their Presence Matters*. New York: Oxford University Press.
- Dolan, Julie, Melissa M. Deckman, and Michele L. Swers. 2021. *Women and Politics: Paths to Power and Political Influence*. Lanham, MD: Rowman & Littlefield.
- Dubin, Michael J. 2015. *Party Affiliations in the State Legislatures: A Year by Year Summary, 1796-2006*. McFarland.
- Edwards, Barry. 2018. "Legislative Effectiveness in the American States." *State Politics & Policy Quarterly* 18 (3): 324–346.
- Fowler, Linda L., and Robert D. McClure. 1989. *Political Ambition: Who Decides to Run for Congress*. New Haven, CT: Yale University Press.

- Fox, Richard L., and Jennifer L. Lawless. 2005. "To Run or Not To Run for Office: Explaining Nascent Political Ambition." *American Journal of Political Science* 49 (3): 642–659.
- Fox, Richard L., and Jennifer L. Lawless. 2010. "If Only They'd Ask: Gender, Recruitment, and Political Ambition." *The Journal of Politics* 72 (2): 310–326.
- Fulton, Sarah A. 2012. "Running Backwards and In High Heels: The Gendered Quality Gap and Incumbent Electoral Success." *Political Research Quarterly* 65 (2): 303–314.
- Haynie, Kerry L. 2002. "The Color of Their Skin or the Content of Their Behavior? Race and Perceptions of African American Legislators." *Legislative Studies Quarterly* 27 (2): 295–314.
- Jenkins, Shannon. 2007. "A Woman's Work is Never Done? Fund-raising Perception and Effort Among Female State Legislative Candidates." *Political Research Quarterly* 60 (2): 230–239.
- Kistner, Michael R. 2022. "Fighting for Majorities? Explaining the Development of Caucus Fund-raising in American Legislatures." *The Journal of Politics* 84 (1): 321–334.
- Klarner, Carl. 2018. "State Legislative Election Returns, 1967-2016." *Harvard Dataverse* V3.
- Knox, Dean, Will Lowe, and Jonathan Mummolo. 2020. "Administrative Records Mask Racially Biased Policing." *American Political Science Review* 114 (3): 619–637.
- Lawless, Jennifer L., and Kathryn Pearson. 2008. "The Primary Reason for Women's Underrepresentation? Reevaluating the Conventional Wisdom." *The Journal of Politics* 70 (1): 67–82.
- Lazarus, Jeffrey, and Amy Steigerwalt. 2018. *Gendered Vulnerability: How Women Work Harder to Stay in Office*. Ann Arbor: University of Michigan Press.
- Mansbridge, Jane. 1999. "Should Blacks Represent Blacks and Women Represent Women? A Contingent "Yes"." *The Journal of Politics* 61 (3): 628–657.

- Meyer, Katherine. 1980. "Legislative Influence: Toward Theory Development through Causal Analysis." *Legislative Studies Quarterly* 5 (4): 563–585.
- Milyo, Jeffrey, and Samantha Schosberg. 2000. "Gender Bias and Selection Bias in House Elections." *Public Choice* 105 (1-2): 41–59.
- Niven, David. 1998. "Party Elites and Women Candidates: The Shape of Bias." *Women & Politics* 19 (2): 57–80.
- Ono, Yoshikuni, and Barry C. Burden. 2019. "The Contingent Effects of Candidate Sex on Voter Choice." *Political Behavior* 41: 583–607.
- Padró i Miquel, Gerard, and James M. Snyder, Jr. 2006. "Legislative Effectiveness and Legislative Careers." *Legislative Studies Quarterly* 31 (3): 347–381.
- Payson, Julia, Alexander Fourinaies, and Andrew B. Hall. 2023. "Decomposing the Source of the Gender Gap in Legislative Committee Service: Evidence from U.S. States." *Political Science Research and Methods* 11 (1): 191–197.
- Pearson, Kathryn, and Eric McGhee. 2013. "What it Takes to Win: Questioning "Gender Neutral" Outcomes in US House Elections." *Politics & Gender* 9 (4): 439–462.
- Richardson, Jr., Lilliard E., and Patricia K. Freeman. 1995. "Gender Differences in Constituency Service among State Legislators." *Political Research Quarterly* 48 (1): 169–179.
- Sanbonmatsu, Kira. 2006. "Do Parties Know that "Women Win"? Party Leader Beliefs about Women's Electoral Chances." *Politics & Gender* 2 (4): 431–450.
- Seltzer, Richard A., Jody Newman, and Melissa Voorhees Leighton. 1997. *Sex as a Political Variable: Women as Candidates and Voters in U.S. Elections*. Boulder, CO: Lynne Rienner Publishers.

- Sorensen, Ashley, and Philip Chen. 2022. "Identity in Campaign Finance and Elections: The Impact of Gender and Race on Money Raised in 2010–2018 US House Elections." *Political Research Quarterly* 75 (3): 738–753.
- Squire, Peverill. 2017. "A Squire Index Update." *State Politics & Policy Quarterly* 17 (4): 361–371.
- Swers, Michele L. 2013. *Women in the Club*. Chicago: University of Chicago Press.
- Thomas, Sue. 1992. "The Effects of Race and Gender on Constituency Service." *Western Political Quarterly* 45 (1): 169–180.
- Thomas, Sue, and Susan Welch. 2001. "The Impact of Women in State Legislatures." *The Impact of Women in Public Office* 1: 166–181.
- Thomsen, Danielle M., and Bailey K. Sanders. 2020. "Gender Differences in Legislator Responsiveness." *Perspectives on Politics* 18 (4): 1017–1030.
- Thomsen, Danielle M., and Michele L. Swers. 2017. "Which Women Can Run? Gender, Partisanship, and Candidate Donor Networks." *Political Research Quarterly* 70 (2): 449–463.
- Volden, Craig, and Alan E. Wiseman. 2014. *Legislative Effectiveness in the United States Congress: The Lawmakers*. New York: Cambridge University Press.
- Volden, Craig, Alan E. Wiseman, and Dana E. Wittmer. 2013. "When are Women More Effective Lawmakers than Men?" *American Journal of Political Science* 57 (2): 326–341.
- Weissert, Carol S. 1991. "Policy Entrepreneurs, Policy Opportunists, and Legislative Effectiveness." *American Politics Quarterly* 19 (2): 262–274.

Supplementary Materials

Gendered Perceptions of Legislative Influence

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A Response Rates for NCCPPR Surveys

Table A.1: Sampling Frames, Respondents, and Response Rates for NCCPPR Surveys

Survey Year	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
<i>Representatives</i>												
Sampling Frame	119	120	120	120	120	119	120	119	119	120	120	120
No. Respondents	86	94	91	84	72	92	81	78	71	63	63	75
Response Rate	72%	78%	76%	70%	60%	77%	68%	66%	60%	53%	53%	63%
<i>Senators</i>												
Sampling Frame	50	50	50	50	50	50	50	50	50	49	50	50
No. Respondents	44	40	39	37	27	37	36	37	28	24	33	27
Response Rate	88%	80%	78%	74%	54%	74%	72%	74%	56%	49%	66%	54%
<i>Legislative Liaisons and Lobbyists</i>												
Sampling Frame	350	371	308	328	321	366	442	614	471	407	438	382
No. Respondents	168	148	147	142	146	145	173	187	156	144	159	160
Response Rate	48%	40%	48%	43%	45%	40%	39%	30%	33%	35%	36%	42%
<i>News Correspondents</i>												
Sampling Frame	33	26	28	28	28	21	16	12	14	22	36	32
No. Respondents	17	8	8	7	15	8	10	6	8	6	6	7
Response Rate	52%	31%	29%	25%	54%	38%	63%	50%	57%	27%	17%	22%
<i>Overall</i>												
Sampling Frame	552	567	506	526	519	556	628	795	654	598	644	584
No. Respondents	315	290	285	270	260	282	300	308	263	237	261	269
Response Rate	57%	51%	56%	51%	50%	51%	48%	39%	40%	40%	41% ^a	46%

Note: Table presents the total number of each type of respondent contacted by NCCPPR, the number responding, and the response rate. Information is drawn from reports produced by NCCPPR for each survey year. ^aThe report for 2013 appears to have incorrectly rounded this value to 40%.

B First-Term Legislators

Table B.1: First Term Legislators' Perceived Influence in the North Carolina General Assembly

	<i>Dependent variable:</i>		
	Ranking		
Panel A: House of Representatives			
Woman	-0.015 (0.028)	0.007 (0.023)	0.029 (0.020)
Majority Party		0.176** (0.023)	0.103** (0.023)
Vote Share			-0.025 (0.043)
Legislative Effectiveness			0.163** (0.021)
Year Fixed Effects	✓	✓	✓
Observations	320	320	320
Panel B: Senate			
Woman	-0.003 (0.047)	0.014 (0.038)	-0.007 (0.039)
Majority Party		0.177** (0.036)	0.096** (0.032)
Vote Share			0.089 (0.083)
Legislative Effectiveness			0.196** (0.031)
Year Fixed Effects	✓	✓	✓
Observations	132	132	132

Note: Entries are linear regression coefficients with robust standard errors shown in parentheses. * $p < 0.10$ and ** $p < 0.05$ (two-tailed tests).

C Descriptive Regression Analysis

Table C.1: Legislators' Perceived Influence in the North Carolina General Assembly

	<i>Dependent variable:</i>			
	Ranking			
	House		Senate	
Woman	-0.019 (0.028)	0.009 (0.020)	-0.051 (0.055)	0.018 (0.047)
Leader		0.262** (0.052)		0.183** (0.047)
Committee Chair		0.096** (0.014)		0.128** (0.027)
Rules Committee		0.088** (0.018)		0.065** (0.028)
Seniority		0.026** (0.003)		0.015** (0.005)
Majority Party		0.131** (0.016)		0.127** (0.031)
Legislative Effectiveness		0.109** (0.008)		0.129** (0.014)
Vote Share		0.031 (0.030)		0.046 (0.056)
Year Fixed Effects	✓	✓	✓	✓
Observations	1,420	1,364	585	561

Note: Entries are linear regression coefficients with legislator-clustered standard errors shown in parentheses. * indicates $p < 0.10$ and ** $p < 0.05$ (two tailed tests).

D Table Version of Within Legislator Models

Table D.1: Perceptions of Legislator Influence, Within Legislator Models

	<i>Dependent variable:</i>	
	House Rankings	Senate Rankings
Leader	0.128** (0.051)	0.066** (0.032)
Committee Chair	0.106** (0.013)	0.150** (0.022)
Rules Committee Member	0.048** (0.020)	0.027 (0.019)
Seniority	0.054** (0.017)	0.015 (0.038)
Majority Party	0.139** (0.020)	0.143** (0.037)
Legislative Effectiveness	0.053** (0.011)	0.056** (0.009)
Vote Share	0.009 (0.009)	0.009 (0.009)
Woman x Leader	0.072 (0.099)	0.002 (0.074)
Woman x Committee Chair	0.024 (0.024)	-0.014 (0.046)
Woman x Rules Committee	0.005 (0.039)	-0.161** (0.055)
Woman x Seniority	-0.051** (0.019)	0.052 (0.041)
Woman x Majority	0.053* (0.029)	0.117 (0.096)
Woman x Legislative Effectiveness	0.008 (0.016)	-0.018 (0.038)
Woman x Vote Share	0.031** (0.016)	0.029 (0.032)
Year Fixed Effects	✓	✓
Legislator Fixed Effects	✓	✓
Observations	1,364	561

Note: Entries are linear regression coefficients with standard errors clustered on legislator shown in parentheses. * indicates $p < 0.10$ and ** $p < 0.05$ (two tailed tests). Continuous variables are standardized for ease of comparison.

E Additional Results

E.1 Results by Party

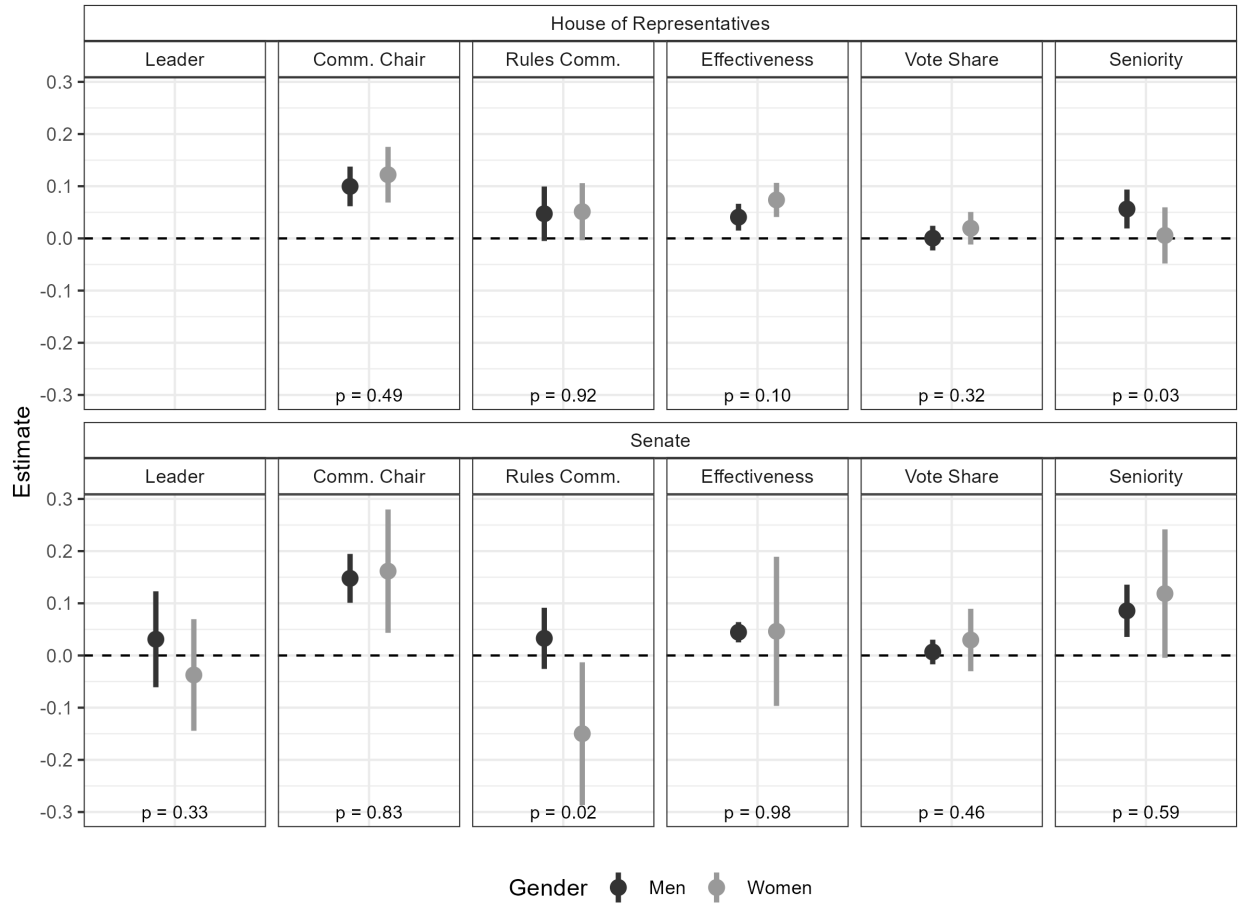


Figure E.1: Perceptions of Legislative Influence, Within-Legislator Models Among Democrats

“Men” and “Women” estimates are based on a single model that interacts the included covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. House model has 672 observations; Senate model has 308 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison.

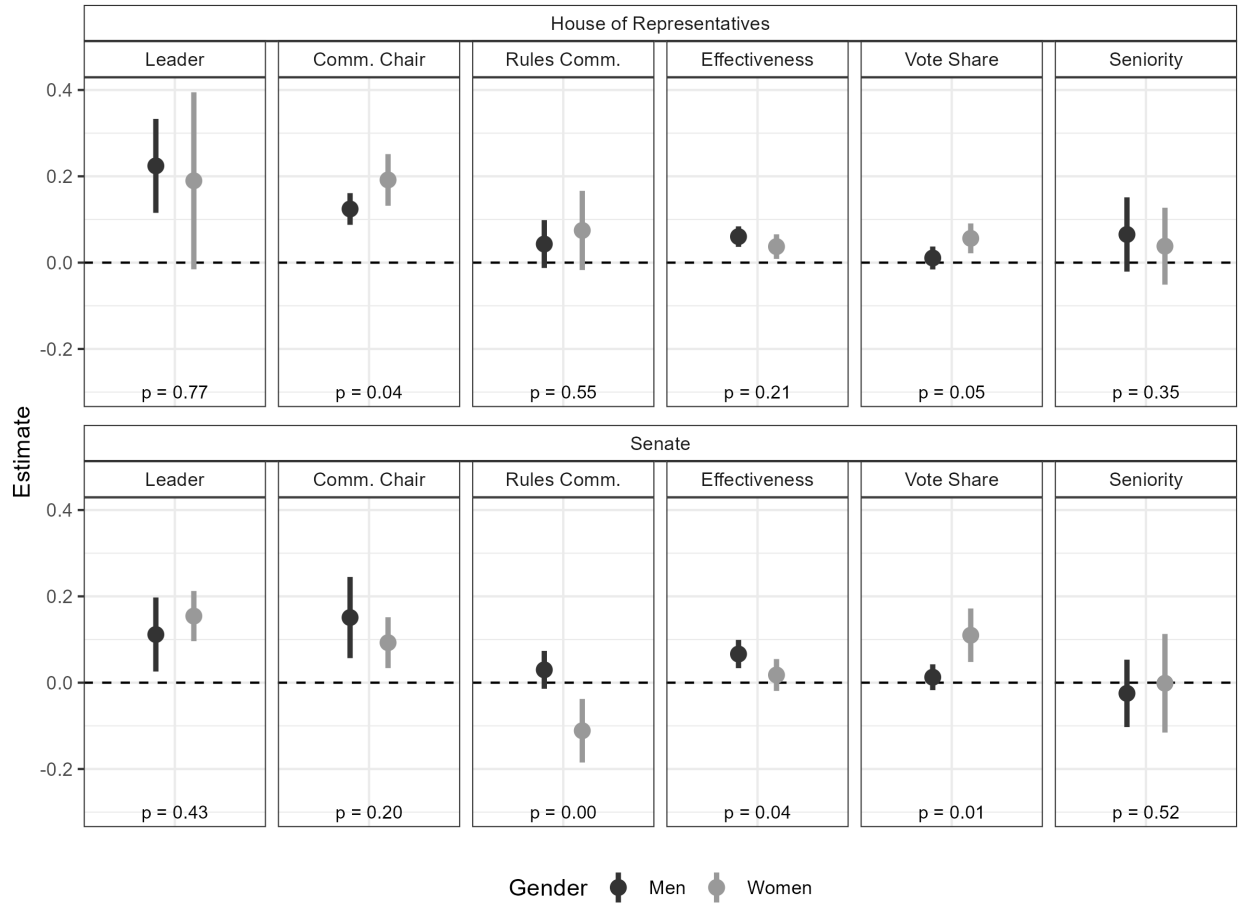


Figure E.2: Perceptions of Legislative Influence, Within-Legislator Models Among Republicans

“Men” and “Women” estimates are based on a single model that interacts the included covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. House model has 691 observations; Senate model has 253 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison.

E.2 Estimates by Decade

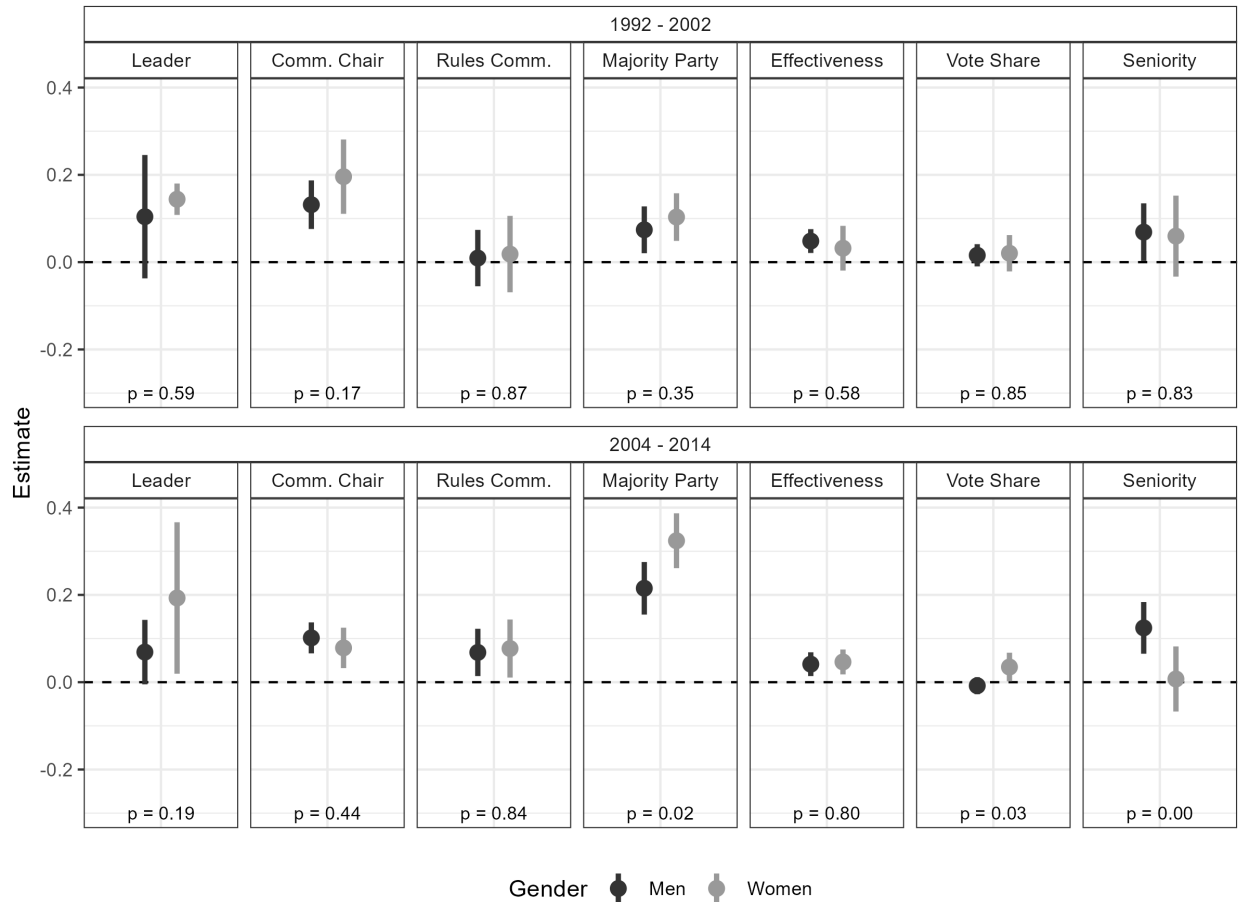


Figure E.3: Perceptions of Legislative Influence, Within-Legislator Models By Decade, North Carolina House

Note: “Men” and “Women” estimates are based on a model that interacts those covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. Model for 1992-2002 have 680 observations and that for the 2004-2014 period have 684 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison.

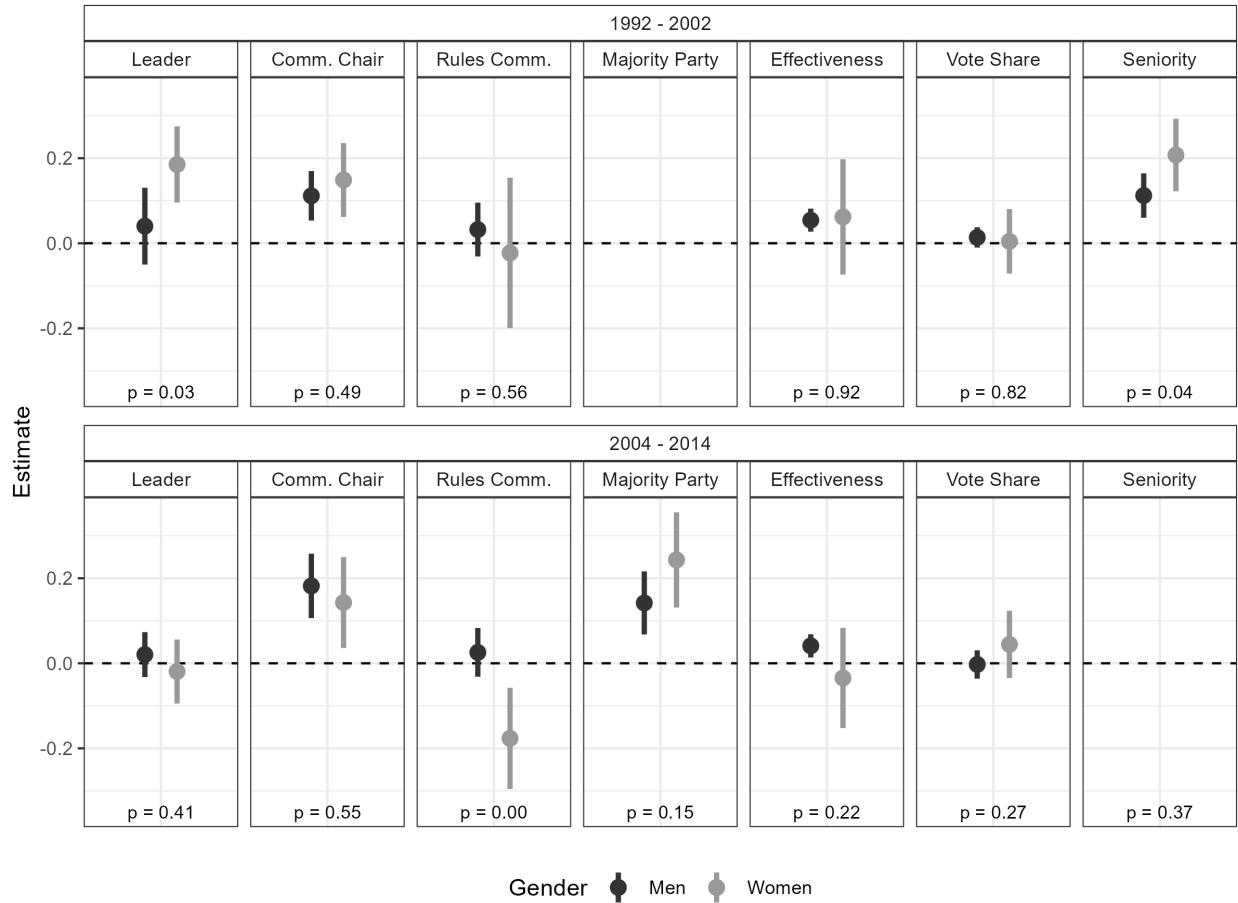


Figure E.4: Perceptions of Legislative Influence, Within-Legislator Models By Decade, North Carolina Senate

Note: “Men” and “Women” estimates are based on a model that interacts those covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. Model for 1992-2002 have 282 observations and that for the 2004-2014 period have 279. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison. Only the interaction for seniority is identified for 2004-2014; we therefore plot the p-value for that interaction but not the marginal effects.

F Robustness Checks

F.1 Lagged Dependent Variable Specification

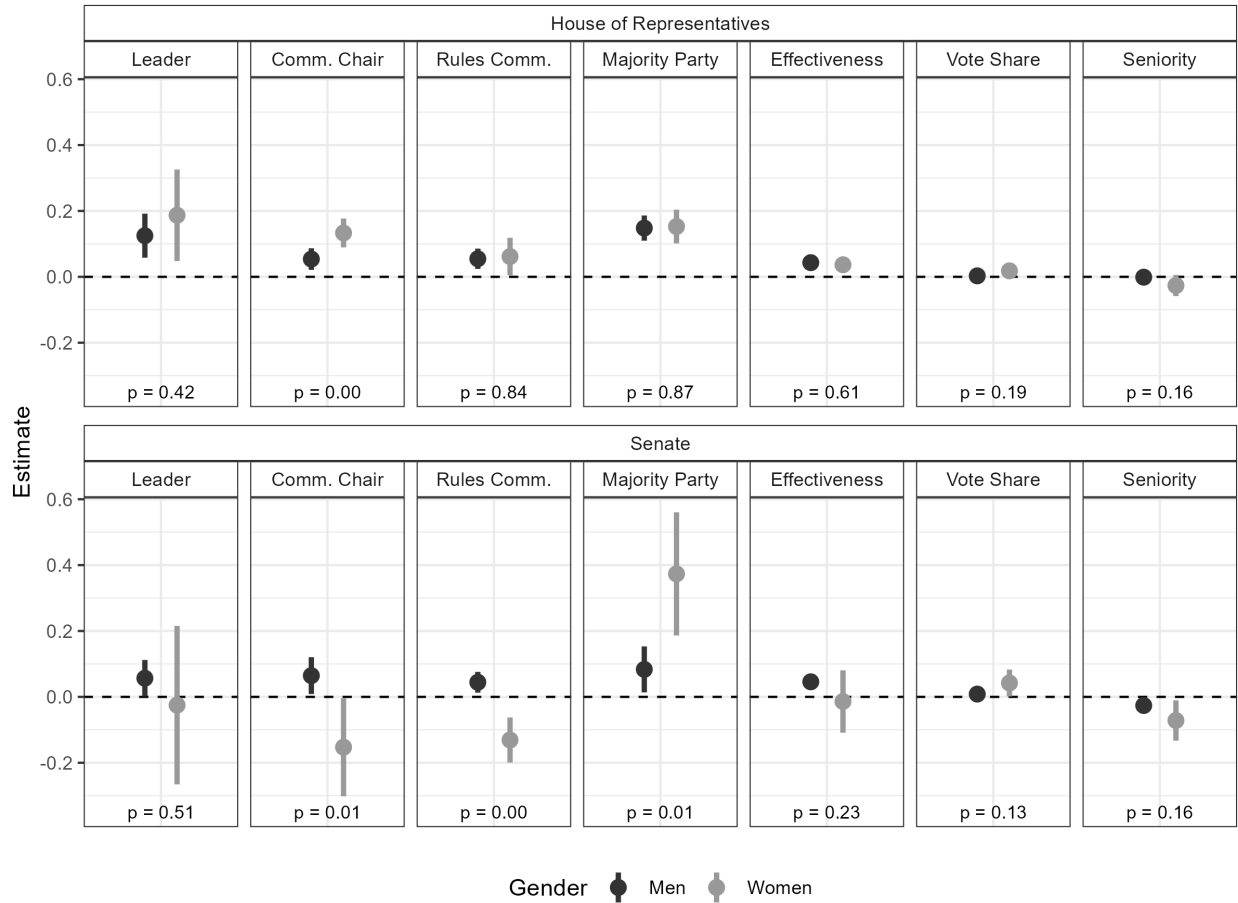


Figure F.1: Perceptions of Legislative Influence, Lagged Dependent Variable Models

“Men” and “Women” estimates are based on a single model that interacts the included covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. House model has 987 observations; Senate model has 392 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison. Because these models do not include legislator fixed effects, they also produce coefficient estimates for “Woman”: for the House model this estimate is -0.059 and it is significant at conventional levels; for the Senate model it is 0.000 and it is not statistically significant.

F.2 Alternative Measures

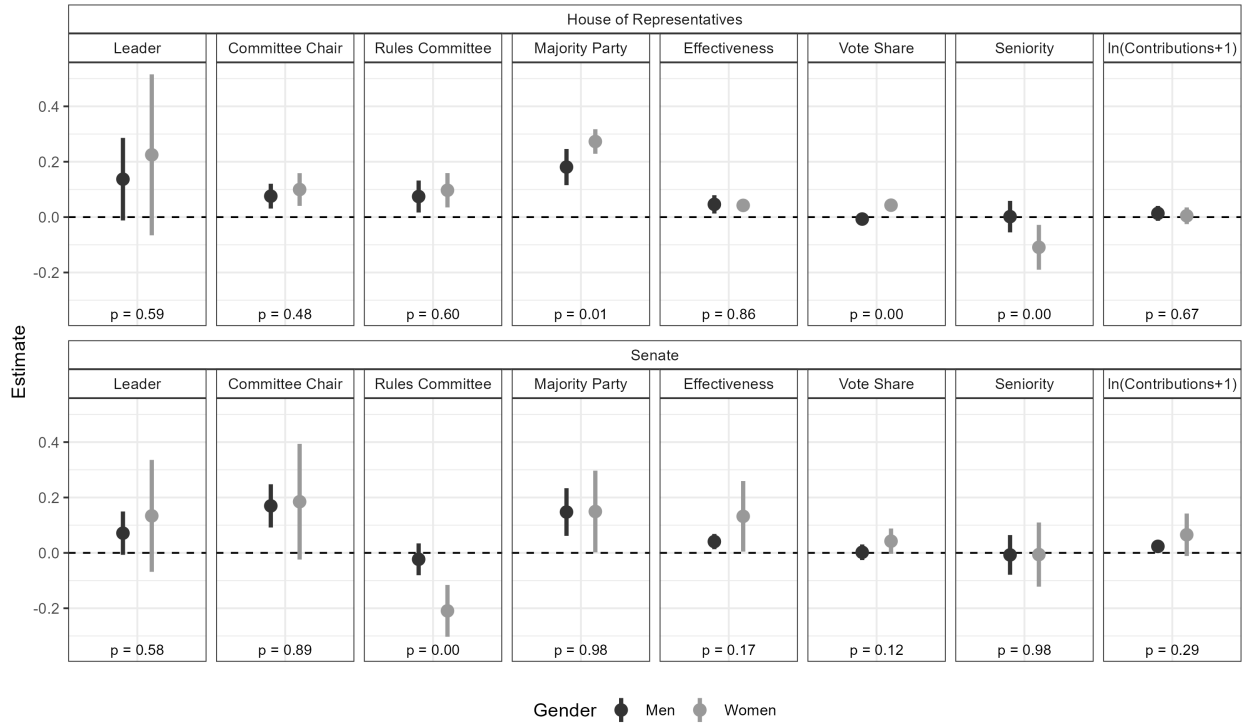


Figure F.2: Perceptions of Legislative Influence, Within-Legislator Models With Contributions

“Men” and “Women” estimates are based on a single model that interacts the included covariates with legislator gender; the marginal effects by gender are presented. Both models include legislator and election year fixed effects. House model has 607 observations; Senate model has 258 observations. 95% confidence intervals are based on legislator-clustered standard errors. Continuous variables are standardized for ease of comparison.