

Women's Advancement in Politics: Evidence from Congressional Staff*

Melinda N. Ritchie[†]

Hye Young You[‡]

Abstract

We examine gender differences in policy influence and advancement within the congressional office context using data on the US Congress payroll system between 2001 and 2014. We document how congressional careers share structural features with non-political occupations with gender gaps. We find that women staffers experience slower promotion and less compensation than men at the same rank and that the gender gap is most salient for positions presenting the greatest structural challenges for women. However, these differences are shaped by the salience of gender equality issues within the office, varying by legislators party and gender, and further demonstrated by gender spillover effects. Our analysis offers leverage for assessing previous explanations for women's underrepresentation among policymakers, suggesting that electoral factors, supply lag, and institutional inertia do not solely account for gender differences. However, the political context mitigates gender disparity because of the salience of gender equality within the political workplace.

*We are grateful for comments from Kristin Kanthak, Daniel Magleby, and participants at the 2018 and 2019 Midwest Political Science Association Meetings and a workshop at the University of California, Riverside.

[†]Assistant Professor, Department of Political Science, University of California, Riverside. Email: ritchie@ucr.edu

[‡]Assistant Professor, Wilf Family Department of Politics, New York University. Email: hyou@nyu.edu

1 Introduction

“Being a woman on Capitol Hill in a senior role is an accomplishment. I’m a rarity, and I know I’ve had to work double overtime to get here. It’s made me stronger, I have thicker skin, and I’m much more confident because I know I’ve blazed trails.” (Congressional staffer, 2015)¹

While female lawmakers are underrepresented in the US Congress, occupying about 20% of the seats in the House and Senate, the gender balance among congressional staff is far more equitable. Women comprise over half of House members’ and senators’ personal office staffs. Yet, evaluations of representation in Congress have focused on the gender of elected officials while neglecting the diversity of the congressional enterprise.

However, growing evidence of the importance of congressional staff suggests that unelected women in Congress may have substantial influence over public policy, despite the underrepresentation of elected women. In fact, legislative staffers have considerable influence over policymaking (e.g., Fox 1997; Malbin 1980; Montgomery and Nyhan 2017). Moreover, the representation congressional offices provide is dependent on staffers’ personal opinions (Hertel-Fernandez, Milderberger and Stokes 2019), suggesting that women’s presence within the congressional enterprise is an important component of descriptive and substantive representation.

Yet, the predominance of women on congressional staffs may not equate to policy influence. Recent findings on the importance of staff focus on senior staffers or staffers who have policy-making roles, rather than examining variation across the entire hierarchy of staff positions. Where women tend to fall along the staff hierarchy has important implications for their influence over policymaking and their access to the legislator. The factors shaping, and challenging, women staffers’ advancement remain unknown. Moreover, examining gender differences in the context of congressional office staff and the experiences of unelected women policymakers contributes to our

¹Quote from 2015 survey of female congressional staff, *National Journal* (<https://www.nationaljournal.com/s/52288/whats-like-be-woman-capitol-hill>).

understanding of the elected women in politics as well.²

We argue that the congressional office offers a unique context for examining gender differences in access to policy influence by allowing us to rule-out a wide-range of election-specific explanations. We build on existing research (e.g., [Lawless and Fox 2010](#)) by questioning explanations focused solely on electoral rules, pipeline or supply lag, and institutional inertia (e.g., incumbency advantage) as leading causes of women’s underrepresentation. We argue that gender differences among policymakers (whether elected politicians or unelected staff) are not particular to electoral or even political contexts (i.e., careers in politics), and that while electoral and political explanations identified in the literature may contribute to gender differences, they are not necessary features of careers with observable gender disparities. However, while the gender gap is not particular to careers in politics, we argue that the political context is unique for its role in mitigating the gender gap because issues of gender equality are particularly salient in the political workplace.

Specifically, we argue that congressional careers, whether elected or unelected, are similar to other occupations where we see a gender gap in pay and promotion. A common feature of the organizational structure of such careers is the demanding, unpredictable yet inflexible schedule, which presents greater challenges for women, who still bear the majority of household and child-care responsibilities ([Lawless and Fox, 2005](#)). Congressional staffers are often expected to work through late votes and weekend events. Moreover, congressional offices are not required to offer paid parental leave, and securing childcare in DC that is affordable on the modest salaries of Hill staffers has led to growing concern that the inadequate family leave policies and on-site daycare facilities are leading to a hemorrhage of talented staffers, particularly women ([Tully-McManus 2018](#)). It is important to note that these structural features of the organization of Congress (e.g., voting schedules) do not work alone to induce gender inequality; we would not observe gender differences if the organizational structure of Congress affects (i.e., hinders) men and women equally. Instead, the organizational structure of Congress (as well as other non-political careers with similarly demanding, inflexible schedules) interacts with traditional gender socialization that places

²We use the general term “policymakers” to refer to both legislators (elected policymakers) and congressional staff (unelected policymakers).

greater childcare and household demands on women (see, for example, [Lawless and Fox 2005, 2010](#)).

However, while childcare issues and demanding schedules are not exclusive to political careers, the political context is unique because of the salience of gender equality within the day-to-day business of political workplaces. For many congressional offices, gender equality is a critical feature of their reelection platform. Legislators and their staff work on issues important to the advancement of women on a daily basis, through legislation, speeches, and discussions with constituents and advocacy groups. We argue that the importance and salience of gender equality within these offices leads to greater attention to the promotion and roles of women within the office, challenges to women staffers' advancement, and equal pay, thus leading to office policies and cultures that mitigate the gender gap among staff.

However, the salience of gender equality varies across offices, with Democratic offices facing more pressure on women's representation and advancement than Republican offices ([Crowder-Meyer and Cooperman 2018; Fox and Lawless 2010](#)). Additionally, offices of women legislators are likely to be more aware of issues of gender equality because of the shared history and experiences of the legislator. This variation in the salience of gender equality across offices leads to differences in the size of the gender gap, in both pay and promotion, by party and gender of the legislator.

We test these arguments using detailed data that include all congressional staffers who are enrolled in the payroll system in the US Congress between 2001 and 2014. We find that men and women staffers have different experiences, political opportunities, and access to power in Congress. First, we find that women experience lower rates of advancement to powerful positions than their male colleagues. In fact, despite making up the majority of staff positions, women staffers tend to be concentrated in lower ranking, clerical positions rather than in policymaking and senior roles. Although women comprise over 60% of the lowest rank among staffers, the ratio of female staffers at the top rank is much smaller. Second, we find that female staffers tend to receive less compensation than male staffers in similar positions. The gender pay gap among congress-

sional staffers is much more salient in the Senate and for positions that are the most demanding in terms of the long, unpredictable hours that are required. We discuss how key features of the congressional office context allow us to rule out a wide-range of previously proposed explanations for the underrepresentation of women policymakers.

Third, these gender differences are shaped by the gender and party of the member of Congress. Female staffers who work for Democratic legislators or female members of Congress experience faster promotion than other female staffers, but even this effect does not fully overcome the gender promotion gap among congressional staffers. Finally, we find evidence of bottlenecks for women's advancement within congressional offices with more low-ranking women staffers, offering support for our argument that the roles and advancement of women are shaped by norms developed in particular offices. Our results could also suggest that some members may have implicit caps for the number of women in the higher ranks.

These findings present a nuanced perspective on women's political influence and roles in representation. While women comprise a majority of congressional staff, their influence is limited by the roles they fill. Women are concentrated in lower-ranked, administrative positions focused on interacting with constituents and engaging with the public, and less for positions responsible for policymaking and legislative decisions. In short, the presence of women on Capitol Hill does not equate to influence in Congress.

Furthermore, these gendered roles and opportunities are shaped by legislators' partisan and gender differences. This finding suggests there may be a disparity in women's roles and influence across the political parties, but also that women's impact in Congress may change with increased gender balance among legislators. Taken together, the mere presence of women in Congress falls short of equitable policy influence. Women's access to power is limited by the roles they fill and their ability to advance.

2 The Importance of Unelected Women Policymakers

What limits women's policymaking influence? The literature on women and politics provides several reasons to be concerned about the underrepresentation of women policymakers. Female elected officials influence the agenda (Swers 1998; Wolbrecht and Campbell 2007), articulate underrepresented and marginalized perspectives (Osborn and Mendez 2010; Pearson and Dancey 2011), tend to have more collaborative policymaking styles (Carey, Niemi and Powell 1998; Rinehart 1991; Thomas 1994), and impact legislative processes and outcomes (Schulze and Hurvitz 2016; Swers 2002; McDonald and O'Brien 2011; Volden, Wiseman and Wittmer 2013). While scholars continue to debate whether there are gender differences for lawmaking (see, for example, Lawless, Theriault and Guthrie 2018), there is a general consensus that women's presence in politics is important for representation, whether symbolic or substantive.

Yet, women's access to power is limited by gendered political opportunities and bias in elections (Fox and Lawless 2010; Lawless 2011; Lawless and Pearson 2008; Holman, Merolla and Zechmeister 2016), party organizations (O'Brien 2015; Sanbonmatsu 2006), and government institutions (Lawless and Fox 2005). Previous explanations for the underrepresentation of women in elected positions have pointed to voter biases about women candidates (e.g., Lawless 2004*b*) and gender differences in gatekeeper and challenger assessments (Palmer and Simon 2006; Lawless and Pearson 2008) and in media coverage (Fox 1997; Kahn 1996, but see Hays and Lawless 2006). The gender disparity in Congress may be exacerbated by incumbency advantage (Darcy, Welch and Clark 1994) and a lag in the growth of women in "pipeline" careers that provide stepping stones for elected office that have traditionally been dominated by men (Darcy, Welch and Clark 1994; Duerst-Lahti 1998). Still, other scholars have argued that gender socialization affects potential women candidates' willingness to run for office and that the underrepresentation of women is due, in part, to lower levels of political ambition among women and that women underestimate their qualifications in comparison to men (Lawless 2004*a*; Lawless and Fox 2010; Lawless 2011).

Despite the large body of literature on women in politics, previous research has focused on

women candidates and elected officials, neglecting the role of *unelected* women in politics.³ In fact, we know comparatively little about the experiences, roles, and consequences of unelected women policymakers and representatives. This is surprising given the public and academic attention to the growing number of female candidates and elected officials, but also because of the influential, although often invisible, role of unelected representatives and policymakers.

However, women's mere presence on congressional staff does not necessarily mean they are in positions of influence. Congressional staffers can be important policymakers, providing information, engaging in networks both on and off Capitol Hill, and bringing issues to their boss' agenda, but recent evidence (e.g., Hertel-Fernandez, Mildenerger and Stokes 2019; Montgomery and Nyhan 2017) has been limited to senior staff. However, if women are predominately confined to low-ranking, administrative positions, answering the phones and scheduling rather than working on policy, their influence is significantly reduced.

In fact, the unelected women of Capitol Hill provide a useful approach for considering the underrepresentation of women in politics. Notably, many of the explanations for the underrepresentation of elected women, like incumbency advantage, unfair media coverage, fundraising uncertainty, and voter perceptions, do not extend to unelected women in politics, who do not face the same challenges particular to elections. Examining the experiences of unelected women may contribute insight beyond election-specific explanations.

For example, institutional and pipeline explanations for the underrepresentation of women politicians point to incumbency advantage, the availability of open seats, and a lag of women in pipeline professions (Carroll 1994; Darcy, Welch and Clark 1994). However, congressional staffs do not suffer from the same lag in opportunity for advancement or the supply of qualified women. Unlike women candidates and legislators, women make up the majority of staff, occupying more of the entry-level positions across both parties and the gender of the member.⁴

This point is particularly important when we consider gender differences in promotion, since previous Hill experience is considered the most valuable qualification for senior staff positions and

³For exceptions, see Barnes and O'Brien 2018; Rosenthal and Bell 2003; Dolan 2002; Krook and O'Brien 2012.

⁴Women congressional candidates hover around 20%, even in 2018's "year of the woman" (Kurtzleben 2018).

staff are generally hired from within the Capitol Hill community and even within an office (Gale 2014). Thus, gender does not appear to be a barrier to entry for congressional staffers, suggesting that a shortage of women in the pipeline is not a problem.

Likewise, previous work offers incumbency advantage and the availability of open seats as factors slowing the rate of women getting elected to Congress. However, congressional offices have a notoriously high rate of staff turnover, with reports of an average House office retention rate in a two-year period around 64%, suggesting that opportunities for promotion to influential positions are not an issue for women staffers.⁵ Together, this suggests that the supply or pipeline of qualified women and the opportunities for turnover and promotion are not a problem for women staffers.

We build on previous work that has questioned explanations focused on structural barriers, electoral rules, and institutional inertia as the leading cause of women's underrepresentation (see Lawless and Fox 2010). We argue that electoral-specific explanations for the underrepresentation of women in policymaking positions are inadequate, as evidenced by the lack of women in *unelected* policymaking positions. However, we argue that the political context is unique for the role it plays in mitigating the gender gap among both elected and unelected women policymakers. This theory is supported by our results that show predictable variation across conditions. Like all observational studies, we are limited in our ability to clearly identify a causal mechanism, despite our research design and efforts at controlling for confounding factors and alternative explanations. Additionally, we recognize that the institutions and norms particular to elections (e.g., single-member district systems, primary process) exacerbate the gender gap for politicians. However, the congressional office context offers leverage to rule out a wide-range of election-specific explanations as necessary for the underrepresentation of women policymakers. At the same time, our results inform our understanding of gender differences among elected officials by focusing on the common hurdles faced by women, whether elected or unelected.

⁵The Sunlight Foundation, which published this finding for the period of 2009 through 2011, points out that, "At this pace, we would expect the average House office to turn over fully within three sessions of Congress (Drutman 2012).

Given that staffers are not merely loyal agents of the legislator (Montgomery and Nyhan 2017) and that the personal views and networks of individual staffers can have implications for representation (Hertel-Fernandez, Mildemberger and Stokes 2019), it is important that we understand women's experiences and roles on congressional staff. While women comprise a majority of personnel positions within Congress, their actual role in policymaking and influence is less clear. In fact, the proportion of women in congressional offices could be a misleading indicator of their influence if they are relegated to clerical and low-status positions. Finally, examining gender inequality in congressional offices may offer insight into the underrepresentation of women in politics in a broader context.

3 Explaining the Gender Gap on Capitol Hill

What might shape the roles and experiences of women on Capitol Hill? Do women staffers have access to positions of policymaking influence? Existing research focusing on women politicians may lend some insight into the representation of women on congressional staffs and the gender distribution across the staff hierarchy. However, the incentives and context of unelected women in politics differ from politicians. Thus, many previous explanations for the experiences of women policymakers, such as the electoral process and voter biases, unfair media coverage, and fundraising challenges, do not extend to female staff.

However, other research on women politicians focuses on factors that are present for both elected and unelected policymakers. For example, Lawless and Fox (2010) examine gender differences in political ambition as a factor keeping women out of politics. This is, in part, because women are less likely than men to perceive themselves as viable candidates or qualified to hold elected office and more likely to believe the political environment is very competitive, particularly for women (Lawless and Fox 2010). Gender differences in the weighing of childcare and career priorities is also a component of the gender gap in political ambition; women are less likely to consider pursuing elected office out of concern for family obligations and because they still bear

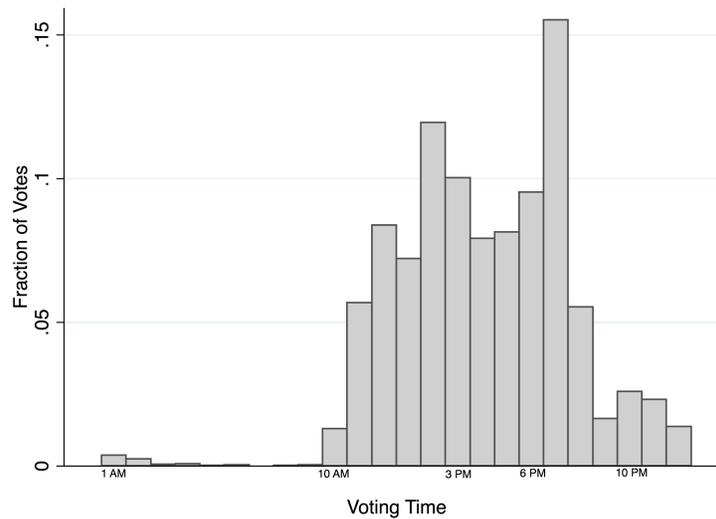
the majority of childcare and household responsibilities (Lawless and Fox 2010).

The gender gap in ambition may also explain barriers to women's advancement beyond elected office, including among congressional staff. If women staffers are more likely than their male co-workers to believe they are not qualified to take on policymaking roles, they may not pursue promotions. On the other hand, clearly women staffers, even in entry-level positions, had enough ambition to get their foot in the door. However, perhaps as women staffers approach their mid to late-twenties and observe the demanding work schedules of their senior colleagues, they decide such promotions would not allow them flexibility for family obligations and childcare responsibilities and either stay in lower-ranking positions or withdraw from a career in politics altogether.

In fact, demanding, inflexible work schedules, a significant challenge for childcare, are a shared feature of careers in politics, whether elected or unelected, as well as other non-political occupations characterized by gender gaps in promotion and compensation. The gender pay gap is larger in occupations that reward individuals who worked long hours and inflexible schedules and tend to be described as jobs where "time pressure, contacts with others, and establishing and maintaining interpersonal relationships" matter (Goldin 2014). Thus, the gender gap in promotion and pay may be primarily driven by how jobs are structured and temporal inflexibility because of childcare challenges for women.

These characteristics of occupations with a higher gender gap depict staff positions in Congress precisely. In particular, the (often unpredictable) demands made on congressional staffers after regular working hours impose significant time constraints on those with childcare responsibilities. Of course, all full-time congressional staffers are expected to keep regular business hours. However, the workload is particularly intense while Congress is in session; when staffers are expected to be available to their bosses as long as votes are taking place and often to accompany their legislators to events throughout the evening between and after late votes and even on weekends. For example, in March 2018, Senate passed \$1.3 trillion spending bill shortly before 1 a.m. which prevented a government shutdown (Werner and Debonis 2018). Mostly recently, a Supreme Court confirmation vote on Justice Brett Kavanaugh occurred on a Saturday morning. Indeed, many of

Figure 1: Distribution of Times of Votes, 2001 - 2018

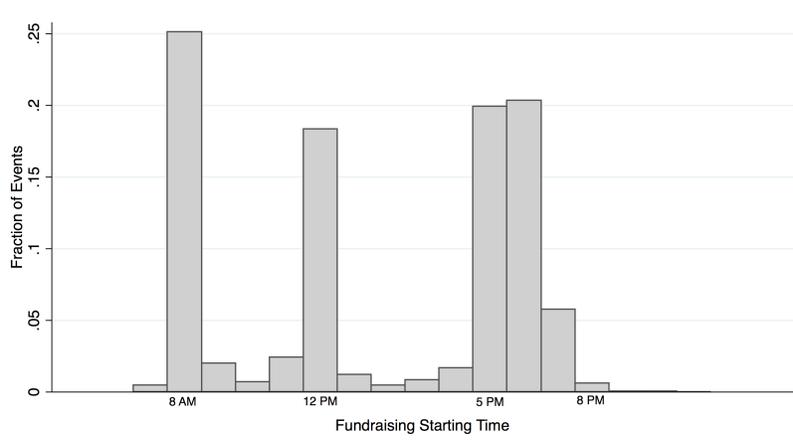


the key votes in Congress, especially on legislation that passes by the narrowest margins, often takes place outside of regular working hours. Figure 1 presents the distribution of votes across time of day for the Congresses from 107th through 115th and shows voting can drag on long after 6 pm and well into the evening through midnight.⁶ In addition, fundraising has increasingly become important as elections become more competitive (Lee 2016), creating a long list of events for legislators and their staff to attend. Figure 2 presents the distribution of event starting times.⁷ We calculate the proportion of events that started after regular business hours and find that 27% of the events started after 6 pm. If we change the threshold to 5 pm, the percentage of the events that started after business hours increases to 47%. These inflexible yet unpredictable late hours and weekend responsibilities are a challenge for childcare. Keep in mind, these demanding schedules are a shared experience of both congressional staffers as well as their bosses.

⁶We web-scraped the voting records from the govtrack (<https://www.govtrack.us/congress>).

⁷We examine the congressional events that the Sunlight Foundation, a non-profit organization that aims to promote transparency in politics, has collected. It launched the website called “Political Party Time” that collects invitations to political events, such as receptions and fundraising that connects politicians with donors, lobbyists, and other interested groups and individuals (see <http://politicalpartytime.org>). We analyze the events data from 2008 through 2014. There are 18,325 events during this period and the most of the events are described as fundraising receptions (e.g., breakfast, lunch, dinner, etc.). We have information on what time events are scheduled to start for 16,773 events.

Figure 2: Distribution of Fundraising Events Starting Time, 2008 - 2014



Like other gender gap occupations, the demanding, inflexible, yet unpredictable work schedule of congressional staff presents challenges for women, who continue to bear the majority of household and childcare responsibilities (Lawless and Fox 2005) and could explain the gender distribution across the congressional staff hierarchy as demands increase both at work and at home and as women approach an age when they are considering childcare. Indeed, the factors associated with the gender gap become increasingly important over the course of the life-cycle (Goldin 2014). While many Hill staffers are in their early and mid-twenties, young female staffers may recognize the challenges for them to have both career and family by observing the day-to-day responsibilities, inflexible schedules, and expectations faced by their superiors. They may come to view advancement in a congressional office as an impossibility for them or as a poor long-term career if they want to have children.⁸ Thus, gender differences in congressional offices may have little to do with political explanations and more to do with the inflexible schedules and long hours associated with many workplaces where we observe gender inequality.

If we observe a gender gap in experiences, roles, and promotion in congressional offices, it suggests that gender differences among elected and unelected policymakers may not be solely due

⁸This argument is consistent with work showing that women still bear most of the household labor (Lawless and Fox 2005) and that party leaders view this burden as the primary reason why women do not run for office at the same rates as men (Sanbonmatsu 2006).

to election-specific explanations. The underrepresentation of women policymakers is not an exclusively political phenomenon. Differences in ambition are not unique to political candidacy or even specific to political contexts. In fact, parallel gender differences are found in non-political occupations that exacerbate the different calculus women make when weighing childcare and career priorities.

However, unlike most workplaces, issues of gender inequality are often at the forefront of the business of the day in congressional offices, especially in the offices of legislators who tout gender equality as one of their priorities. By running on platforms promising a commitment to gender equality, legislators face greater expectations when it comes to gender differences within their own offices. For these legislators, their commitment to gender equality is the product they are selling to the public. These legislators and their staff are engaging with policies related to gender equality and women's issues by working on related legislation, speeches, and interacting with advocacy groups. The political pressure and salience regarding gender equality in the workplace may lead these legislators to encourage and mentor the women in their offices for senior staff and policymaking roles and to be more aware of workplace flexibility issues. Findings indicating that women need to be asked multiple times in order to run for office lend credence to the possibility that explicit encouragement from legislators and Chiefs of Staff could make the difference for the advancement of women staffers. Moreover, the women staffers that choose to work for such politicians likely hold strong views on gender equality and women's advancement themselves. Thus, while gender inequality in the workplace is not unique to the political arena, the political incentives to overcome these barriers and recruit women candidates (see [Fowler 1993](#); [Sanbonmatsu 2006](#)) and promote women staffers is particularly salient within the political context.

If the pressure and salience of gender inequality in the political context does help to overcome barriers for women, we would expect to see variation based on the legislators' political commitment to gender equality. Democrats, for example, face more pressure and recruitment assistance from women's organizations to increase women's political representation than the Republican party ([Crowder-Meyer and Cooperman 2018](#); [Fox and Lawless 2010](#); [Lawless and Fox](#)

2010). Likewise, gender equality among staff is likely to be more salient factor in Democratic offices, mitigating the gender inequality in pay and promotion in comparison to Republican offices.

Alternatively, it is possible that Republican offices promote women in order to overcome their party's perceived weakness on issues of gender equality. One survey response implied this might be the case because it seemed to her that "Republicans want a female spokesperson."⁹ However, Democrats have also faced negative press attention for a lack of gender equality in their own offices. For example, Senator Elizabeth Warren received scrutiny and accusations of hypocrisy over a controversy about whether she paid her female staffers less than the men in her office (Ernst 2017). It is possible both parties face pressure to promote women.

Beyond partisan priorities, gender equality among staff could also be more salient for women legislators than for their male colleagues. For the same reasons we observe women legislators voting and advocating for priorities for women, we might expect to see them recruit and promote women in their offices. Female legislators' previous experiences with gender biases and barriers in their own histories would likely heighten their awareness to gender equality within their offices. It is also possible that congresswomen are more comfortable with women in the staff roles that are closest to the boss, similar to how some congressmen have expressed discomfort with being staffed (in particular, meeting alone) with women staffers.

We argue that while the demanding and inflexible schedules of congressional careers lead to gender inequities, factors particular to the political context mitigate these differences. Concerns about gender equity are going to be particularly salient in the context of the political workplace, especially among women and Democratic legislators, who tout their commitment to gender equality as a policy priority and who face pressure and receive more assistance from women's interest groups or policy demanders to recruit more women (Crowder-Meyer and Cooperman 2018; Fox and Lawless 2010; Lawless and Fox 2010).

Understanding gender differences in the opportunities and experiences of congressional staffers has important implications for our knowledge about women and politics beyond the unelected

⁹Quote from 2015 survey of female congressional staff, *National Journal* (<https://www.nationaljournal.com/s/52288/whats-like-be-woman-capitol-hill>).

staff. First, considering questions of women’s advancement and access to power in the context of congressional offices offers leverage in how we evaluate previous explanations for the underrepresentation of women. Second, congressional staff play an important role in policymaking. If women hold positions of power within congressional offices, it could suggest that priorities and perspectives of women are still being voiced in an overwhelmingly unrepresentative Congress. However, if women are facing barriers to policymaking roles, it further exacerbates the underrepresentation of the policy concerns that they themselves face. Taken together, while congressional staff are influential policymakers, it is the member of Congress who determines the hierarchy of influence.

4 Data Description and the Summary Statistics

We start with the list of all congressional staffers who enrolled in the payroll system in the US Congress for the period between 2001 and 2014. Legistorm, an online information service that provides information on career histories of congressional staff, assembles the congressional staff salary data from the official records of the House and Senate. Congress publishes a quarterly statement of disbursement (SOD), and the SOD reports all receipts and expenditures for congressional members, committees, and other offices within Congress.¹⁰ Legistorm supplements the salary data with biographical information for staffers from available sources such as LinkedIn pages.¹¹ We purchased the congressional staff data from Legistorm that includes the name of the congressional office, each staffer’s name and title, pay period, and salary paid in that period. We drop staffers if they were interns, part-time or temporary employees, shared employees, or drivers (based on their staff titles) to measure the number of full-time employees in congressional offices.

Table 1 presents the summary statistics for congressional staffers who worked in members’ personal offices. On average, more than 13,000 people received a positive payment from personal offices in the Congress in a given term and more than half of the personal staffers were women.¹²

¹⁰<https://disbursements.house.gov/archive.shtml>

¹¹We have educational attainment information for 35% of the staffers in the payment directory.

¹²The total number of unique staffers who worked more than 6 months in our data is 50,591.

The average total compensation in a given term (two years) is around \$90,000. The turnover rate, which indicates the percentage of staffers who were enrolled in the payroll from a member’s office in a given Congress but did not appear on the payroll in the subsequent Congress, is around 37% for personal staffers.¹³

Table 1: Summary Statistics of Congressional Staff

| Congress | No. Staff ^a | Female (%) | Average Total | |
|----------|------------------------|------------|---------------------------------|---------------------------|
| | | | Compensation (\$K) ^b | Turnover (%) ^c |
| 107 | 13,751 | 56.1 | 91 | 37.2 |
| 108 | 14,012 | 56.1 | 95 | 35.3 |
| 109 | 14,303 | 54.7 | 93 | 38.9 |
| 110 | 14,324 | 54.4 | 91 | 36.1 |
| 111 | 14,320 | 54.5 | 98 | 39.3 |
| 112 | 13,793 | 53.1 | 94 | 39.2 |
| 113 | 13,194 | 52.4 | 90 | - |

Note: The unit of observation is staff \times congress. **a.** Total number of personal office staffers who had a payment record and worked more than 6 months. **b.** This is the average total compensation given per congressional term (two years, in 2014 dollar terms). **c.** Percentage of staffers enrolled in the payroll in a given Congress but did not appear in the payroll in the subsequent Congress.

To examine whether congressional staffers are promoted and compensated differently by gender, we need to standardize staffers’ ranking across different offices. To produce a comprehensive ranking of congressional staff, we relied on government (CRS reports), academic (Davidson et al. 2018; Romzek and Utter 1996), and government support nonprofit organization (Congressional Management Foundation) sources which provide standard congressional staff titles and descriptions of the positions. Using these resources, a former congressional staffer (one of the authors) read through the titles listed and categorized them based on the standard list of titles and ranked them (see Table A1 in the Appendix A).

The titles were ranked based on the hierarchy and chain of command within congressional offices, position qualifications, and on the position descriptions (e.g., policy, administrative). For example, the Chief of Staff is the first in command in a congressional office and, thus, has the

¹³Table A3 in the Appendix presents the summary statistics at the member level.

highest rank (1). The Deputy Chief of Staff (also District Chief of Staff, State Director) is the second in command, reporting to the Chief of Staff, and is ranked (2) above the rest of the staff positions. The lowest ranking positions are entry level positions that require the least amount of experience (e.g., previous experience working on Capitol Hill) and perform administrative or clerical office support, such as staff assistants (ranked at 7). Finally, staff positions that require policy expertise, whether legislative in nature (e.g., Legislative Assistants), or involving the communication of policy positions and activities (e.g., Press Secretary) are ranked above positions that are primarily administrative (e.g., Executive Assistant, Scheduler).¹⁴

The standardization of staffer ranking matters especially when we compare wages and promotions *across* different congressional offices. However, we also compare compensation and promotions of congressional staffers within a member’s office. In those cases, even if each congressional office might use different ranking systems among congressional staffers, as long as the ranking system is stable within the member’s office, our analysis is immune to potential mistakes in the process of standardizing the rankings.

Table 2 presents the composition of female staff by ranks and by four different groups of legislators (party \times gender). While the ratio of female staffers at the lowest rank (7) is similar across parties and the chamber, there is a significant difference in the ratio of high-ranked female staff by the party line. Democratic female legislators have the highest ratio of top-ranked female staffers, whereas Republican male legislators have the lowest ratio of top-ranked female staffers. This suggests that the promotion of female staffers within the Congress may be different by the party affiliation and gender of a member whom they are serving. However, it is important to reiterate that across all of the conditions, women make up the majority of staff in the lowest-ranking positions (Rank 7), ruling out supply-side or pipeline explanations.

We create a dataset where the unit of observation is member \times staff \times rank \times congress for each chamber. For each staffer, we aggregate the total salary paid to a staffer in a given rank from each

¹⁴While Chiefs of Staff and Deputy Chiefs of Staff often manage administrative tasks, they are also responsible for the policy agenda and supervising the legislative staff and are included within the category of “policy positions” (Congressional Management Foundation report, 1991-2001).

Table 2: Female Staff Composition

| Staff Rank | Total Staff ^a | Female Staff (%) ^b | Female Democrats | Male Democrats | Female Republicans | Male Republicans |
|-------------------------------|--------------------------|-------------------------------|------------------|----------------|--------------------|------------------|
| <i>Panel A. House</i> | | | | | | |
| Rank 1 (Top) | 4,721 | 34 | 51 | 40 | 25 | 25 |
| Rank 2 | 4,100 | 44 | 49 | 47 | 63 | 38 |
| Rank 3 | 4,064 | 37 | 45 | 38 | 30 | 35 |
| Rank 4 | 5,367 | 45 | 50 | 46 | 43 | 43 |
| Rank 5 | 13,059 | 43 | 49 | 46 | 41 | 39 |
| Rank 6 | 7,267 | 47 | 44 | 49 | 43 | 45 |
| Rank 7 (Low) | 49,335 | 59 | 60 | 57 | 60 | 60 |
| <i>Panel B. Senate</i> | | | | | | |
| Rank 1 (Top) | 1,192 | 33 | 48 | 38 | 31 | 25 |
| Rank 2 | 2,655 | 51 | 59 | 56 | 41 | 44 |
| Rank 3 | 1,214 | 39 | 40 | 43 | 30 | 36 |
| Rank 4 | 2,823 | 48 | 48 | 49 | 45 | 48 |
| Rank 5 | 7,368 | 42 | 47 | 45 | 33 | 39 |
| Rank 6 | 6,957 | 46 | 49 | 49 | 40 | 44 |
| Rank 7 (Low) | 23,931 | 61 | 61 | 60 | 62 | 61 |

Note: The unit of observation is member \times congress for the member office level female staff composition.

a. Total number of personal office staffers at each rank who had a payment record and worked more than 6 months. **b.** Average percentage of female staff across all types of offices at each rank.

office by Congress. We calculate the total number of days that a staffer worked for a member’s office in a given rank by Congress. We also create a variable that indicates whether a staffer worked in a district or state field office as opposed to working in Washington D.C.

5 Gender Gap in Promotions in Congress

First, we examine gender differences in promotion. This analysis is particularly valuable because, as mentioned, women make up the majority of congressional staff even though they are heavily concentrated in lower-ranking positions. This is important because the hiring process on Capitol Hill occurs largely through promotion within or between offices, and there is a strong expectation that staffers “pay their dues.” In other words, it is expected that staffers start out as interns or in entry-level positions, even if they have graduate degrees. “Hill experience” is generally a require-

ment and is widely considered to be more valuable than graduate education, with some legislators even refusing to hire someone who had not interned in a Capitol Hill office first (Gale, 2014). Thus, if women are getting their foot in the door as staff assistants and in other entry-level roles, gender differences higher up the hierarchy become more puzzling.

We systematically examine the promotion of congressional staffers in the following way. We define a promotion in Congress t as the highest rank change between Congresses t and $t + 1$ for a given staffer.¹⁵ If a staffer left Congress after the time period t , then we do not have a record of promotion for those staffers.

We also include variables that capture the overall gender composition of staffers to study gender spillover whether a gender composition within a member's office affects the promotion of female staffers. We observe the population of staffers in each office during a given Congress at a given rank. We calculate the female staff shares among the staffers at the same rank (*Female Peer Share*) and the female staff shares of bosses working at higher ranks in the same member's office in a given Congress (*Female Boss Share*).

We estimate the model below to examine staffer promotion in the Congress.

$$\begin{aligned}
 Promotion_{ijt} = & \alpha_j + \alpha_t + \beta_1 Female_i + \Gamma X_{ijt} \\
 & + \beta_2 FemalePeerShare_{ijt} + \beta_3 FemalePeerShare_{ijt} \times Female_i \\
 & + \beta_4 FemaleBossShare_{ijt} + \beta_5 FemaleBossShare_{ijt} \times Female_i + \varepsilon_{ijt}
 \end{aligned} \tag{1}$$

, where i, j, t indicate staffer, member, and Congress, respectively. X_{ijt} includes a set of control variables such as member's characteristics and a staffer's educational attainment. α_j and α_t denote member- and Congress fixed effects.

The estimated results are reported in Table 3. In the House, we find that female staffers who are

¹⁵There are some cases where a staffer's rank changed within a Congress. 12.5% of the House staffers and 11.6% of the Senate staffers experienced a promotion within a Congress. In those cases, we take the highest rank in a given Congress to compare promotions between Congresses.

hired by Democratic members tend to experience faster promotions than female staffers hired by Republicans. This difference continues even after we control for staffers' educational background. We also find significant gender spillovers in promotion. If there are more women in the same rank in a member's office, the gender gap in promotion becomes larger. Having more female staffers in higher ranks than their own rank is not systematically related to a female staffer's promotion.

Table 3: Gender Gap in Promotion

| | (1) | (2) | (3) | (4) |
|----------------------------------|-----------------------|----------------------|-----------------------|----------------------|
| Panel A: House | | | | |
| Female Staff | -0.0820*** (-3.47) | -0.0259 (-0.70) | -0.0941*** (-3.90) | -0.0387 (-0.99) |
| Female Staff × Democrat | 0.0618*** (3.98) | 0.0597** (2.40) | 0.0667*** (4.28) | 0.0589** (2.31) |
| Female Staff × Female Peer Share | -0.122*** (-3.42) | -0.249*** (-4.65) | -0.0997*** (-2.72) | -0.237*** (-4.14) |
| Female Staff × Female Boss Share | -0.0428 (-1.35) | -0.0449 (-0.90) | -0.0482 (-1.49) | -0.0296 (-0.57) |
| Member Controls | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ |
| Staff Education | | ✓ | | ✓ |
| Member FE | | | ✓ | ✓ |
| <i>N</i> | 50862 | 22060 | 50862 | 22060 |
| adj. <i>R</i> ² | 0.020 | 0.048 | 0.024 | 0.043 |
| Panel B: Senate | | | | |
| Female Staff | -0.0522* (-1.83) | -0.0845* (-1.87) | -0.0640** (-2.20) | -0.106** (-2.29) |
| Female Staff × Democrat | 0.0607*** (3.30) | 0.0200 (0.63) | 0.0592*** (3.21) | 0.0203 (0.64) |
| Female Staff × Female Peer Share | -0.0188 (-0.38) | 0.0808 (1.03) | 0.000150 (0.00) | 0.0929 (1.15) |
| Female Staff × Female Boss Share | -0.0971** (-2.37) | -0.0572 (-0.89) | -0.0908** (-2.22) | -0.0245 (-0.38) |
| Member Controls | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ |
| Staff Education | | ✓ | | ✓ |
| Member FE | | | ✓ | ✓ |
| <i>N</i> | 26470 | 11197 | 26470 | 11197 |
| adj. <i>R</i> ² | 0.012 | 0.026 | 0.015 | 0.027 |

Note: The unit of observation is staffer × member's office × congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at member-level.

In the Senate, women experience slower promotion than male staffers. Female staffers who work for Democratic members experience faster promotions but this effect is weakened once we control for a staffer’s educational background. This suggests that Democratic senators tend to hire more highly educated women as staffers who may experience faster promotions. We also observe some gender spillover effects in the Senate. In particular, having more female workers in the higher ranks reduces a female staffer’s promotion. But this effect is also weakened once we control for staffers’ educational background.¹⁶

6 Gender Gap in Compensation in Congress

In this section, we present the results that document a significant gender pay gap among congressional staffers. First, to examine whether there is any gender pay gap, we estimate the following model:

$$Pay_{ijt} = \alpha_j(\alpha_s) + \alpha_t + \Gamma S_{ijt} + \Pi M_{jt} + \varepsilon_{ijt} \quad (2)$$

, where i, j, s, t indicate staffer, member, member’s district (or state), and Congress, respectively. S_{ijt} includes staffer-specific variables such as gender, rank, days of employment in a given rank, and educational background. M_{jt} includes member-specific variables such as party, leadership, seniority, and gender. Member- (or District or State-) and Congress-fixed effects are included ($\alpha_s, \alpha_j, \alpha_t$). In particular, we are interested in whether a staffer’s gender is associated with the compensation they receive in Congress.

Table 4 presents the results for the House of Representatives.¹⁷ All the specifications include member-level control variables and Congress FE. Columns (2) and (3) include a district FE and columns (4) and (5) include a member FE. Column (5) restricts the analysis to staffers for whom we have educational information. In the House, female staffers tend to receive less compensation

¹⁶Tables A6 and A7 in the Appendix present the gender gaps in promotions by rank. We do not find significant results when the gender of the legislator is included in the models in Table 3 due to the correlation between the party and gender of the legislators.

¹⁷A full regression result is reported in the Appendix.

than their male counterparts. Female legislators do not necessarily pay their female staffers more. Democratic members appear to pay female staffers more but this effect is weakened once we control for staffers' education background. This implies that Democratic legislators tend to hire female staffers who have advanced degrees.

Table 4: Staff Compensation - House

| Outcome = Total Salary (\$) | (1) | (2) | (3) | (4) | (5) |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Total Days of Work | 174.9*** (179.23) | 175.1*** (181.03) | 175.1*** (181.12) | 174.8*** (180.48) | 186.6*** (136.08) |
| Rank | -14216.5*** (-76.64) | -14217.3*** (-76.99) | -14216.6*** (-76.97) | -14262.1*** (-76.97) | -15450.4*** (-57.54) |
| Female Staff | 215.4 (0.52) | -1402.8** (-2.55) | -1402.4** (-2.55) | -1508.7*** (-2.73) | -1455.0* (-1.68) |
| District Staff | 3007.1*** (5.54) | 3112.4*** (5.75) | 3112.7*** (5.75) | 3287.9*** (5.99) | 1688.6** (2.02) |
| Not Full Time | -15796.4*** (-4.63) | -15092.8*** (-4.36) | -15113.9*** (-4.37) | -15572.8*** (-4.45) | -12256.5** (-2.29) |
| Female Staff × Democrat | | 2996.0*** (3.70) | 2734.4*** (3.06) | 2799.9*** (3.05) | 2668.0* (1.81) |
| Female Staff × Democrat × Female Member | | | 1070.7 (0.98) | 1071.8 (0.89) | -1846.7 (-0.91) |
| Holding Graduate Degree | | | | | -489.3 (-0.63) |
| Holding JD/PhD | | | | | 2528.9** (2.10) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| District FE | | ✓ | ✓ | | |
| Member FE | | | | ✓ | ✓ |
| <i>N</i> | 87913 | 87913 | 87913 | 87913 | 35365 |
| adj. <i>R</i> ² | 0.708 | 0.714 | 0.714 | 0.717 | 0.738 |

Notes: The unit of observation is staffer × rank × member × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level.

Table 5 presents the results for the Senate. Female staffers are consistently paid less and there is no significant difference across parties. When we include a staffer's educational background for a subset of the sample, female staffers who work for female Democrats are paid more than their other female staffers. In contrast to the results from the House, staffers who work at a Senator's state

office are paid less than staffers who work in Washington DC. This may reflect the differences in election cycles and the importance of policymaking versus constituency service between the House and the Senate.

Table 5: Staff Compensation - Senate

| Outcome = Total Salary (\$) | (1) | (2) | (3) | (4) | (5) |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Total Days of Work | 206.2*** (95.19) | 205.2*** (96.88) | 205.1*** (96.84) | 205.0*** (97.33) | 224.1*** (85.95) |
| Rank | -16434.7*** (-39.27) | -16594.4*** (-40.04) | -16596.4*** (-40.00) | -16655.5*** (-40.27) | -18978.8*** (-36.91) |
| Female Staff | -2208.9*** (-2.91) | -3165.3*** (-3.03) | -3166.2*** (-3.03) | -3084.0*** (-2.90) | -4893.3*** (-2.75) |
| State Office Staff | -10069.2*** (-7.85) | -9607.4*** (-7.70) | -9599.9*** (-7.70) | -9558.9*** (-7.67) | -11410.2*** (-6.75) |
| Not Full Time | -1706.4 (-1.11) | -1481.5 (-0.93) | -1477.8 (-0.93) | -1764.5 (-1.14) | -2103.9 (-1.12) |
| Female Staff × Democrat | | 1887.7 (1.27) | 2204.3 (1.40) | 1398.7 (0.87) | -1050.0 (-0.44) |
| Female Staff × Democrat × Female Member | | | -1197.4 (-0.57) | 1261.5 (0.52) | 6579.4*** (2.64) |
| Holding Graduate Degree | | | | | 2808.1** (2.31) |
| Holding JD/PhD | | | | | 8637.2*** (4.45) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| State FE | | ✓ | ✓ | | |
| Member FE | | | | ✓ | ✓ |
| <i>N</i> | 46140 | 46140 | 46140 | 46140 | 18712 |
| adj. <i>R</i> ² | 0.638 | 0.643 | 0.643 | 0.646 | 0.674 |

Notes: The unit of observation is staffer × rank × member × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level.

One important missing staffer-level characteristic is a staffer's Hill experience. Male staffers might have worked longer on the Hill than female staffers and this experience gap may drive the gender pay gap. Given that our dataset starts in 2001, we do not have accurate information for staffers who appeared in the 107th Congress in terms of when those staffers started their career in Congress. Therefore, we focus on staffers who first appeared during the 108th Congress or

later in our data and calculate their experience in each Congress during which they appear.¹⁸ We run the regression by including previous Hill experience and restrict the analysis to the staffers whose first appearance occurs during 108th Congress (2003) or later. Tables A4 and A5 in the Appendix present the results. Hill experience is strongly correlated with salaries that staffers receive. However, the main results are robust after including congressional experience.

To further understand differences by staff gender, we estimate the regressions that include rank dummy, a female staff dummy, and an interaction of rank and female staff. Table 6 presents the coefficients on the interaction terms. The results suggest that the gender gap in compensation is the most salient among female staffers in rank 1 and rank 4 in the House. Rank 1 includes Chief of Staff and Rank 4 includes Communication Directors (Press Secretary). In the Senate, female staffers whose rank is above or equal to Rank 5, which includes Legislative Assistants, are paid less than their male counterparts. The results are similar when we drop district or state FEs or include a member FE.

The results are consistent with the explanation that the inflexible, unpredictable long hours of congressional schedules are contributing to the gender differences we observe. The gender gap is most salient for positions with the greatest schedule demands from staffers. In the House, Chiefs of Staff and Communication Directors (or Press Secretaries) are expected to be “on call” at all times to deal with issues (whether policy or press-related) that may arise. In the Senate, Legislative Assistants and higher-ranking positions (including Chiefs of Staff, Deputy Chiefs of Staff, Communication Directors) also take on unpredictable schedules with the greater demands of the Senate (e.g., senators receive more press, serve on more committees, represent entire states).¹⁹

¹⁸For example, a staffer who first appeared in the 108th Congress will be coded to have 4 years of experience if the same staffer appeared in the 109th Congress. It is possible that some staffers return to Congress after working in a private sector for a while. However, this type of “revolving door” from Congress to private sector to Congress is not very common among congressional staffers. This pattern of a constant revolving door is more common among executive branch bureaucrats.

¹⁹See A1 in the Appendix for an example of an advertisement that states that the Press Secretary must “fulfill an on-call role during weekends.”

Table 6: Gender Gap in Compensation by Staff Rank

| Outcome = Total Salary (\$) | House | | Senate | |
|-----------------------------|-----------------------|----------------------|------------------------|------------------------|
| | (1) | (2) | (3) | (4) |
| Rank 1 × Female Staff | -8620.0** (-2.29) | -8713.4* (-1.83) | -16750.1*** (-2.95) | -6412.6 (-0.95) |
| Rank 2 × Female Staff | 55.65 (0.02) | 2596.5 (0.65) | -12828.4*** (-2.85) | -13276.5** (-1.99) |
| Rank 3 × Female Staff | -1691.4 (-1.03) | -1811.5 (-1.02) | -18749.7*** (-3.25) | -26231.0*** (-3.47) |
| Rank 4 × Female Staff | -3380.7*** (-2.66) | -3729.1** (-2.31) | -13942.2*** (-4.90) | -12214.9*** (-3.26) |
| Rank 5 × Female Staff | -388.0 (-0.62) | 303.6 (0.38) | -5402.2*** (-4.00) | -8920.5*** (-4.35) |
| Rank 6 × Female Staff | -519.5 (-0.88) | 424.6 (0.49) | -1006.5 (-1.02) | 809.2 (0.68) |
| Rank 7 × Female Staff | 732.2 (1.53) | 436.7 (0.60) | 2368.8*** (2.60) | 3286.7** (2.37) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ |
| District FE | ✓ | ✓ | | |
| State FE | | | ✓ | ✓ |
| Staff Education Controls | | ✓ | | ✓ |
| <i>N</i> | 87913 | 35365 | 46140 | 18712 |
| adj. <i>R</i> ² | 0.743 | 0.773 | 0.682 | 0.709 |

Notes: The unit of observation is staffer × rank × member × Congress. The numbers report the coefficients for interaction terms between staff rank and female staff dummy. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level.

7 Conclusion

While women comprise a majority of congressional staff, our results indicate that gender inequities persist for these unelected policymakers. First, we show that women are concentrated in lower-ranking, clerical positions. Second, we show that female staffers are paid less than their male counterparts at the same rank. Third, while women make up the majority of the promotion pool, they experience slower promotion than male staffers. Fourth, these inequities vary based on the party and gender of the legislator, with Democrats and women legislators paying and promoting

women more in comparison to Republican congressmen.

These findings are consistent with our argument that the congressional office context is similar to other careers associated with the gender gap. The demanding, inflexible work schedule could hamper women's ability to advance and may discourage them from senior staff positions due to traditional gender roles that expect women to carry the majority of childcare and household labor. However, we argue that political careers are unique because issues of gender equality are often on the daily agenda, and so legislators that prioritize these issues on their political agendas will also be more aware and responsive to the gender gap within their own offices. Democratic and women legislators may encourage the female staff in their offices, explicitly recruit them for senior staff positions, and build office norms and culture that mitigate the barriers to women's advancement in staff roles. This interpretation of our results is consistent with work on the representation of women in elected office that finds that women perform as well as men in elections (e.g., Dolan 2004; Fox 1998; Thompson and Steckenrider 1997) and identifies differences in ambition (Lawless and Fox 2005) and recruitment (Crowder-Meyer and Cooperman 2018; Lawless and Fox 2005, 2010) as explanations for the underrepresentation of women.

To be clear, we are not arguing that discrimination and gender biases do not play a critical role in gender differences among staff. In fact, we would argue that gender biases are implicit in our theory. The organizational structure of Congress alone does not induce gender differences; the effects of traditional gender socialization creates expectations that women bear the majority of childcare and household responsibilities. Moreover, legislators' attention to issues of gender equality among their staff and workplace flexibility could be interpreted as a choice not to punish women for the greater societal demands placed on them by traditional gender roles and expectations. Of course, more explicit discrimination on the part of both legislators and staff likely exacerbates the barriers women experience on Capitol Hill.

Alternatively, the offices of Democrats and congresswomen may also attract women who are more ambitious and qualified and who prioritize their careers. In fact, if we assume women's pursuit of advanced degrees is associated with differences in how women weigh career and childcare

priorities, our results showing that Democratic congresswomen tend to hire more highly educated women suggests that the female staffers who go to work for Democratic women might prioritize their career in relation to household responsibilities differently than women who go to work for Republican men. In other words, perhaps female staffers for Democratic congresswomen are more likely to choose not to have children or to delay having children. Their counterparts in the offices of Republican congressmen might prioritize staying at home full or part time once they have children.

Our results suggest that the underrepresentation of women is not solely due to institutional or situational explanations that are particular to elections like incumbency advantage or the historical underrepresentation of women in careers that are typical stepping stones to elected offices. Our results suggest that an increase of women in pipeline professions may not solve the problem of underrepresentation if women are already in the congressional staff pipeline, but still not advancing to senior positions.

Our results make clear that discussions about women in politics should include examinations of the unelected women. These unelected representatives and policymakers can have an impact on policy positions and legislative priorities, but not if they are impeded from advancing within the hierarchy of congressional offices. This paper is a step towards advancing our understanding of the experiences, advancement, and consequences of female congressional staff, and several important questions remain. For example, do women on congressional staffs, and their concentrations within the hierarchy, influence representation and legislative outputs? Do female staffers affect legislative styles, productivity, and legislative effectiveness? Do we observe gender differences in where staffers land on the other side of the revolving door?

With the growing number of female candidates and women getting involved in politics, we suspect that congressional staffs may also see an increase of women at the top of the staff hierarchy. Yet, the remaining questions call attention to the need for future research on what this will mean for women's representation as well as the broader implications for public policy and quality of governance. It is important to know whether the congressional offices producing legislation that often has an inordinate impact on women, such as workplace flexibility, equal pay, and

anti-discrimination laws, are themselves suffering from gender inequality.

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A Categorization of Congressional Ranking

Table A1: Staff Titles, Descriptions, Categorization, and Rank

| Rank | Category | Title | Other Common Titles | Description |
|------|---------------------------------|---------------------------|--|--|
| 1 | Executive | Chief of Staff | DC Chief of Staff (CoS) | Head of office, chief policy adviser, reports to MC |
| 2 | Executive | Deputy Chief of Staff | State/District Director | Second in command, report to Chief of Staff |
| 3 | Executive | State/District Director | District/Deputy CoS, Regional Director | Oversee state/district office |
| 4 | Policy & Press | Press Secretary | Communications Advisor/Director | Oversee press/media staff & operations, spokesperson |
| 4 | Policy & Press | Legislative Director | Senior Adviser, Policy Director | Oversee legislative/policy staff & operations |
| 5 | Policy & Press | Legislative Assistant | Legislative Counsel, Policy Adviser | Manages legislative portfolio of assigned policy issues |
| 6 | Policy & Press Support Staff | Legislative Correspondent | Director of Correspondence | Oversee incoming constituent mail & outgoing responses |
| 6 | Policy & Press Support Staff | Deputy Press Secretary | Press Assistant | Assist Press Secretary, write press releases/speeches |
| 6 | Policy & Press Support Staff | Specials Director | Director of Special Projects | Pursue grants, earmarks, & local projects, appropriations |
| 6 | Administrative/District Support | Deputy District Director | Deputy State Director | Assist District/State Director |
| 7 | Administrative/District Support | Executive Assistant | Administrative Assistant, Scheduler | Maintain office accounts, scheduling, MC's travel |
| 7 | Administrative/District Support | Office Manger | Executive Assistant, System Administrator | Manage office equipment, supplies, office accounts |
| 7 | Administrative/District Support | Staff Assistant | Assistant to Chief of Staff, Special Assistant | Manage phone/front office, tours/flag requests, assist staff |

B Tables

We create a member-level dataset for every person who served in the House or Senate from the 107th through the 113th Congresses. We calculate the total number of staffers who worked for a member in each Congress and staffers' mean salary. Table [A3](#) presents the summary statistics

Table A2: Female Staff Composition

| Office Type (N) | R1 | R2 | R3 | R4 | R5 | R6 | R7 |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|
| Female Democrats (95) | 11.2 | 14.1 | 13.9 | 14.7 | 14.2 | 11.0 | 12.5 |
| Male Democrats (296) | 35.0 | 40.8 | 39.6 | 38.0 | 41.8 | 37.9 | 38.6 |
| Female Republicans (43) | 5.1 | 8.0 | 4.6 | 5.5 | 4.2 | 5.4 | 4.9 |
| Male Republicans (412) | 48.7 | 37.1 | 41.9 | 41.8 | 39.8 | 45.7 | 43.9 |
| Total | 846 | 1,822 | 1,509 | 2,432 | 5,666 | 3,381 | 29,035 |
| Female Staff Ratio | (33.5) | (44.2) | (37.1) | (45.3) | (43.4) | (46.5) | (58.9) |

at the Congress-member level regarding Congress members' staffers. The unit of observation is member \times congress. Members in the House have on average 21 staffers on their payroll in a given Congress. For the Senate, the average number of staffers in member's personal offices is 52 and more than a majority of the personal staffers were women.

Table A3: Member Level Summary Statistics on Staffers

| | House | | | | Senate | | | |
|-------------------------|-------|------|------|------|--------|------|------|------|
| | N | Mean | Min. | Max. | N | Mean | Min. | Max. |
| Number of Staff | 3,080 | 21 | 11 | 35 | 704 | 52 | 24 | 97 |
| Number of Female Staff | 3,080 | 11 | 2 | 22 | 704 | 28 | 11 | 58 |
| Mean Compensation (\$K) | 3,080 | 91 | 26 | 177 | 704 | 101 | 49 | 176 |

Table A4: Staff Compensation - House (Including Staff Hill Experience)

| Outcome = Total Salary (\$) | (1) | (2) | (3) | (4) | (5) |
|---|----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Female Staff | -625.0* (-1.91) | -1789.9*** (-4.09) | -1789.8*** (-4.09) | -1760.9*** (-3.97) | -1186.4* (-1.77) |
| Hill Experience | 1475.5*** (15.16) | 1490.2*** (15.54) | 1490.3*** (15.55) | 1509.6*** (15.37) | 1498.6*** (11.24) |
| Female Staff × Democrat | | 2294.2*** (3.62) | 2215.1*** (3.16) | 2198.8*** (3.06) | 2754.3*** (2.63) |
| Female Staff × Democrat × Female Member | | | 303.3 (0.35) | 287.2 (0.31) | -1229.4 (-0.91) |
| Holding Graduate Degree | | | | | -326.9 (-0.58) |
| Holding JD/PhD | | | | | 4046.8*** (4.54) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| District FE | | ✓ | ✓ | | |
| Member FE | | | | ✓ | ✓ |
| <i>N</i> | 53195 | 53195 | 53195 | 53195 | 25775 |
| adj. <i>R</i> ² | 0.748 | 0.755 | 0.755 | 0.757 | 0.769 |

Notes: The unit of observation is staffer × rank × member × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level.

Table A5: Staff Compensation - Senate (Including Staff Hill Experience)

| Outcome = Total Salary (\$) | (1) | (2) | (3) | (4) | (5) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Female Staff | -2604.4*** (-3.83) | -4037.8*** (-4.10) | -4035.2*** (-4.10) | -3992.8*** (-3.93) | -4069.1*** (-2.88) |
| Hill Experience | 2573.8*** (12.13) | 2585.1*** (12.76) | 2588.6*** (12.80) | 2581.9*** (12.58) | 2024.5*** (7.05) |
| Female Staff × Democrat | | 3124.9** (2.36) | 2663.9* (1.90) | 2382.7 (1.61) | 1769.8 (0.85) |
| Female Staff × Democrat × Female Member | | | 1602.0 (0.87) | 2416.4 (1.27) | 3079.9 (1.15) |
| Holding Graduate Degree | | | | | 4704.7*** (4.92) |
| Holding JD/PhD | | | | | 9330.7*** (4.84) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| State FE | | ✓ | ✓ | | |
| Member FE | | | | ✓ | ✓ |
| <i>N</i> | 27422 | 27422 | 27422 | 27422 | 13576 |
| adj. <i>R</i> ² | 0.658 | 0.663 | 0.663 | 0.667 | 0.674 |

Notes: The unit of observation is staffer × rank × member × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level.

Table A6: Gender Gap in Promotion by Rank: House

| | (1) | (2) | (3) | (4) |
|----------------------------|-----------------------|----------------------|-----------------------|----------------------|
| Rank 2 × Female Staff | -0.00537 (-0.65) | -0.0118 (-0.63) | -0.00881 (-0.74) | -0.00919 (-0.35) |
| Rank 3 × Female Staff | -0.0554*** (-2.67) | -0.0597** (-2.22) | -0.0515** (-2.39) | -0.0647** (-2.26) |
| Rank 4 × Female Staff | -0.0208 (-1.12) | 0.00821 (0.31) | -0.0179 (-0.92) | -0.0132 (-0.45) |
| Rank 5 × Female Staff | -0.0980*** (-6.15) | -0.109*** (-5.00) | -0.0984*** (-6.10) | -0.111*** (-4.84) |
| Rank 6 × Female Staff | -0.0490** (-2.57) | -0.0135 (-0.50) | -0.0441** (-2.25) | -0.00876 (-0.31) |
| Rank 7 × Female Staff | -0.165*** (-13.34) | -0.195*** (-8.17) | -0.166*** (-13.45) | -0.199*** (-8.42) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ |
| Staffer Education | | ✓ | | ✓ |
| Member FE | | | ✓ | ✓ |
| <i>N</i> | 51138 | 22175 | 51138 | 22175 |
| adj. <i>R</i> ² | 0.022 | 0.049 | 0.025 | 0.043 |

Notes: The unit of observation is staffer × member's office × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level. Staffers at rank 1 (Chief of Staff) is excluded because there is no promotion for them.

Table A7: Gender Gap in Promotion by Rank: Senate

| | (1) | (2) | (3) | (4) |
|----------------------------|-----------------------|----------------------|----------------------|----------------------|
| Rank 2 × Female Staff | -0.0121** (-2.27) | -0.0204 (-1.56) | -0.0135 (-1.52) | -0.0358* (-1.89) |
| Rank 3 × Female Staff | -0.0640 (-1.37) | -0.0659 (-1.08) | -0.0581 (-1.29) | -0.0768 (-1.31) |
| Rank 4 × Female Staff | -0.0652*** (-2.64) | -0.0580* (-1.72) | -0.0619** (-2.49) | -0.0550 (-1.56) |
| Rank 5 × Female Staff | -0.0411** (-2.14) | -0.0485* (-1.86) | -0.0426** (-2.19) | -0.0483* (-1.81) |
| Rank 6 × Female Staff | -0.0252 (-1.50) | -0.0556** (-2.26) | -0.0310* (-1.83) | -0.0632** (-2.55) |
| Rank 7 × Female Staff | -0.103*** (-6.65) | -0.0716** (-2.16) | -0.104*** (-6.72) | -0.0715** (-2.15) |
| Member-level Controls | ✓ | ✓ | ✓ | ✓ |
| Congress FE | ✓ | ✓ | ✓ | ✓ |
| Staffer Education | | ✓ | | ✓ |
| Member FE | | | ✓ | ✓ |
| <i>N</i> | 26508 | 11205 | 26508 | 11205 |
| adj. <i>R</i> ² | 0.012 | 0.027 | 0.016 | 0.028 |

Notes: The unit of observation is staffer × member's office × Congress. *t* statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are clustered at the member-level. Staffers at rank 1 (Chief of Staff) is excluded because there is no promotion for them.

C Position Advertisement Example

Figure A1: Example of Position Advertisement: Press Secretary for Senator Bernie Sanders

224901

PRESS SECRETARY -

Sen. Bernie Sanders seeks an experienced, motivated and detail-oriented Press Secretary. The ideal candidate will have: excellent writing and editing skills, a strong familiarity and demonstrated past success with social media strategies; on-the-record experience; a demonstrated track record of multi-tasking, ability to fulfill an on-call role during weekends. Duties include, but are not limited to: fielding press calls, drafting press releases, coordinating press events, writing copy for office website, managing and drafting content for social media accounts, managing short and long-term communications projects and contributing to a fast-paced communications team. Senate experience preferred. Vermont ties a plus. **Please e-mail a cover letter and resume to senate_employment@saa.senate.gov indicating job referral number in the subject line.**