Gender Gap in Politician Performance and its Determinants*

Ana Garcia-Hernandez**, Guy Grossman, Kristin Michelitch

Abstract

Women politicians face barriers that can undermine their performance relative to men. Using original micro-data from Uganda, we test for gender gaps in performance across different job duties in subnational legislatures. We hypothesize, and find, that performance gender gaps are greatest in job duties that require greater peer interaction (legislative duties), while no such gaps exist in more individually-performed duties (e.g., meeting with the electorate, facilitating constituency development). Fine-grained network data reveals women's informal exclusion in politician networks, and this exclusion holds explanatory power in explaining job duties requiring interaction with fellow politicians. Further, qualifications and previous experience also determine part of the gender performance gap in more intricate tasks. Moving forward, advocacy organizations may consider holding trainings and simulations with politicians on performing job duties in ways that encourage cross-gender professional network ties.

Keywords: Politician performance, Informal Exclusion, Networks, Gender Gap
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*RWI Leibniz Institute for Economic Research, Germany
**Corresponding author. Postfach 10 30 54, 45030, Essen, Germany
University of Pennsylvania,United States
Vanderbilt University,United States
Email address: ana.garciahernandez@rwi-essen.de (Ana Garcia-Hernandez)

1. Introduction

Political leadership positions have traditionally been controlled by men, and women have faced multiple barriers to entry. However, in recent years, there has been a global increase in the share of women in parliaments and subnational legislators both as a result of affirmative action (e.g., reservations; quotas) and changing norms (Pande & Ford 2012; Beaman *et al.* 2009). Given that politicians' performance affects economic outcomes (Jones & Olken 2005; Besley *et al.* 2011; Prakash *et al.* 2019)[1], it is critical to understand whether—and if so, why—female legislators face barriers to conduct their job duties compared to their male counterparts. Answering these questions requires detailed and granular data on performance and individual and contextual explanatory factors, which are not easy to gather in most contexts. Thus, these questions remain understudied, particularly outside of data-rich consolidated democracies.

Taking a critical step in this important area, this paper investigates whether a gender gap in performance exists in different aspects of legally-defined job duties of local politicians in Uganda and – if so – what factors determine the disparity. While most studies of politician performance focus solely on legislative duties, our data allows us to investigate performance gaps across multiple job duties: facilitating constituency development, monitoring public service delivery, participating in lower local government, and legislative activities. Examining multiple job duties beyond legislative duties is important, not only because citizens tend to care deeply about constituency development and service delivery in Global South contexts (Grossman & Slough 2022), but also to gain an accurate portrait of whether and why gender gaps exist in some duties but not others.

We assess the most common barriers identified by existing scholarship that could explain gender performance gaps: 1) *lag in human capital*, such as education and previous work experience, 3) *lag in social capital*, measured as exclusion in networks, and 3) *political factors*, such as partisan alignment and the constituency size. Of course, these factors can contribute to gender gaps in politicians' performance only to the extent to which gender disparities exist in these factors.

We make the simple observation that politicians' job duties range widely in terms of what types of efforts or skills are required to perform them. We thus argue that the degree to which gender disparities in human and social capital matter is conditional on the particular job duty under question. Applying this logic to the context at hand, we investi-

[1]Better political connections also increase performance (Li *et al.* (2008))

gate whether: (1) gender disparities in network centrality are more important predictors of gender gaps in job duties that require more interaction with fellow politicians (e.g., legislative duties); and (2) gender disparities in human capital (e.g., education) are more likely to result in gender gaps in job duties that require more intricate skills. By contrast, gender disparities in political factors (e.g., constituency competitiveness) may affect job performance across the board.

To test this argument, we collect unique network data, background experience and qualifications data, and job duty performance data for over 800 local politicians in Uganda. These politicians represent 49 (of 112) subnational (district) governments, where one-third of seats are reserved for women. Since men hold almost all open-gender seats, we effectively compare performance and gender disparities between reserved-seat woman politicians and open-seat men politicians. To capture performance across all job duties of Ugandan subnational politicians, we use five data sources: (1) plenary meeting minutes (2011-2015, 49 districts), capturing legislative activity; (2) a civil society organization's annual politician performance scorecard (2011-2015, 25 districts), capturing legislative activities, participation in lower local governments and constituency development such as, monitoring public service providers and contact with constituents; and (3) original data on constituency development (20 district governments), namely the extent to which politicians help schools in their constituency to apply for grants; (4) two original in-person surveys capturing politicians' professional and personal network ties, background characteristics, and political knowledge, and (5) a survey of senior bureaucrats (20 districts), capturing their evaluations of politicians.

Consistent with our framework, we find that performance gender gaps of different magnitudes appear across different job duties. On one hand, we find large and significant differences between female and male politicians in legislative activities. An index of legislative activities — based on a local NGO's scorecard — shows a 16% reduction for a female politician compared to the average man. Legislative activities, extracted by the authors from the universe of all plenary meeting minutes, exhibits an even larger gender gap: 79% reduction. On the other hand, we do not find any gender differences in meeting with the electorate or facilitating the procurement of constituency development funds. We further find moderate differences favoring men in monitoring public services and participating in lower local government. In summary, we discover mixed findings regarding the gender gap in performance and conclude that measuring only one aspect of a politician's activity — common in almost all past work — can paint a misleading and incomplete assessment of women's performance as politicians.

Turning to mechanisms, we find that female legislators have fewer years of education, are less politically experienced, represent larger and less competitive constituencies, and are less central in politician networks and that these differences drive a large part of the gender gap in performance. More importantly from a theoretical point of view, the contribution of any such factor to gender gap in politician performance depends on the specific domain or job duty. For example, women's peripheral position within the legislators' professional networks explains a large part of the gender gap in activities that require interaction with fellow politicians (43% of the difference in legislative activity and 51% in monitoring public services), but is less consequential in other duties, such as meeting with the electorate. Similarly, the contribution of education disparities to a gender gap in politicians' performance is larger for duties requiring a more intricate understanding of rules and procedures (e.g., monitoring public services, legislative responsibilities).

This paper contributes to three main strands of literature. First, we contribute to research on determinants of politicians' performance in developing countries. Past studies focus in particular on institutional factors that affect politician's performance, such as renumeration (Ferraz & Finan 2009), levels of political competition (Poulsen & Varjao 2018; Grossman & Michelitch 2018), and term limits (Dal Bó & Rossi 2011; Klašnja & Titiunik 2017). However, evidence regarding individual and relational traits that influence a politician's performance is limited. We advance this body of work by examining individual, relational and political factors.

Second, we add to the literature that explores gender gaps in performance in, and beyond, the political realm. Past research has explored gender gaps in school performance (Dickerson *et al.* 2015), as well as in professional careers, be it the productivity of lawyers (Azmat & Ferrer 2017), manufacturing workers (Dong & Zhang 2009), and entrepreneurs (De Mel *et al.* 2008). In politics, performance has been generally proxied by outcomes since it is hard to observe it directly. Women are found to be less corrupt (Dollar *et al.* 2001; Swamy *et al.* 2001; Bauhr & Charron 2021) and in some contexts, provide more public goods when they are leaders (Andersen *et al.* 2008). We measure the performance of female politicians directly, using objective data on legally defined duties, as well as a novel original measure of the extent to which politicians help procure constituency development funds.

Lastly, we also contribute to a strand of literature that uses network data to explain the barriers that women face in exerting political influence.[2] Bjarnegård argues that in

[2]Networks have been extensively analyzed to explain diffusion of agricultural practices. Several papers

clientelistic contexts, it is harder for women to become politicians since the system benefits already powerful and influential men. (Prillaman 2020) argues that women's political participation is negatively affected by their marginalization in village network. Methodologically, while many such studies suggest the importance of networks, few [e.g., Prillaman (2020) and Cruz & Tolentino (2021)] assemble detailed social network data to test such claims systematically. To the best of our knowledge, the only other work examining the effect of politician network position with network data is Cruz *et al.* (2020), which shows that politicians' vertical network position affects their electoral mobilization strategy. Our study innovates by studying the effect of politician network position on their performance in legally-defined job duties regarding gender.

This paper is structured as follows. Section 2 describes the context of the study and the data used to explore the gender gap in performance and its determinants. In section 3, we describe our main hypotheses and the empirical strategy used to answer the questions. Section 4 presents the results and we finalize in section 5 with the conclusion and discussion of the results.

2. Context

We examine the job duty performance of Ugandan woman politicians, elected via reserved seats, as compared to men politicians elected from open seats, in subnational (district) governments. Below the central government, Uganda has three subnational government tiers: district (LC5), sub-county (LC3), and village (LC1). District politicians (councilors) and bureaucrats are jointly responsible to develop annual budgets and work-plans for public service delivery. District councils are further vested with the power to make laws, regulate and monitor public service delivery, formulate comprehensive development plans based on local priorities, and supervise the district bureaucracy.

The study area consists of 50 (of 112) district local governments from all of Uganda's four regions. In 25 districts, a leading non-partisan civil society organization (CSO)—Advocates Coalition for Development and the Environment (ACODE)—produces an annual performance scorecard for each politician serving at the district council. The remaining 25 districts were selected by matching non-ACODE districts with districts in which

identify gender differences in network centrality and informal exclusion in this context (Beaman & Dillon 2018; BenYishay *et al.* 2020).

ACODE operates. District councils in the sample have, on average, 23 politicians.[3] See Supplemental Information (SI) A.1 for a map of the study area and SI A.2 on the CSO's selection of districts and the matching details.[4]

District politicians, whether elected in open-seat or women's reserved seats, have four key job duties, as stipulated in the Local Government Act: *legislative* (e.g., passing motions in plenary, committee work), *lower local government participation* (e.g., attending LC3 meetings), *monitoring public service provision* (e.g., visiting schools and clinics to ensure service delivery standards are met), and *contact with and service to the electorate* (e.g., meeting with constituents and community-based organizations and providing constituency services).

Uganda is a semi-democracy at the national level. The National Resistance Movement (NRM) has controlled the presidency since 1986 and held about 70% of national and subnational legislative seats in 2011. At the national level, the NRM's hegemony has been built on a combination of genuine popular support, intimidation of opposition, and misuse of state resources to support patronage networks. During the study period, NRM did not engage in widespread election rigging. At subnational levels of government during the study period, there is heterogeneity in the level of political competition with opposition parties and elections and/or primaries can be rather competitive. In that regard, Ugandan district politicians have an incentive to perform well, since their performance significantly affects their reelection prospect (Grossman *et al.* 2021).

3. Data

3.1. Measuring politician's performance

We use the following data sources to assess possible gaps in performance between men and women politicians across different job duties at the district level in Uganda:

Plenary Meeting Minutes. We use plenary session meeting minutes to construct performance measures of legislative activities. Since Ugandan districts governments do not make meeting minutes available online, we dispatched local research assistants to all district headquarters to scan hardcopy transcripts over the 2011-2015 period. On average, we

[3] By comparison, the Ninth Parliament (2011-2016) had 238 constituency MPs, 112 Women (district) MPs and 25 Indirect seats (e.g., youth, PWD and military).

[4] We do not find that results are different across ACODE and non-ACODE districts — results available upon request.

obtained 20 meeting minutes per district for the 2011-2015 cycle (with range of 2–41), for a the total of 1,009 plenary session meetings in 49 districts.[5] We code for each politician-meeting dyad: (a) the number of *motions* proposed; (b) the number of *bills* sponsored; (c) the number of *presentations* made; and (d) the number of *remarks* made during the session. We then normalize actions by the number of meetings. Finally, we calculate (e) a summary measure of legislative performance *total actions* per meeting, which sums the legislative actions (a)-(d). See SI A.3 for more detail and descriptive statistics.

Performance Scorecard. We leverage ACODE's annual scorecard available in 25 districts for each politician over a 4-years period to examine politicians' performance in all four (legally-defined) job duties. One advantage of ACODE's scorecard is that in addition to legislative duties, it captures performance in three additional duties: *lower local government participation*, *monitoring public service points*, and *contact with the electorate*. ACODE's scorecard is based on administrative data and does not rely on citizen's attitudes or opinions, and is constructed using local researchers who collect the underlying data in reference to the previous fiscal year (June-July). The first scorecard of the 2011-2016 term covered July 2011 to June 2012, and the last scorecard covered July 2014 to June 2015.[6] Wide variation exists in scores which range between 0 and 100. See SI A.4 for more detail on the scorecard methodology.

Facilitating School Improvement Grants. To measure politician performance in constituency development, we designed a unique behavioral task in collaboration with District Education Offices in the study area. The task mimics a common practice in which politicians help to secure development funds to their constituency in collaboration with the district bureaucracy. Specifically, district council politicians were given an opportunity to help primary schools in their constituency to apply for a grant to support school improvements. The grant's value, which was advertised after the politician survey in 20 study area districts, was about 100 USD. The application process involved mobilizing the school principal and parents and teachers association (PTA) representatives who had to sign the application and accompanied budget to deem an application valid. Politicians could only submit one application per school in their constituency.[7] Only valid applications entered a public lottery carried out at the district headquarters. The number of grants per district was proportional to the population and ranged between two and five,

[5]One district (Nebbi) refused to share the minutes with the research team, pointing to its bylaws that indicate that meeting minutes are not shareable with the general public.

[6]One exception is Agago district where ACODE began operating only in 2012.

[7]Schools could apply twice, given the overlap in the regular and special woman constituencies.

to ensure equal probability of winning across politicians. We received a total of 1,662 out of 4,585 possible applications and 61 grants were allocated. The outcome of interest here is the number of school grant applications facilitated out of the total number of schools in a politician's constituency. See SI A.5 for more detail and descriptive statistics.[8]

In-Person Politician Surveys. To collect data on politicians' human capital (e.g., education), social capital (network ties), political knowledge, and subjective peer evaluations, we carried out two original politician surveys, one at the start and one at the end of the term. At the start of term in 2012, we surveyed all politicians elected to serve in 20 districts councils, while at the end of term in 2016, we surveyed all politicians from 50 district councils. Committee chairs were further asked to provide an assessment of the performance of committee members. Descriptive statistics are listed in the online appendix — on background qualifications and political factors in SI A.6, for subjective peer and committee chair evaluations in SI A.7, and for network position in SI A.9.

In-Person Bureaucrat Surveys. To collect data on the perceptions of district bureaucrats, we conducted in-person interviews with senior civil servants in district health, education, and general administration offices. District bureaucrats have unique insight into politicians' efforts and effectiveness in job duties related to monitoring public services and constituency development. Bureaucrats in the original sample of 20 districts were interviewed between June and August 2015 and were asked to assess politicians along four performance dimensions, using a five-point scale. We averaged the ratings on these dimensions across surveyed bureaucrats to create a single composite index (Cronbach's alpha = 0.91). See SI A.8 for descriptive statistics.

3.2. Measuring barriers for performance

In other to evaluate how effectively undertaking specific job duties may vary in (a) the level of interaction with fellow politicians they entail, (b) the importance of background qualifications, and (c) political factors, we construct the following scales.

Informal Exclusion. We proxy informal exclusion (i.e., lag in social capital) using the network position of politicians within the legislature. Measures of network centrality (such as degree, betweenness and eigenvector) capture the set of ties that can help agents (in this case, politicians) wield influence and thus be more effective. Unlike covariates

[8]Results are similar using alternative operationalizations: total applications facilitated, and a binary variable for facilitating at least one application — see SI B.1.

that precede the electoral term (e.g., education, experience), network ties can change over time. We thus collected network data both at the electoral term start (20 district councils) and at the term's end (all 50 district councils in the study area). We measure both personal and professional ties because politicians are likely connected differently along these two relationship dimensions. Personal ties in legislatures, for example, have been noted as more salient in the US context (Ringe *et al.* 2017), but it is unclear ex-ante which type of relationship matters most for politician performance in this study context.

At term start, district politicians were read the names of all fellow politicians in their legislature, and were asked to indicate for each one if they consulted them when undertaking their job duties (*professional network*) and if they consider them as friends (*personal network*). When we repeated this process in the middle of the term, politicians indicated almost everyone in their legislature such that there was little, if any, variation.[9] Thus, at end of term, we construct networks by using instead a standard name generator technique (Knoke & Yang 2008). Here, we asked politicians to name up to five co-politicians for each type of relationship.

For each politician, we then calculate core centrality measures, such as indegree and eigenvector, for each of the two network ties. *Indegree* centrality measures the number of links a politician "receives" from other politicians. Eigenvector centrality is a measure of the influence of a politician in a network. Specifically, connections to high-scoring nodes contribute more to the score of a node than equal connections to low-scoring nodes. Figure **??** and Figure **??** illustrate the professional ties and personal ties at term's end on the example of 4 of the 50 district councils. See SI A.9 for additional information regarding the procedures for collecting and coding the network data, as well as descriptive statistics, network figures, and robustness checks for alternative centrality measures — betweenness, and closeness.

[9] Ringe *et al.* (2017) point out this difficulty in studying legislative networks longitudinally.

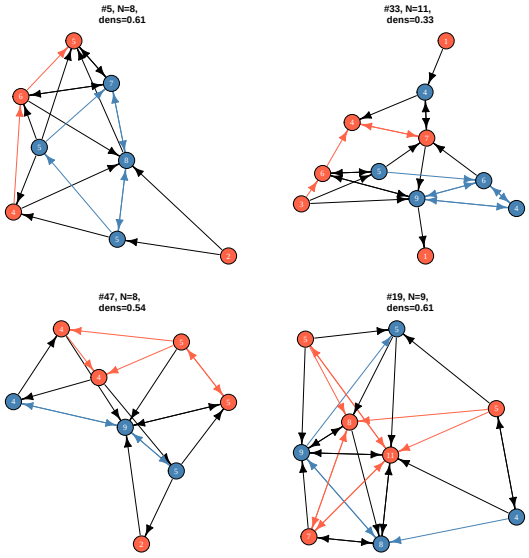

Figure 1: Professional Networks (Term End). Men politicians in blue, RS-women politicians in red. Blue arrows connect between men politicians, red arrows connect between woman politicians, and back arrows connect politicians from opposite sex.

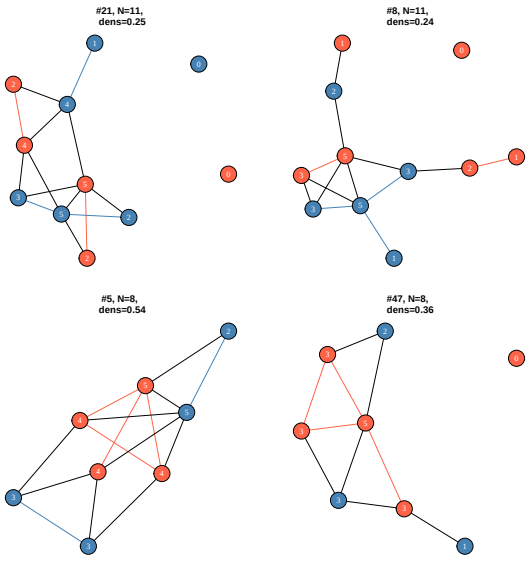

Figure 2: Personal Networks (Term End). Men politicians in blue, RS-women politicians in red. Blue arrows connect between men politicians, red arrows connect between woman politicians, and back arrows connect politicians from opposite sex

Qualifications (human capital). We proxy qualifications using *education*, a three-category variable capturing below secondary, secondary and post-secondary education; and *number of terms*, a continuous variable of the number of terms a politician has previously served at the district-level, which captures political experience. We measure

two other covariates that can affect politician performance: *wealth*, using two context-appropriate binary indicators (household car and motorcycle ownership); and a continuous measure of *age*, which can be consequential given that in this context, deference is accorded to elders.

Political Factors. We explore possible disparities in formal leadership position, partisanship and constituency characteristics. *Formal leadership* is a binary variable that is equal one for politicians that either serve as the LC5 Speaker or who chair one of the district council's standing committees. For partisanship, *NRM*, indicates whether a politician caucuses with Uganda's ruling party. For constituency competitiveness, we calculate *margin of victory*: the difference in vote share between the incumbent and the runner up in the previous (2011) elections. Given RS-women's constituencies are larger than men's, on average, we construct the variable *constituency size*, measured as the number of registered voters in a politician's constituency. These last two variables were culled from Uganda's Electoral Commission.[10]

4. Hypotheses

We hypothesize that the gender gap in various activities will be of different magnitude depending on both the ties and skills that help to perform a politician's duty. Thus, we distinguish duties by the level of interaction with other politicians and the level of complexity and know-how that they involve.

Among all job duties, legislative activities require the highest level of interaction with fellow politicians, as well as the most intricate skills in order to be performed effectively. Politicians propose bills and motions, remark on debated issues, and prepare presentations on topical policy areas during plenary sessions according to rules of order. Such legislative duties require significant interactions with fellow politicians to push legislation forward. Thus their performance is likely affected by formal leadership positions and lag in social capital (informal exclusion). Further, rules surrounding legislative activities are fairly intricate. We argue, following Johnson *et al.* (2003), that performance in more intricate duties is likely to be positively related to human capital (qualifications).

Contact with the electorate and constituency development do not require interaction

[10]We also measure *desire leave politics*, a binary variable indicating a politician no longer aspires to run for reelection. We treat this measure with care since it is 'post-treatment' and not a covariate.

with fellow politicians or intricate skills, and should not be affected by gender disparities in qualifications or network exclusion among fellow politicians. Politicians are expected to meet regularly with constituents to hear their requests and then represent constituents' interests vis-à-vis fellow politicians and the bureaucracy. Further, NGOs or foreign aid donors provide opportunities for constituency development in improving public services, and politicians play a role in securing such funds in their constituency, often times in collaboration with the district bureaucracy.

Monitoring public service delivery requires an intermediate level of skills. Politicians are expected to report public service delivery violations by auditing service providers and ongoing development projects in their constituency. Thus, politicians must know what public service delivery standards are, be able to assess compliance, and report violations to the bureaucracy — a series of activities likely aided by qualifications. Network position vis-à-vis fellow politicians also arguably would have little effect here.

Lower local government participation does not require a high level of skills or interaction with fellow politicians. Lower local government participation simply means being present — attending the plenary sessions in order to be in tune with the deliberations taking place at the lower local government tiers within one's constituency. This politician duty does not require high levels of human capital.

Thus, we hypothesize that gender disparities in informal (network) exclusion and formal leadership positions affect gender gaps in legislative duties, but likely not other duties. Gender disparities in background qualifications, we expect, will drive gender gaps in legislative duties and monitoring public services. Gender disparities in these factors will not be as consequential in contact with the electorate and constituency development, or lower local government participation.

5. Empirical Strategy

The analysis proceeds in three steps. First we examine whether gender gaps in politician performance exist and whether they differ across job duties. To answer those questions, we estimate the following regression model for each job duty performance measure:

$$Performance_{ij} = \beta_0 + \beta_1 RSWoman_{ij} + \theta_j + \epsilon_i \quad (1)$$

where Y_{ij} is a performance outcome, $RSWoman_{ij}$ is an indicator equal to 1 for RS-

woman politicians from district j, and θ_j captures district fixed effects, which effectively allows us to compare women and men politicians from the same districts. We cluster standard errors at the politician level and standardized outcome variables to allow comparability of coefficient magnitude. We are initially interested in the relationship between gender and politicians' performance brought about through any mechanism and therefore do not control for any characteristics which could result from, rather than proceed, gender (see also, Gottlieb *et al.* (2018)). Further, we examine whether gender gaps in performance (captured by β_1) are significantly different from one another across job duties.

The second step is testing for gender disparities in politician network centrality (i.e., informal inclusion and exclusion), background qualifications, and political factors. We use a similar model as above to estimate whether there are gaps in disparities across these factors.

$$Covariate_{ij} = \beta_0 + \beta_1 RSWoman_{ij} + \theta_j + \epsilon_i \tag{2}$$

The third step is to examine whether any gender gaps in the performance of certain job duties are explained by any gender disparities we may find in network centrality, background qualifications, and political factors. Of course, if there is no gender disparity in a covariate, it cannot explain a gender gap in performance. Thus, for each covariate in which we detect a gender disparity, we will add in one-by-one to the base gender gap model. Formally:

$$Performance_{ij} = \beta_0 + \beta_1 RSWoman_{ij} + \beta_2 Covariateij + \theta_j + \epsilon_i \tag{3}$$

We will examine whether β_2 is significant, which suggests that some variation in performance is explained by the included covariate, as well as the magnitude of change in β_1 towards 0 (compared to the model without the covariate), indicating that the inclusion of the covariate "explains" a portion of the gender gap. Covariates that are both significant and reduce the gender gap substantially arguably have the most explanatory power. When discussing results, we refrain from using causal language given that both gender and the included covariates are not randomly assigned and may be correlated with unobservables.

6. Results

6.1. Performance Gaps

We first report the results of the analyses on the gender gap in performance. For the analysis, we restrict the sample to those politicians for whom we have non-missing data in all measures of performance — 820 politicians. In SI B.2, we present equivalent results for the unrestricted sample.[11]

Table 1 reports the coefficient on the RS-woman indicator (column 3) for all outcomes across all job duties (rows): legislative activities as captured in meeting minutes (Panel A); ACODE's scorecard (Panel B); school grant application activity (Panel C), and subjective evaluations of peers, committe chairs, and bureaucrats (Panel D).[12]

[11] While the unrestricted sample has larger number of observations per outcome (compared to the restricted ample), it is hard to compare across outcomes since the sample itself is not constant.

[12] Meeting minutes outcomes are weighted by the share of meetings politicians attended. SI B.1 shows similar results when we do not weight the data by the share of meetings the politician attended, as well as when we restrict the sample to the 19 districts we have both baseline network data and meeting minutes information (weighted and unweighted).

	Constant	SE	RS-Women coefficient	SE	Observations
Panel A: Plenary Session Minutes					
Total Actions (Summary Index)	-0.219***	(0.081)	-0.490***	(0.054)	820 (49 districts)
Motions	0.008	(0.126)	-0.247***	(0.055)	820 (49 districts)
Bills	-0.180***	(0.032)	-0.141**	(0.065)	820 (49 districts)
Presentations	-0.255***	(0.077)	-0.225***	(0.061)	820 (49 districts)
Remarks	-0.323***	(0.067)	-0.569***	(0.055)	820 (49 districts)
Share meeting attended	0.049	(0.125)	-0.067*	(0.039)	820 (49 districts)
Panel B: ACODE scorecard					
Total Score (Summary Index)	-0.371***	(0.085)	-0.399***	(0.068)	374 * 4 yrs (25 districts)
Legislative	0.401***	(0.062)	-0.499***	(0.058)	374 * 4 yrs (25 districts)
Meeting Electorate	-0.503***	(0.123)	-0.048	(0.062)	374 * 4 yrs (25 districts)
Monitoring	-0.462***	(0.071)	-0.311***	(0.064)	374 * 4 yrs (25 districts)
Lower Local Government	-0.104	(0.099)	-0.222***	(0.059)	374 * 4 yrs (25 districts)
Panel C: School grant applications					
Apps/# schools	0.200	(0.232)	0.077	(0.135)	284 (19 districts)
Panel D: Subjective Evaluations					
Peer Politician Assessments	3.114***	(0.125)	-0.382***	(0.080)	271 (25 districts)
Bureaucrat Assessments	0.215***	(0.076)	-0.297***	(0.042)	733 (49 districts)
Committee Chair Assessments	8.184***	(0.638)	-0.790***	(0.198)	378 (49 districts)

OLS regression analyses with District and year Fixed Effects and cluster standard errors at politician level. Standardized outcome variables. Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. In Panel A, Session minutes are weighted by the share of meetings politician attended. In Panel B, we use four annual scorecards; the number of unique councilors is 374.

Table 1: Politician Performance by Gender

We find support in Table 1 for the core hypothesis that gender gaps vary across politicians' job duties. First, we do not find evidence of gender gaps in meeting the electorate (Panel B *meeting electorate*) and facilitating *school grant applications* (Panel C). Since voters place a high value on these constituency development job duties, this is an important finding.

Second, we find evidence of moderate gender gaps favoring men in monitoring public services (Panel B *monitoring*, a .31 sd gap, or 29% lower than mean values for men politicians). Subjective evaluations from bureaucrats (Panel D) corroborate this finding. We also find moderate gender gaps in participating in lower local government (Panel B *lower local government*, a .22 sd gap, or 18.5% lower than the mean men's score).

Third, we find relatively large gender gaps favoring men in legislative activities. This is the case whether legislative activities are measured using plenary meeting minutes (Panel A *Total Score* - a 0.49 sd gap, or 79% lower than the mean men's score), or ACODE's scorecard (Panel B *legislative duties* - a 0.4 sd gap, or reduction of 15.6% compared to men politicians' mean score). Politician peer evaluations (0.38 sd) and committee chair evaluations (0.79 sd) corroborate these finding (Panel D).

Overall, the findings present a mixed picture of gender gaps in performance across different job duties. Using pairwise coefficient tests, the differences in the size of these gaps across job duties are by and large statistically significant for the majority of pairs of job duties compared.[13] The findings suggest that different incentives and barriers likely exist across RS-women and men in different job duties, which produce gaps of different sizes. Had we considered only a single job duty (in most studies, legislative duties), the study could have reached a misleading conclusion.

6.2. Gender Disparities in Network Position, Background Qualifications, and Political Factors

We turn to examine whether gender disparities exist in factors discussed above that may play a role in these gaps. Recall that to test whether significant differences in these factors exist across RS-women and men politicians, we regress each covariate separately on a RS-woman indicator and district fixed effects, as described in Equation 2.

Table 2 reports the findings using the sample of 49 districts,[14] save for network measures at term start, where we have 19 districts (omitting the 1 district that did not produce meeting minutes). We find disparities between RS-women and men politicians in some but not all individual covariates and political factors. RS-women have, on average, lower education levels (60% less likely to complete post-secondary education) and are less wealthy (44% less likely to own a motor vehicle). RS-women also represent less competitive and significantly larger constituencies. Conversely, we find no discernible differences by politician gender with respect to age, political experience and partisanship.

[13] However, we cannot reject the null that gender gaps for legislative activities and monitoring outcomes are of different magnitude. We also cannot reject the null that gender gaps are significantly different for lower local government participation (where only a small gap was detected) and contact with the electorate (where no gap of statistical significance was found. Of course, we have limited statistical power in the reduced sample of the scorecard outcomes (25 districts).

[14] Findings are similar when restricting the sample to the 19 districts we have both baseline network and meeting minutes information (SI **??**) and when using the expansive unrestricted sample (SI B.2).

	Constant	SE	RS-Women Coefficient	SE	Observations
Background Characteristics					
Education level	2.681***	(0.207)	-0.572***	(0.058)	820 (49 districts)
Below Sec	-0.424*	(0.252)	0.619***	(0.072)	820 (49 districts)
Secondary	0.198	(0.339)	0.143*	(0.078)	820 (49 districts)
Post Secondary	0.552**	(0.263)	-0.613***	(0.066)	820 (49 districts)
Age	-0.513*	(0.268)	0.029	(0.075)	820 (49 districts)
Wealth	-0.236	(0.193)	-0.385***	(0.070)	820 (49 districts)
Number of terms	0.121	(0.232)	0.105	(0.077)	820 (49 districts)
Political Factors					
Formal leadership position	0.423***	(0.136)	-0.099***	(0.027)	820 (49 districts)
NRM	0.119	(0.233)	0.067	(0.073)	820 (49 districts)
Margin of Victory 2011	-0.428***	(0.144)	0.152**	(0.067)	820 (49 districts)
Constituency size (N. Voters)	-0.913***	(0.108)	0.797***	(0.057)	820 (49 districts)
Run Unopposed	-0.451***	(0.042)	0.229***	(0.072)	820 (49 districts)
Informal Exclusion (TERM START)					
In-degree centrality					
Professional Network	1.232**	(0.560)	-0.419***	(0.092)	274 (19 districts)
Personal Network	2.698***	(0.322)	-0.257***	(0.079)	274 (19 districts)
Eigenvectorcentrality					
Professional Network	0.815***	(0.298)	-0.406***	(0.120)	274 (19 districts)
Personal Network	1.050***	(0.284)	-0.317***	(0.110)	274 (19 districts)
Informal Exclusion (TERM END)					
In-degree centrality					
Professional Network	1.129***	(0.318)	-0.555***	(0.071)	820 (49 districts)
Personal Network	0.943*	(0.534)	0.230***	(0.072)	820 (49 districts)
Eigenvector centrality					
Professional Network	0.911***	(0.241)	-0.432***	(0.067)	820 (49 districts)
Personal Network	0.083	(0.249)	0.243***	(0.074)	820 (49 districts)

Regression results are reported by row and not column. Regressions include district fixed effects and variables are standardized to facilitate comparison. Standard errors are clustered at the politician level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 2: Gender Gaps in Politician Characteristics

Moving to the measures of exclusion, we find that 12% of women politicians but 22% of men politicians hold some formal leadership position, and that this difference is statistically significant. As for informal exclusion—which recall we proxy using social network position—we find again significant gender-based disparities in politicians' centrality scores. RS-women are less central (i.e., more marginal) in networks defined by *professional ties* at both the start and the end of the electoral term. And while they are somewhat more peripheral in *personal ties* at the start of the term, this is not the case at the end of term. Consistent with the idea that network ties are sticky (Carrington *et al.* 2005), we

find a high correlation from start to end in professional networks in the 20 legislatures for which we have data in both periods.[15]

6.3. Which Gender Disparities Drive Which Performance Gaps

To examine which disparities are contributing to which gender gap in politician job duty performance, we regress the performance outcome variables for which we find significant gender gaps—legislative activities, monitoring public services, and lower local government participation—on a RS-woman indicator and covariates (one at a time) for which a gender disparity exists (equation 3) reported in Table 2). These covariates include: wealth and education (the proxy for human capital), formal leadership (proxy for formal exclusion), network centrality (proxy for informal exclusion), constituency competitiveness, and constituency size.

For network centrality measures, we separately include indegree and eigenvector centrality, at the start and end of term. Network measures computed for the term start are available for only 20 legislatures, but have the advantage that they are measured prior in time to performance outcome. Network measures computed for the term end have the advantage that they were collected for all 50 legislatures. Of course, networks and performance could mutually reinforce over time (Ringe *et al.* 2017). While we note a high correlation of network centrality from term start to end, we nonetheless treat the term end measures with a grain of salt.

In Tables 3 and 4 we report the results of these regressions by row, indicating the name of the included covariate in the first column. For consistency, here too we drop from all analyses the one district (Nebbi) for which we are missing meeting minutes data; results for the other data sources including that district are almost identical and available upon request. Table 3 reports results from the scorecard performance measures in the 19 districts: legislative, lower local government participation, and monitoring public services. In Table 4, we report results from the meeting minutes, with the top panel reporting results for the same sample of 19 districts and the bottom panel reporting results for the full sample of 49 districts. In the former, we can additionally report the results of network measures from the term start.

[15] As mentioned above, network data was collected using different elicitation methods at the start and end of the term. Thus, to compare politicians' network position across time, we further transform the centrality measures into a within-legislature ranking at start and at end, respectively. In SI A.9, we provide lowess scatterplots of the professional and personal in-degree centrality ranking.

In both tables, in the first row we report the estimate of the RS-women coefficient without any covariate, along with the constant and the number of observations. In each subsequent row, we report these estimates alongside the estimate of the additionally included covariate coefficient and standard error, as well as the percentage change in the RS-woman coefficient (next to last column) and absolute change in RS-woman coefficient (last column) as a result of the inclusion of the said covariate. The last row in each panel shows results from a saturated model that includes all covariates in the same regression, reporting just the RS-woman coefficient for brevity.

Informal Exclusion

Turning attention to our hypothesis that network gender gap disparities may drive gender gaps in legislative activities, we find that professional networks (as captured by either indegree or eigenvector centrality) are an important contributor, while personal networks are not. Professional networks, at both term start and term end, are significantly associated with performance and contribute to a substantively large drop in the RS-woman coefficient. For example, in Table 3 on the scorecard measures, including the end of term professional indegree network measure as a covariate reduces the RS-woman coefficient in legislative activities by 25%. In Table 4, including the end of term professional indegree network measure as a covariate reduces the RS-woman coefficient in the legislative activities according to the meeting minutes by 43% in the reduced sample and 33% in the full sample (indegree measured at term start - by 18% in the restricted sample).

Professional network gender disparities also matter for monitoring public services at term start and end, and for lower local government at term end. Specifically, including professional network centrality as a covariate reduces the RS-woman coefficient in monitoring public services component by 51% at term end and 15% at term start, and in lower local government performance by 46% at term end. Exclusion might matter here because 'know-how' information can be shared between politicians about how to monitor frontline providers effectively as well as interact with bureaucrats. In addition, it is possible that centrality in politician networks is more broadly reflective of connections to the district government line ministries.

	Constant	SE	RS-Women coefficient	SE	Covariate coefficient	SE	Observations	% Change	Absolute Change
Legislative activities (scorecard component)									
None	0.477***	(0.065)	-0.482***	(0.066)			1036		
Education	0.414***	(0.068)	-0.421***	(0.069)	0.099***	(0.032)	1036	-12.7%	-0.06
Wealth	0.490***	(0.067)	-0.444***	(0.069)	0.074**	(0.034)	1036	-7.9%	-0.04
Margin of Victory	0.474***	(0.067)	-0.488***	(0.066)	-0.016	(0.033)	1036	+1.2%	+0.01
Size Constituency	0.566***	(0.075)	-0.555***	(0.068)	0.089**	(0.043)	1036	+15.00%	+0.07
Leadership position	0.442***	(0.066)	-0.468***	(0.066)	0.074*	(0.033)	1036	-3.0%	-0.01
Start Professional InD	0.555***	(0.067)	-0.423***	(0.067)	0.165***	(0.043)	1036	-12.3%	0.06
Start Personal InD	0.508***	(0.065)	-0.437***	(0.067)	0.189***	(0.049)	1036	-9.3%	-0.04
Start Professional EV	0.484***	(0.062)	-0.453***	(0.068)	0.068*	(0.039)	1036	-6.0%	-0.03
Start Personal EV	0.518***	(0.068)	-0.448***	(0.066)	0.113***	(0.038)	1036	-7.2%	-0.03
End Professional InD	0.463***	(0.065)	-0.361***	(0.067)	0.185***	(0.033)	1036	-25.1%	-0.12
End Personal InD	0.476***	(0.064)	-0.491***	(0.066)	0.043	(0.033)	1036	+1.7%	+0.01
End Professional EV	0.423***	(0.070)	-0.422***	(0.066)	0.144***	(0.033)	1036	-12.5%	-0.06
End Personal EV	0.475***	(0.066)	-0.484***	(0.065)	0.004	(0.030)	1036	+0.4%	+0.00
All	0.561***	(0.096)	-0.255***	(0.068)			1036	-47.0%	-0.23
Lower Local Government participation (scorecard component)									
None	-0.174*	(0.101)	-0.189***	(0.072)			1036		
Education	-0.162	(0.102)	-0.200***	(0.074)	-0.019	(0.037)	1036	+6.1%	+0.01
Wealth	-0.162*	(0.097)	-0.155**	(0.071)	0.067	(0.042)	1036	-18.1%	-0.03
Margin of Victory	-0.175*	(0.102)	-0.190***	(0.072)	-0.002	(0.044)	1036	+0.4%	0.00
Size Constituency	-0.061	(0.106)	-0.281***	(0.079)	0.113**	(0.044)	1036	+48.7%	+0.09
Leadership position	-0.197	(0.108)	-0.179*	(0.072)	0.050	(0.035)	1036	-5.1%	-0.01
Start Professional InD	-0.153	(0.107)	-0.173**	(0.074)	0.045	(0.057)	1036	-8.6%	-0.02
Start Personal InD	-0.172*	(0.102)	-0.185**	(0.072)	0.015	(0.059)	1036	-1.9%	0.00
Start Professional EV	-0.170	(0.105)	-0.173**	(0.071)	0.036	(0.040)	1036	-8.1%	-0.02
Start Personal EV	-0.164	(0.104)	-0.180**	(0.071)	0.028	(0.044)	1036	-4.5%	-0.01
End Professional InD	-0.184*	(0.103)	-0.101	(0.073)	0.134***	(0.040)	1036	-46.4%	-0.09
End Personal InD	-0.176*	(0.102)	-0.199***	(0.071)	0.055	(0.037)	1036	+5.6%	+0.01
End Professional EV	-0.242	(0.099)	-0.112	(0.070)	0.183***	(0.037)	1036	-40.8%	-0.08
End Personal EV	-0.206	(0.100)	-0.232***	(0.073)	0.089***	(0.032)	1036	+23.1%	+0.04
All	-0.170	(0.123)	-0.153*	(0.085)			1036	-19.2%	-0.04
Monitoring public services (scorecard component)									
None	-0.443***	(0.077)	-0.276***	(0.079)			1036		
Education	-0.501***	(0.082)	-0.219**	(0.086)	0.092**	(0.043)	1036	-20.6%	-0.06
Wealth	-0.416***	(0.079)	-0.199**	(0.079)	0.149***	(0.044)	1036	-27.8%	-0.08
Margin of Victory	-0.452***	(0.077)	-0.276***	(0.080)	-0.030	(0.043)	1036	+0.3%	0.00
Size Constituency	-0.403***	(0.095)	-0.308***	(0.088)	0.040	(0.057)	1036	-11.8%	-0.03
Leadership position	-0.470***	(0.082)	-0.264***	(0.079)	0.057	(0.047)	1036	-4.0%	-0.01
Start Professional InD	-0.387***	(0.083)	-0.233***	(0.082)	0.118**	(0.056)	1036	-15.4%	-0.04
Start Personal InD	-0.422 ***	(0.079)	-0.246***	(0.079)	0.124**	(0.063)	1036	-10.6%	-0.03
Start Professional EV	-0.428***	(0.080)	-0.218***	(0.081)	0.136***	(0.039)	1036	-20.8%	-0.06
Start Personal EV	-0.417***	(0.079)	-0.254***	(0.081)	0.071	(0.050)	1036	-7.8%	-0.02
End Professional InD	-0.459***	(0.081)	-0.135**	(0.079)	0.216***	(0.042)	1036	-51.1%	-0.14
End Personal InD	-0.445***	(0.079)	-0.293***	(0.078)	0.089***	(0.044)	1036	+6.3%	+0.02
End Professional EV	-0.528***	(0.084)	-0.179**	(0.076)	0.229***	(0.042)	1036	-34.9%	-0.10
End Personal EV	-0.481***	(0.076)	-0.328***	(0.080)	0.107***	(0.037)	1036	+19.1%	+0.05
All	-0.552***	(0.119)	0.006	(0.091)			1036	-102.2%	-0.28

Table reports the information for each regression by row and not by column. Regression includes district and year fixed effects and clustered standard errors at the politician level. All the variables are standardized. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 3: Legislative Activities from Scorecard (top panel), Lower Local Government Participation (middle panel) and Monitoring Public Services (bottom panel) - Sample 19 districts.

	Constant	SE	RS-Women coefficient	SE	Covariate coefficient	SE	Observations	% Change	Absolute Change
Legislative activities index (meeting minutes) - 19 districts									
None	0.261	(0.159)	-0.550***	(0.105)			274		
Education	0.179	(0.160)	-0.472***	(0.108)	0.127**	(0.053)	274	-14.1%	-0.08
Wealth	0.273*	(0.158)	-0.520***	(0.101)	0.058	(0.052)	274	-5.4%	-0.03
Margin of Victory	0.248	(0.160)	-0.553***	(0.106)	-0.046	(0.055)	274	+0.5%	0.00
Size Constituency	0.354**	(0.175)	-0.622***	(0.131)	0.092*	(0.055)	274	+13.2%	+0.07
Leadership position	0.202	(0.148)	-0.529***	(0.105)	0.146***	(0.050)	274	-3.8%	- 0.02
Start Professional InD	0.380***	(0.143)	-0.444***	(0.103)	0.253***	(0.080)	274	-19.3%	-0.11
Start Personal InD	0.306**	(0.141)	-0.480***	(0.105)	0.271***	(0.087)	274	-12.7%	-0.07
Start Professional EV	0.284*	(0.151)	-0.478***	(0.104)	0.176***	(0.067)	274	-13.0%	-0.07
Start Personal EV	0.294*	(0.159)	-0.520***	(0.106)	0.095	(0.061)	274	-5.5%	-0.03
End Professional InD	0.227*	(0.134)	-0.312***	(0.090)	0.343***	(0.068)	274	-43.2%	-0.24
End Personal InD	0.261*	(0.158)	-0.566***	(0.109)	0.079	(0.054)	274	+3.0%	+0.01
End Professional EV	0.139	(0.148)	-0.425***	(0.098)	0.256***	(0.055)	274	-22.6%	-0.12
End Personal EV	0.263	(0.160)	-0.546***	(0.114)	-0.007	(0.050)	274	-0.6%	-0.00
All	0.356**	(0.152)	-0.152	(0.116)			274	-72.4%	-0.40
Legislative activities index (meeting minutes) - 49 districts									
None	-0.219***	(0.081)	-0.490***	(0.054)			820		
Education	-0.262***	(0.080)	-0.418***	(0.057)	0.107***	(0.026)	820	-14.7%	-0.07
Wealth	-0.206**	(0.087)	-0.471***	(0.053)	0.054**	(0.026)	820	-3.9%	-0.02
Margin of Victory	-0.214**	(0.083)	-0.494***	(0.055)	0.009	(0.030)	820	+0.8%	0.00
Size of Constituency	-0.209**	(0.087)	-0.498***	(0.065)	0.011	(0.030)	820	+1.5%	+0.01
Leadership position	-0.276***	(0.105)	-0.467***	(0.055)	0.092***	(0.027)	820	-4.8%	-0.02
End Professional InD	-0.550***	(0.127)	-0.327***	(0.049)	0.293***	(0.030)	820	-33.2%	-0.16
End Personal InD	-0.322***	(0.108)	-0.514***	(0.055)	0.109***	(0.028)	820	+4.9%	+0.02
End Professional EV	-0.428***	(0.106)	-0.390***	(0.053)	0.229***	(0.029)	820	-20.5%	-0.10
End Personal EV	-0.224***	(0.082)	-0.503***	(0.056)	0.056*	(0.032)	820	+2.6%	+0.01
All	-0.569***	(0.138)	-0.239***	(0.059)			820	-51.2%	-0.25

Table reports the information for each regression by row and not by column. Regression includes district and year fixed effects and clustered standard errors at the politician level. All the variables are standardized. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 4: Legislative Activities Index from Meeting Minutes in 19 districts (top panel) and same in 49 districts (bottom panel).

While highly correlated, we note that the magnitude of the reduction is typically larger for the measure of professional networks at the end of the term than the start. While we do not want to put too much weight into the evidence, the larger magnitude at term end is consistent with the idea that some mutual reinforcement of networks and performance takes place over the term. Importantly, adding personal network centrality measures do not reduce the RS-woman coefficient, and are therefore not a factor contributing to politician performance gender gap.

The finding that RS-women are less central in professional networks and that such marginalization or exclusion are associated with performance gender gaps in interactive duties is an important finding, and consistent with our hypothesis. Additional survey evidence shows that women, more so than men politicians, are aware of how women's exclusion affects performance (see SI C for survey question wording and analysis). When asked

what barriers RS-women face to better perform, RS-women were significantly more likely to mention discrimination/harassment by colleagues (21% RS-women, 6% men). By contrast, men politicians are significantly more likely to argue that traditional societal/family gender roles (37% RS-women, 47% men) and low self esteem (26% RS-women, 45% men) are what holding RS-women politicians back. Thus, men and women politicians have different perceptions with respect to the main barriers that RS-women's face.[16]

Unlike informal exclusion, formal leadership appears to play only a small role (noting that leadership is defined here as the district council speaker or the chairperson of a standing committee).[17] Formal leadership is only significantly associated with legislative activities (whether using the scorecard or the meeting minutes data) and it's inclusion reduces the gender gap in performance in legislative activity mildly (by 3% on the scorecard and 4-5.5% in the meeting minutes). Importantly, the results on informal exclusion are not simply capturing formal leadership effects – the network results are robust to dropping those politicians holding formal leadership positions (results available upon request).

Qualifications (human capital)

Consistent with our hypotheses, we find suggestive evidence that education disparities play a role in the performance gap. Education seems to matter more for job duties that require high levels of qualification such as legislative activities (scorecard and in plenary meeting minutes), and monitoring public services. Wealth seems to matter for lower local government participation and monitoring public services, perhaps reflecting the idea that resources are required to travel to perform these activities.[18]

Is education really capturing qualifications and expertise needed to navigate the demanding legislative process? We test that using knowledge vignettes regarding legislative procedure, which we have embedded in our in-person surveys with politicians (see Table 5 using the 49 district sample). We find that men politicians are more knowledgable about rules governing district plenary and committee meetings (0.28 sd gap); procedures for passing bills and motions (.21 sd gap); and budget procedures (.35 sd gap). Further,

[16] As for other reasons, RS-women and men were equally likely to cite lower qualifications (42% RS-women, 43% men mention). RS-women were more likely to mention a structural barrier — constituency size (52% RS-women versus 38% men). In the data, constituency size was not found to be a significant driver of performance, however, suggesting that there may be ways that constituency size may affects performance in ways that we did not pick up. Further, RS-women politicians are three times more likely to perceive favoritism towards men by the chairperson (only 8% of men but 22% of RS-women report that men are favored).

[17] This finding contrasts with the national level finding that leadership plays a large role (Wang 2014).

[18] These findings contrast with the national level, where O'Brien (2012) shows there is no qualification gaps between men and women.

we find that education has a statistically significant effect on knowledge (see SI D). Such rules and procedures are quite intricate and the degree of knowledge and application of these legislative procedures are likely mutually reinforcing. These findings are consistent with Johnson *et al.* (2003)'s earlier field interviews with district and lower tier (subcounty, and village) politicians that RS-women politician's legislative activities were perceived to be hindered by lack of procedural knowledge, which was speculated to result from lower education background.

	Constant	SE	RS-Women coefficient	SE	Observations
Knowledge Questions					
Public Service Delivery	0.487	(0.441)	-0.187***	(0.070)	820 (49 districts)
Procedures/Rules District Council	0.238	(0.279)	-0.281***	(0.070)	820 (49 districts)
Passing Bills/Motions	0.037	(0.231)	-0.208***	(0.072)	820 (49 districts)
Knowledge Budget	0.088	(0.340)	-0.350***	(0.072)	820 (49 districts)
Knowledge Total	0.435	(0.302)	-0.453***	(0.068)	820 (49 districts)

OLS regression analyses with District and year Fixed Effects and cluster standard errors at politician level. Standardized outcome variables. Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.Session minutes are weighted by the share of meetings politician attended

Table 5: Politician Performance: knowledge questions

7. Discussion and Conclusion

Studying gender gaps in job duty performance is important as women increasingly enter ever more historically-male professions across the Global South. Gender gaps in politician performance are critical to uncover and address because they not only affect women's professional trajectory, but also the potential to improve policymaking on issues (such as water access) that women are more likely to prioritize (Gottlieb *et al.* 2018). Gender gaps in performance also matter since they affect women's leadership role modeling.

We examine whether gender gaps in job duty performance exist across reserved-seat-women (RS-women) and men politicians from 50 subnational governments in Uganda over a full electoral term (2011-2016). While past work generally focuses on a single job duty (often legislative activity), we cast a wider net, testing whether different job duties present different barriers for woman politicians. We find significant variation in performance gender gaps across politicians' job duties. Job duties requiring high levels of interaction with fellow politicians, namely legislative activities, show large performance

gender gaps. Moderate performance gender gaps exist in duties requiring moderate interaction with fellow politicians—monitoring public services and lower local government participation. Finally, we find no evidence of performance gaps for various types of constituency services, which politicians undertake relatively independently.

To explain variation in the size of the gender gap across job duties we assemble unique network data, capturing both professional and personal ties within 50 subnational legislative bodies. Network data allow us to measure the position (centrality) of all politicians in the sample in their respective legislature. We find that RS-women politicians are significantly less central in professional networks within (what are clearly male-dominated) legislatures. Such peripherality, we empirically show, can help explain variation in gender gaps across different politician job duties. Informal exclusion in professional networks minimizes RS-women's influence and ability to wield power within legislatures, which is especially consequential for one's effectiveness in job duties that entail interaction with peer politicians. By contrast, informal exclusion is largely inconsequential when politicians undertake relatively independent tasks.

We are not the first to suggest that informal marginalization of women is consequential for job duty performance (see, for example, Kantor (2009); BenYishay *et al.* (2020)). However, our study builds on past work by focusing on politicians and demonstrating marginalization systematically across a large number of comparable legislatures, and by employing original network data that separates between informal personal and professional ties. By so doing, we expand the study of networks in legislatures outside the United States suing what, to our knowledge, is the largest scale collection of network data on politicians to date (Ringe *et al.* 2017).

One open question is how to assess our findings normatively. Legislative activities are undoubtedly a core job duty for legislators. It is thus not surprising that most of the scholarship on possible gender gaps in politician performance focuses on this domain. From this perspective, large gender gaps in legislative activities are problematic. However, some studies (e.g., Dunning *et al.* (2018)) have documented that legislative activities, at least in developing countries, is not particularly salient to citizens. Politicians often do not experience strong accountability pressure—from citizens—for passing bills or attending plenary sessions. Constituency services—for example, maintaining contact with the electorate—are both more visible and salient to citizens (Ofosu 2019). Especially where multiparty competition are relatively new, these activities by local government politicians are important in legitimizing the system as a whole.

Our study is not without limitations. First, we may be missing some important drivers

of the performance gap. For example, disparities in personality traits or working "styles" may be relevant (Volden *et al.* 2013). Further, we do not have data on every possible aspect of performance — for example, no systematic objective data exists in Uganda for committee work (even though we provided supportive subjective evaluations by committee chairpersons). In addition, it could be that despite sharing formal (that is legally-defined) job duties, RS-women and men may view (or believe citizens value) their performance across different job duties differently. However, examining survey responses at term end, we find no differences between men and RS-women politicians regarding (a) beliefs about citizens' ability to monitor their performance, (b) ways citizens contact them, and (c) efficacy in performing job duties (results available on request). Admittedly, there could be other differences in perceptions of job duties for which we have no measures.

Given the study's findings, future research should explore what forces might make professional political networks more inclusive. Many "team building" or social events focusing on *social* inclusion may not be effective, since this study shows that RS-women can be central in personal networks, and simultaneously excluded professionally. Interventions strengthening gender-sensitive collaborative professional task-working skills may be more effective. In particular, our survey data reveal that barriers to RS-women's performance are seen very differently by men and RS-women. In particular, interventions could attempt to address a dynamic where men politicians fail to recognize discrimination that RS-women experience, viewing the behavior of RS-women as stemming instead from low self-esteem. Further, given that RS-women perceive the legislature's leadership to be biased against them, political leaders in particular may benefit from training on implicit bias that could lead to greater inclusion of RS-women in a mixed-gender legislature.

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