



The road not taken: Gender gaps along paths to political power

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ABSTRACT

Using an original survey conducted in India's largest state, we offer systematic evidence on the gender gaps in a rich set of electoral and non-electoral participation metrics. We find that gender gaps in non-electoral forms of participation (such as involvement in public petitions, interactions with public officials and attendance of village meetings) are larger than those in election-related activities, including political candidacy. These gender gaps in political participation persist even after we account for women's poorer knowledge of political institutions, self-assessment of leadership skills, literacy rates and asset ownership, as well as constraints on their mobility and voice in household decisions. Using a Oaxaca-Blinder decomposition approach, we find that bringing women on par with men on these attributes would bridge less than half of the gender gap in political participation. This suggests that external factors, such as the roles played by voters, political parties or societal groups, may constitute important barriers to women's political participation. The presence of a woman leader in the village increases women's propensity to meet with government officials, but is not enough to close the gender gap in this outcome or others. Our evidence points to the need to consider a wider set of policy tools beyond quotas to encourage women's civic and political engagement.

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1. Introduction

Women constitute half the world's population, but they account for less than a quarter of the membership of national parliaments globally. In 2015, 12% of India's national legislators were female; in the United States Congress, this number was 19% and in the United Kingdom's House of Commons, it was 29%. This numerical (or descriptive) under-representation of women goes hand in hand with poor substantive representation of their preferences, as reflected by the gender gaps in health, education, economic and, as already noted, political opportunities worldwide. Using a composite index based on these four components, the *Global Gender Gap Report 2017* finds that the overall gap has in fact worsened over the past year, and estimates that it will take a hundred years to bridge the overall gender gap at the current rate of change ([World Economic Forum, 2017](#)).

On a more positive note, a body of rigorous recent evidence finds that having more women in political office does result in policy choices and outcomes that are better attuned to women's needs and concerns ([Chattopadhyay & Duflo, 2004](#); [Rehavi, 2012](#); [Iyer, Mani, Mishra, & Topalova, 2012](#)). This is especially valuable in

developing countries, where gender inequalities are particularly acute. Furthermore, women's political participation has been found to achieve broader benefits such as improved investments in children and lower corruption ([Bhalotra & Clots-Figueras, 2014](#); [Brollo & Troiano, 2016](#); [Clots-Figueras, 2012](#); [Dollar, Fisman, & Gatti, 2001](#); [Miller, 2008](#); [Swamy, Azfar, Knack, & Lee, 2001](#)). This suggests that increasing women's engagement and representation in the political sphere can improve the welfare not just of women, but also of the rest of society.

To date, research and policy efforts directed towards this goal of greater female political participation have largely focused on women's voting behavior and their representation as elected public officials. However, citizens can engage in a rich array of activities to articulate their diverse policy preferences and interests ([Madison, 1787](#)), and ensure their representation in policy. These activities include communicating with public officials, attending protests or rallies, taking part in written petitions, attending public meetings or speaking up in public forums. There are many important reasons to examine these forms of political and civic engagement among women, alongside their involvement as voters and elected representatives.

For one, studying a broader range of such activities can provide a better picture of the true extent of political voice that women have. Unlike with voting rights, there is no mandated equality of

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participatory input in these other activities across citizens, including men versus women. Yet these are important means through which (different groups of) citizens get to convey information about their preferences to public officials, and to exert pressure on them to act in their interest (Schlozman, Verba, & Brady, 1999). Unequal participation in these activities could result in unequal political voice. In the case of India, such inequality could be one of the reasons why the country has been characterized as a “flailing state” for widespread failures in delivering citizen services despite the presence of a well-established political democracy with free and fair elections (Pritchett, 2009).

Second, these forms of citizens’ political engagement play an important role in shaping public opinion and electoral outcomes. Some recent examples of this from the U.S. context are events such as the Women’s March in January 2017 and the #MeToo movement online, that seem to have galvanized more women into running for public office (Todd, Murray, & Dann, 2018). Such participation can also shape public policy. For instance, women’s rights activists in Morocco played a pivotal role in achieving a complete overhaul of the Islamic family law and the introduction of a new constitution in 2011 that “guarantees equality between women and men, prohibits all forms of discrimination against women and requires the State to promote women’s rights in their entirety” (Pittman & Naciri, 2010; UN Women, 2015, pp 30).

Finally, even with regard to achieving balanced representation of women in elected office, these other forms of political and civic participation could be important stepping stones to becoming a political leader. Arguably, candidacy is not a hat that people simply put on in an instant; neither is it the predictable culmination of a time-bound process of formal training and apprenticeship – as is the case with other professions such as law, engineering or medicine. Women’s involvement in activities such as public meetings, petitions, political campaigns and interactions with public officials could provide valuable experience for political candidacy and elected office. The time (and mental bandwidth) demands of these activities could be less onerous than those of candidacy and holding political office, hence making it feasible for more women to be involved in them. Over time, this could attract more suitable women into political office as well, i.e. those who have the commitment, ability and relevant experience, rather than those who are incompetent or mere pawns who further the political agenda of male family members.¹

Systematic evidence on citizen participation in these other political and civic activities is largely based on the experience of developed countries: Burns, Schlozman, and Verba (2001) document the gender patterns in political participation in the United States, while Dal Bo, Folke, Finan, Persson, and Rickne (2017) focus on the career paths of male politicians in Sweden. Relatively little is known about women’s non-electoral engagement in the politics of developing countries, including India, the world’s largest democracy. In this paper, we make one of the first forays towards documenting the gender gap in non-electoral activities, comparing it to gender gaps in electoral participation and examining the factors influencing such gender gaps. Prior related studies on India differ from ours in important ways. Chhibber (2002) describes women’s non-electoral participation across six Indian states but since it does not compare it with those of men, it cannot provide a picture of women’s relative political voice through these channels. Kruks-Wisner (2018) documents differences in the channels, formal or informal, through which marginalized versus dominant groups (including women versus men) try to access claims to public services. Neither of these two studies analyzes the determinants of

such gender gaps. In concurrent work, Prillaman (2017) examines the role of self-help groups in mitigating some of the barriers to women’s political participation.

The data we examine comes from a survey we conducted in Uttar Pradesh, India’s largest state with a population exceeding 100 million people (which would make it the fifth largest country in the world if it were an independent one). We collected information on the extent to which men and women engage in a wide range of activities related to politics, under two broad categories: electoral and non-electoral participation. The first category includes voting and candidacy (typical outcomes available from administrative data sets), but also detailed questions about involvement in political campaigns, party memberships and campaign contributions. The second category includes activities such as attending village meetings, meeting officials at the village, block or district level and submitting petitions to the local government. Many previous studies have focused on at most one or two of such non-electoral activities.²

We are also interested in understanding what factors may help or hinder such participation. Here we chose to focus on factors that directly affect a person’s ability and effectiveness in engaging with politics, such as her education or knowledge (“supply-side” factors) rather than those that are outside her control, such as the attitudes or views of political party leaders or voters (“demand-side” factors). We recognize that these are not water-tight compartments, and that some supply-side factors (e.g. women’s self-assessment as leaders) can be influenced by demand-side factors such as societal views about the role of women in leadership positions that women may internalize via self-stereotyping (Coffman, 2014). In turn, changes in women’s attributes and women’s actions can shape demand-side factors such as the views of voters or political parties. One reason for our focus on supply-side factors or individual characteristics is that they are arguably more malleable through individual actions or effort, in the short run.

We collected data on a rich set of variables that could affect a person’s political and civic participation: knowledge of political institutions and electoral rules, individuals’ self-perception about their own leadership abilities, their sense of agency or ability to achieve change in the political and personal domain, and measures of women’s voice in household decisions and their mobility outside the home. Finally, in order to examine the impact of female leaders on these various forms of participation, we linked the information gathered above with data on whether a female village leader had been elected in the previous local government election of 2010.

Our survey can thus be used as a diagnostic tool to answer the following questions: (a) In what kinds of political activity are gender gaps the largest? (b) What are the factors holding back women’s participation in political and civic activities? Would it be possible for women to address these factors through their own efforts and changes in attitudes? (c) Which of these activities, if any, are affected by the presence of women leaders at the village level? Documenting male versus female participation rates in a broad range of political activities, and the factors holding women back is not only important in itself; it is also the first step in identifying a wider menu of policy options to bring about sustainable positive change.

We find that, more so than in election-related political participation, the biggest gender gaps are in non-electoral political participation. Specifically, women are 0.58 standard deviations behind

¹ In the case of India, concerns have been raised that the women elected to local councils via quotas do not have true agency, and that actual power remains in the hands of their husbands (Saxena, 2015).

² For instance, Chattopadhyay and Dufló (2004) and Deininger, Songqing, Nagarajan, and Xia (2015) only examine attendance and speaking at village council meetings. We find that these measures are only weakly correlated with other types of non-electoral participation. In our data, the correlation of attendance at village council meetings with writing a letter to a public official is 0.10, and with attempting to meet the village council head is 0.31.

men on electoral participation (voting, candidacy, campaign involvement) and 0.89 standard deviations behind men on non-electoral participation (interactions with public officials, involvement with public petitions, attendance and participation at village council meetings). We also document significant gender gaps in knowledge of political institutions and self-assessed leadership skills. All of these gender gaps remain even after controlling for the potential disadvantages imposed by women's lower literacy and wealth or their social (caste and religion) backgrounds.

As one would expect, lower knowledge of politics and self-assessment of leadership skills is associated with lower political participation, both electoral and non-electoral. However, what is noteworthy is that taken together, these supply-side factors account for only 37% (29%) of the gender gap in electoral (non-electoral) participation. We find that women's lack of voice within the household and restrictions on their mobility hinder such participation as well. These factors account for an additional 36% (11%) of the electoral (non-electoral) participation gender gap. This still leaves 27% (60%) of the electoral (non-electoral) gender gap in participation unexplained. A Oaxaca-Blinder decomposition analysis of these determinants of political participation reaches a similar conclusion: both supply-side and demand-side factors are important in influencing political participation, but the demand-side factors have a quantitatively larger role. In particular, bringing women's attributes (education, knowledge, assets, leadership skills) on par with men would bridge less than half the gender gap.

Finally, given that gender quotas for candidacy and elected office are the most widely used (and researched) policy tool to increase women's political participation, we examine their effect on gender gaps in electoral and non-electoral forms of civic engagement in India. A constitutional amendment in 1993 mandated that at least one-third of all village and district level councils in India were to be comprised of women. In addition, one-third of all village council head (*pradhan*) positions were set aside for women. These quotas are implemented by randomly selecting a set of villages in each election to be reserved for women *pradhans*; the quota thus provides exogenous variation in the presence of women *pradhans* at the village level. We find that the presence of female *pradhans* reduces the non-electoral participation gender gap to a modest extent (specifically, by increasing women's likelihood of meeting block and village level officials and the police, as well as attending village council meetings). There is little impact on the electoral participation gender gap.³

The rest of the paper is structured as follows: we describe our data and key variables in Section 2. Section 3 documents gender gaps in political participation and its potential determinants. Section 4 examines the quantitative significance of these factors in explaining gender gaps, and whether gender quotas in local leadership can help to mitigate the gender gaps. Section 5 concludes with policy implications and thoughts on further research needed in this domain.

2. Data sources and key variables

2.1. Uttar Pradesh survey

Our primary source of data is a survey conducted by us across 256 village councils (*gram panchayats*) in 11 districts of Uttar Pradesh state in India in 2015.⁴ Uttar Pradesh is a relatively poor state; gross state domestic product per capita in 2013–14 was Rs 36,250, less than half of the all-India figure of Rs 74,380. Uttar Pradesh is also a laggard on other measures of development. For instance, overall literacy was 68% in the 2011 census and female literacy was 57%, compared to the nationwide averages of 74% and 65% respectively.

We surveyed 2573 men and women across 256 selected villages, with approximately 10 respondents in each village. All the villages chosen were those in which women's self-help groups (SHGs) had been established. This was simply because this survey was used for baseline data collection as part of the implementation of a political leadership training program carried out by an NGO we worked with, for members of its self-help groups. In terms of demographics, 56% of our survey respondents are female, 42% belong to Other Backward Castes, 41% belong to Scheduled Castes (SC) or Scheduled Tribes and 8% are Muslims. A large fraction (41%) of our respondents are illiterate and 18% belong to landless households. A comparison of our sample demographics with those of the state of Uttar Pradesh shows that they are very similar on all key variables with one exception. The fraction of SC population is higher in our sample than in the state as a whole (27.3% in our surveyed districts compared to 23.8% in Uttar Pradesh state). This is primarily attributable to the NGO's explicit strategy of operating in places that are poor and have a high SC population.^{5,6}

Of the 10 respondents in each village, three were women chosen from the members of SHGs, three were chosen as family members of these women and the remaining four were randomly selected village residents, two men and two women.⁷ Since becoming an SHG member is likely correlated with some personal characteristics and may not be representative of the average village population, we also show results for the subsample of randomly selected respondents. Results from this subsample are very similar to those from the full sample.

2.2. Measures of electoral and non-electoral political participation

We collected data on several dimensions of political participation in the context of elections: whether respondents voted in the previous local and state elections, whether they discussed politics with family members or had ever listened to a candidate's speech, whether they were involved in campaign activities such as helping candidates in door-to-door campaigning, distributing leaflets, organizing campaign events or donating money to candidates, and whether they were members of any political party or had been a political candidate themselves. We sum these ten

⁴ Each *gram panchayat* consists of elected representatives from 2 to 4 villages. We selected the largest village of the village council for our survey.

⁵ Detailed comparisons of other census characteristics are available upon request.

⁶ The Scheduled Castes are communities that have historically been at the bottom of the Hindu caste hierarchy. Scheduled Tribes include communities traditionally outside the Hindu caste system. Other Backward Castes refer to castes that are in the middle of the caste hierarchy. All these communities are provided affirmative action in political representation, government jobs and educational institutions.

⁷ The final number of respondents (2573) is slightly higher than our target number of 2560 (10 respondents each across 256 villages). This occurred primarily due to difficulties in locating respondents in the field: in several villages, either the SHG member or the family of the SHG member could not be located when the survey team arrived. In such cases, the survey team substituted an additional randomly selected respondent in the survey. In a few cases however, the survey team was able to locate the SHG member or her family member after the interview with the randomly selected member was complete. We thus ended up with a few extra respondents.

³ Our results on the impact of female *pradhans* on non-electoral participation is consistent with those of other studies (Chattopadhyay & Duflo, 2004; Deininger et al., 2015; Priebe, 2017). The available evidence on the impact of quotas on women's electoral political participation and representation is more mixed: Beaman et al. (2009) find a significant impact on female candidacy, although only after repeated exposure to women leaders, and Bhavnani (2009) finds an increase in female candidacy in urban India. Candidacy quotas may not necessarily result in greater women's representation, due to the role of parties in undermining such quotas (Bagues & Campa, 2017; Baudino, 2003; Casas-Arce & Saiz, 2015). Some studies have shown important spillover effects, both negative (as fewer women being fielded in non-quota constituencies (see Sekhon and Titiunik (2012)'s reanalysis of Bhavnani (2009)) and positive (improvement in the quality of male candidates (Besley, Folke, Persson, and Rickne, 2017)).

zero-one indicators to create an “index of electoral participation” that is then normalized with respect to the values for women respondents. In other words, for each individual i , we subtract the *overall* mean for women respondents from his or her sum of ten indicators, and divide by the standard deviation for women respondents:

$$Index_i = (\sum_k Indicator_{ik} - \mu_w) / \sigma_w$$

where $Indicator_{ik}$ is a zero-one variable measuring the k th indicator of political participation for individual i , μ_w is the mean value and σ_w is the standard deviation of the summed indicators for the women in the sample. By construction therefore, the mean of this normalized z-score index for the sample of women is zero, and the standard deviation is one (though the index is typically not zero for any individual woman).

To measure non-electoral political participation, our survey asked questions about respondents’ attendance in village council general meetings (the *gram sabha*), written communication with government officials and attempts to meet political representatives at different levels of government (state legislators, district and block level officials, village *pradhans* and members of the *gram panchayat*). We combine eleven such indicator variables into a normalized “index of non-electoral participation,” constructed using the same procedure as the index of electoral participation described above.

2.3. Supply-side determinants of women’s political participation

We collected information on several possible determinants of women’s political participation. Our focus was on what we describe as “supply-side” characteristics – i.e. women’s individual level characteristics that they have the potential to directly change – rather than external or contextual factors completely outside their control. In particular, we do not focus on factors such as voters’ views about women candidates or the views of existing government officials or political parties (Kunovich & Paxton, 2005). Nor do we focus on other external determinants, such as electoral rules or practices that may systematically disadvantage women (Krook & Schwindt-Bayer, 2013) or the role played by societal reactions to candidacy (Gulzar & Khan, 2017) or the constraints posed by negative advertising or intimidation efforts by political opponents.

Among the set of supply-side reasons for women’s lower participation, one is their relative lack of knowledge about the political process and the opportunities for women therein. In the context of our survey, such a gap is plausible given that 56% of women were illiterate compared to 22% of men. We examined respondents’ knowledge of politics via a series of questions about institutions such as the *gram sabha* (village public meetings that are open to all village residents), the process of selection of *panchayat* members, ballot secrecy and opportunities available to women due to the gender quota for political office. The answers to eight questions were combined into a standardized “index of knowledge of political institutions.”

A different reason for women’s lower participation could be women’s poorer self-assessment of themselves as potential candidates. As Lawless and Fox (2010) and Lawless (2012) document in the U.S., similarly qualified men and women nevertheless exhibit a large gap in their self-assessed likelihood of success as candidates. In the Indian context, we should note that official qualifications for candidacy are quite minimal. For village elections, candidates need to be 21 years old, reside in the village, be registered as a voter and lack a criminal record. In fact, the government rules are supposed to help women candidates. For instance, nomination filing fees are halved for women candidates. However, women’s subjective

self-evaluations about their leadership abilities may still outweigh these objective factors that favor them.

Our survey asked a number of questions to assess respondents’ self-perception as leaders. The questions focused on how confident they were about their ability to determine the direction of activities for a group, to change the attitudes and behaviors of group members, build an effective team, delegate specific tasks to individual members, to identify their own strengths and weaknesses and to get things done. The answers to these questions were collected on a four-point Likert scale and then converted to indicator variables. All six answers were then combined into an “self-assessed leadership index.”

A different psychological difference between men and women may be in the extent to which they believe that an individual’s participation can change important public outcomes. We assessed this by asking about their agreement with statements about whether individuals can eliminate conflicts in society by their efforts, whether the average citizen can influence government decisions, whether leadership opportunities are available to everyone and whether voters are responsible for bad governments. The responses to these questions are combined into a “public locus of control index.”

We also asked questions about how much control women felt they had over their own lives, rather than influencing public outcomes. Improvements in such measures of individual agency have been shown to mediate better health and savings outcomes (Ghosal, Mani, Mitra, Jana, & Roy, 2017). We asked respondents whether they agreed with the following statements: that they can change their fate through their own efforts, that they are certain of making their plans work and that people get the respect they deserve, and combined these answers to create a “personal locus of control index.”⁸

A widely used approach to assess women’s empowerment is to examine their influence on household decision making and the extent of their physical mobility in their local areas. We asked a series of questions about whether women had a “high,” “moderate,” “low” or “very low” say in household spending decisions on food, clothing, medical expenses, education, land or household repairs. There was considerable heterogeneity across these six indicators, which were then combined into a “voice index.”

Women in rural India have very limited mobility outside their homes. In our sample, we find that 25% of women report never going to the market and another 28% of women report that they need to ask permission before going to the market; 46% of women report requiring permission even to go to nearby places such as a friend’s house. We therefore construct an index of mobility based on a set of four questions about women’s ability to go alone to the market, to a friend’s house and to visit relatives, as well as whether they had gone outside their village more than once in the past month. These questions on voice and mobility were not asked for men, since they are rarely subject to these constraints. In the regression analysis, we impute the highest value of these indices for men.

3. Gender gaps in political participation and its determinants

3.1. Regression specification

To assess the statistical significance of the gender gaps in political participation, as well as to see whether they are attributable to

⁸ Note that this is a modified version of the locus of control questionnaire introduced in Rotter (1966). Several questions from the original scale were dropped due to difficulties in communicating the question in the context of rural India.

demographic differences, household characteristics or village level factors, we run the following regression:

$$Y_{iv} = a_v + b \text{Female}_i + \mathbf{X}_{iv}d + e_{iv} \quad (1)$$

where Y_{iv} measures political participation of individual i living in village v , a_v is a village fixed effect that controls for village characteristics, Female_i is a dummy variable that equals one if individual i is female, \mathbf{X}_{iv} is a vector of individual demographics and household characteristics other than gender that could affect political participation or be correlated with it, and e_{iv} is the error term.

The coefficient b is our measure of the gender gap, namely the difference in outcome between men and women residing in the same village, after controlling for a range of individual and household characteristics. \mathbf{X}_{iv} includes the following: a dummy for whether the respondent is illiterate,⁹ religion and caste category dummies (whether the respondent is a Muslim, a member of the Scheduled Castes or a member of the Other Backward Castes), a dummy for whether the household is landless, a household assets index and an index of housing quality. The asset index takes values between 0 and 9, based on ownership of nine different durable goods; the housing quality index takes values between 0 and 5, based on the quality of housing amenities.¹⁰ In all specifications, standard errors are adjusted for within-village clustering, to account for the fact that outcomes of respondents within the same village may be correlated with each other (Bertrand, Duflo, & Mullainathan, 2004).

3.2. Gender gaps in political participation

We document considerable gender gaps that disfavor women, both in the electoral and the non-electoral dimensions of political participation (Table 1). However, this masks considerable diversity in participation rates among the range of measures we consider. In activities such as voting, both men and women have high participation rates, even leading to a gender gap that slightly favors women's participation. However, in other components of political participation, men participate at reasonably high rates, but women do not, which results in a significant gender gap. For example, over 75% of men report discussing politics with friends or family, but women are much less likely to do so, resulting in a gap of over 10% points. The largest gender gap is in having heard a candidate speech in the past: 61% of men have done so, compared to only 23% of women. Women also lag behind men in terms of participating in electoral activities such as door-to-door campaigning, distributing leaflets or organizing campaign events. In terms of formal involvement with politics, women are 7.1 percentage points less likely than men to be a member of any political party. In a couple of activities such as campaign donations and candidacy, both men and women have low rates of participation; nevertheless, women do still lag behind in candidacy by a statistically significant 2.6 percentage points (Table 1, panel A, columns 1 and 2).

Columns 3 and 4 show the coefficients b obtained from a regression based on specification (1) and its associated standard error. They enable us to test whether the documented difference between men and women is statistically different from zero. We find that the gender gap in electoral participation is statistically significant even after controlling for individual demographics, edu-

cation levels, asset ownership and village fixed effects. In particular, our combined index of political participation is 0.58 standard deviations higher for men, compared to women. This difference corresponds to men engaging in 0.92 actions more than women on this 10-point scale.

Turning to non-electoral political participation, we observe large gender gaps in all of our measures: in attending or speaking at village meetings, contacting government officials in writing, and in attempting to meet a range of government officials (Table 1, panel B, columns 1 and 2). The largest gaps we document are in fact at the local level: while 44% of men have attended village meetings and 73% of men have tried to meet the village council leader (*pradhan*) in the last 12 months, the corresponding figures for women are only 17% and 43%. Controlling for individual, household and village characteristics does not reduce this gender gap by much (Table 1, panel B, columns 3 and 4). In particular, the combined index of non-electoral political participation is 0.895 standard deviations higher for men, a gap larger than the one documented for electoral political participation in Panel A. In terms of the number of forms of political participation, this corresponds to men engaging in 1.8 more actions than women on this 11-point scale.

In percentage terms, this means that the gender differences in India are much higher than in the United States. For the U.S., Burns et al. (2001) document that men engage in 0.31 more political actions on an 8-point scale that includes measures of both electoral and non-electoral participation. We constructed a similar 8-point scale using measures from our survey that most closely correspond to theirs, and find that men engage in 1.05 more activities than women. Relative to the U.S., male participation rates in India are not systematically lower across the board. U.S. men are more likely to belong to political organizations compared to Indian men (53% vs. 13%), and more likely to donate money to political campaigns (27% vs 7.6%). However, Indian men are more likely to contact a government official (73% tried to meet the village *Pradhan*, compared to 38% of U.S. men who contacted a government official), and in active participation in political campaigns (28% of Indian men report participation in door-to-door campaigning compared to only 9% of U.S. men). Thus, it seems reasonable to conclude that the gender gaps observed in the Indian context are not just driven by low overall rates of political participation.

These gender gaps in political participation remain large and statistically significant even when we restrict our sample to the set of randomly selected respondents within each village. For electoral participation, the index of political participation is 0.65 standard deviations higher for men compared to women in this sub-group. (Table 1, panel A, columns 5 and 6). For non-electoral participation, the combined index is more than a full standard deviation higher for men than women (Table 1, panel B, columns 5 and 6). Our estimated gender gaps also remain very large and statistically significant even when restricted to the non-SC population, suggesting that the targeting strategy of the NGO we worked with does not bias our estimates much (results available upon request).

3.3. Gender gaps in supply-side determinants of political participation

We find that women lag behind men on several different personal characteristics that might affect political participation. First, we find that on almost all questions related to local political institutions, women are 5–10 percentage points less likely to give the correct answer (Table 2, columns 1 and 2). It is particularly striking that 27% of women give the wrong answer to the question of whether women can become panchayat members (i.e. they answer “no”), despite the existence of a one-third quota. Similarly, 44% of women and 36% of men believe that it is possible to have an all-male panchayat. When we combined all of these questions into a

⁹ Our results remain very similar when we include six education category dummies rather than just the illiteracy dummy.

¹⁰ The durable goods considered are tractors, private toilets, bicycle, other vehicles, electricity in the home, refrigerators, TVs, radios and telephones. The median number of assets owned by households was 3; 91% of households reported owning a telephone while only 6% reported owning a tractor. The housing quality index is the sum of 5 components: whether the house has a brick or tile roof, tile or cement floors, a pukka wall made of brick or wood, a private tap or well, and LPG as the main cooking source.

Table 1
Gender Gaps in Political Participation.

	Means		Differences between men and women (gender gap)			
	Men 1	Women 2	All respondents		Randomly chosen respondents only	
			Coefficient 3	s.e. 4	Coefficient 5	s.e. 6
<i>Panel A: Electoral Political Participation</i>						
Voted in last village election	0.880	0.899	−0.016	[0.014]	−0.009	[0.022]
Voted in last state election	0.856	0.890	−0.008	[0.014]	0.008	[0.022]
Discussed politics with friends/family	0.762	0.675	−0.107***	[0.019]	−0.099***	[0.035]
Ever listened to candidate speech	0.615	0.232	−0.376***	[0.021]	−0.407***	[0.033]
Door-to-door campaigning	0.283	0.134	−0.133***	[0.017]	−0.176***	[0.027]
Distributed leaflets	0.237	0.102	−0.124***	[0.016]	−0.152***	[0.025]
Organized campaign events	0.167	0.087	−0.059***	[0.015]	−0.062***	[0.023]
Donated to a campaign	0.076	0.063	−0.003	[0.011]	−0.023	[0.019]
Member of any political party	0.135	0.051	−0.071***	[0.013]	−0.080***	[0.019]
Ever been a candidate	0.078	0.052	−0.024**	[0.010]	−0.038**	[0.016]
Index of electoral participation	0.573	0.000	−0.583***	[0.046]	−0.653***	[0.077]
<i>Panel B: Non-electoral Political Participation</i>						
Attended Gram Sabha meeting	0.439	0.172	−0.270***	[0.020]	−0.316***	[0.031]
Spoke in Gram Sabha meeting	0.285	0.116	−0.171***	[0.019]	−0.212***	[0.028]
Signed a petition or letter	0.218	0.121	−0.089***	[0.017]	−0.107***	[0.027]
Wrote a letter to a government official	0.164	0.074	−0.078***	[0.015]	−0.084***	[0.024]
Tried to meet local MLA	0.229	0.064	−0.150***	[0.015]	−0.174***	[0.023]
Tried to meet district officials	0.182	0.062	−0.098***	[0.014]	−0.113***	[0.021]
Tried to meet block officials	0.252	0.114	−0.112***	[0.017]	−0.148***	[0.028]
Tried to meet village pradhan	0.728	0.432	−0.308***	[0.021]	−0.324***	[0.036]
Tried to meet panchayat secretary	0.298	0.105	−0.180***	[0.019]	−0.219***	[0.028]
Tried to meet panchayat members	0.323	0.106	−0.204***	[0.018]	−0.237***	[0.027]
Tried to meet police official	0.224	0.096	−0.114***	[0.014]	−0.130***	[0.022]
Index of non-electoral participation	0.948	0.000	−0.895***	[0.055]	−1.041***	[0.083]

Notes: Index variables are computed as the sum of the individual indicators, normalized by the mean and standard deviation for all women respondents. Gender gaps in columns 3 and 5 are obtained by regressing the measures of political participation on a dummy for the respondent being female. All regressions control for village fixed effects and respondent demographic and economic characteristics such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality. Standard errors in columns 4 and 6 are corrected for within-village clustering. * represents significance at 10% level, ** at 5% level, *** at 1% level. Non-responses and respondents answering “don’t know” have been excluded from analysis.

Table 2
Gender Gaps in Knowledge of Political Institutions.

	Means		Difference between women and men (gender gap)			
	Men 1	Women 2	All respondents		Randomly chosen respondents only	
			Coefficient 3	s.e. 4	Coefficient 5	s.e. 6
Know about Gram Sabha <i>Answered correctly:</i>	0.629	0.403	−0.216***	[0.021]	−0.303***	[0.036]
Who selects panchayat members?	0.849	0.747	−0.101***	[0.016]	−0.111***	[0.031]
Can you know how other people voted?	0.864	0.853	−0.025	[0.016]	−0.011	[0.028]
Can women become panchayat members?	0.885	0.728	−0.123***	[0.016]	−0.165***	[0.030]
Can a woman become the pradhan?	0.948	0.874	−0.051***	[0.012]	−0.075***	[0.023]
Can we have an all-male panchayat?	0.656	0.559	−0.067***	[0.023]	−0.115***	[0.036]
Minimum # women if panchayat has 9 seats	0.263	0.150	−0.071***	[0.018]	−0.082**	[0.032]
Can we have an all-woman panchayat?	0.387	0.374	0.013	[0.022]	0.049	[0.037]
Index of knowledge of political institutions	0.539	0.000	−0.574***	[0.039]	−0.651***	[0.069]

Notes: Index variables are computed as the sum of the individual indicators, normalized by the mean and standard deviation for all women respondents. Gender gaps in columns 3 and 5 are obtained by regressing the measures of political participation on a dummy for the respondent being female. All regressions control for village fixed effects and respondent demographic and economic characteristics such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality. Standard errors in columns 4 and 6 are corrected for within-village clustering. * represents significance at 10% level, ** at 5% level, *** at 1% level. Non-responses and respondents answering “don’t know” have been excluded from analysis.

knowledge index, we find a gender gap of 0.57 standard deviations after controlling for individual, household and village characteristics; this corresponds to men answering about 1.7 more questions correctly out of the eight asked, compared to women. The gender gap is even larger (0.65 standard deviations) when we restrict to the randomly selected sample.

Women also lag behind men on the self-assessment of their leadership skills. They are less likely to be confident in their abilities to determine group activities, choose group members, delegate tasks or change attitudes or behaviors. They are also less confident in their ability to identify their own strengths and weaknesses, and to get things done. These gender gaps remain large and statistically

Table 3
Gender Gaps in Self-Assessed Leadership Skills and Locus of Control.

	Means		Difference between women and men (gender gap)			
	Men 1	Women 2	All respondents		Randomly chosen respondents only	
			Coefficient 3	s.e. 4	Coefficient 5	s.e. 6
<i>Panel A: Self-assessed Leadership Skills</i>						
Are you confident in your ability to						
Determine the direction of activities for a group	0.791	0.700	-0.046**	[0.019]	-0.085***	[0.032]
Change attitudes and behaviors of group members	0.784	0.708	-0.051***	[0.019]	-0.067**	[0.030]
Choose group members to build an effective and efficient team	0.807	0.678	-0.086***	[0.018]	-0.089***	[0.033]
Delegate specific tasks to specific members	0.896	0.807	-0.059***	[0.015]	-0.047*	[0.025]
Identify own strengths and weaknesses	0.924	0.860	-0.042***	[0.014]	-0.041*	[0.024]
Get things done	0.761	0.609	-0.102***	[0.020]	-0.121***	[0.034]
<i>Self-assessed leadership index</i>	0.330	0.000	-0.214***	[0.036]	-0.253***	[0.062]
<i>Panel B: Locus of control: public life</i>						
Do you agree that						
Our efforts can eliminate conflicts in society	0.863	0.834	-0.033**	[0.016]	-0.007	[0.026]
The average citizen can influence government decisions	0.843	0.785	-0.037**	[0.016]	-0.093***	[0.029]
Leadership opportunities are available to all	0.773	0.764	0.001	[0.018]	-0.013	[0.028]
Voters are responsible for bad government	0.257	0.274	0.021	[0.019]	0.015	[0.032]
<i>Public life locus of control index</i>	0.115	0.000	-0.072*	[0.039]	-0.128**	[0.064]
<i>Panel C: Locus of control: personal</i>						
Do you agree that						
You can change your fate through your efforts	0.842	0.798	-0.034**	[0.016]	-0.074**	[0.029]
You can make your plans work	0.756	0.743	-0.019	[0.019]	-0.060*	[0.033]
People get the respect they deserve	0.536	0.557	0.001	[0.021]	-0.005	[0.038]
<i>Personal locus of control index</i>	0.052	0.000	-0.065	[0.041]	-0.166**	[0.071]

Notes: Index variables are computed as the sum of the individual indicators, normalized by the mean and standard deviation for all women respondents. Gender gaps in columns 3 and 5 are obtained by regressing the measures of political participation on a dummy for the respondent being female. All regressions control for village fixed effects and respondent demographic and economic characteristics such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality. Standard errors in columns 4 and 6 are corrected for within-village clustering. * represents significance at 10% level, ** at 5% level, *** at 1% level. Non-responses and respondents answering “don't know” have been excluded from analysis.

significant even after controlling for individual, household and village characteristics, and when restricted to the randomly selected respondents. The combined index of self-assessed leadership is 0.21 standard deviations higher for men (Table 3, Panel A).

Turning to our measures of the public and private locus of control, we find much smaller gaps between men and women on these measures. The index of the locus of control related to public life shows men to be only 0.07 standard deviations higher than women (Table 3, Panel B). In particular, women and men do not differ significantly in their agreement with statements such as “leadership opportunities are available to all” and “voters are responsible for bad government.”

In terms of feeling in control of their personal life, we find that women are significantly less likely than men to believe that they can change their fate through their own efforts (Table 3, Panel C), but there is no gender gap on the answers to the other questions. The personal locus of control index shows no significant gender gap for the full sample, though women do lag behind men among the randomly chosen respondents.

4. Assessing the magnitude of the supply-side factors

4.1. How much do supply-side factors matter?

We have documented that women lag behind men on several supply-side factors that may hinder their political participation, namely their knowledge about political institutions and processes, their self-perception as leaders, their beliefs in the ability of citizens to affect government functioning and their empowerment in terms of being able to influence household decisions or to be mobile outside the home. We now assess how much these factors matter quantitatively to explain the gender gap in political participation.

We augment the regression specification (1) by adding additional variables as follows:

$$Y_{iv} = a_v + b \text{Female}_i + \mathbf{X}_{iv}d + f_1 \text{Knowledge}_{iv} + f_2 \text{LeaderSelfPercep}_{iv} + f_3 \text{LocusPub}_{iv} + f_4 \text{LocusPers}_{iv} + f_5 \text{Voice}_{iv} + f_6 \text{Mobility}_{iv} + e_{iv} \quad (2)$$

where Y_{iv} measures political participation of individual i living in village v , a_v is a village fixed effect, Female_i is a dummy variable that equals one if individual i is female, \mathbf{X}_{iv} is a vector of individual and village-specific characteristics, and e_{iv} is the error term. Knowledge_{iv} is an index of knowledge about political institutions and processes (see Table 2), $\text{LeaderSelfPercep}_{iv}$ is an index of self-assessed leadership qualities and LocusPub_{iv} and LocusPers_{iv} are indices of public and private locus of control respectively (see Table 3). Voice_{iv} is the index of their decision-making influence within the household and Mobility_{iv} is the mobility index, described earlier in Section 2.3. Our main interest is to see how the coefficient b , our measure of the gender gap, changes with the inclusion of these additional factors. As before, all regressions include controls for individual characteristics (illiteracy, caste and religion dummies, whether household is landless, a household assets index and an index of housing quality) and village fixed effects; standard errors are adjusted for within-village clustering.

We find that the gender gaps in political knowledge and self-assessed leadership scores are significant determinants of the gender gap in both electoral and non-electoral participation. A one-standard deviation increase in the political knowledge index increases the electoral political participation index by 0.31 standard deviations and non-electoral political participation index by 0.37 standard deviations (Table 4, columns 1 and 3). The gender gap in the electoral participation index declines from 0.583

Table 4
Is the Political Participation Gender Gap Explained by Supply Side Factors?

	All respondents				Randomly selected respondents only			
	Electoral participation index		Non-electoral participation index		Electoral participation index		Non-electoral participation index	
	1	2	3	4	5	6	7	8
Female dummy	−0.368*** [0.046]	−0.157** [0.061]	−0.639*** [0.055]	−0.541*** [0.067]	−0.445*** [0.083]	−0.265** [0.109]	−0.768*** [0.087]	−0.687*** [0.114]
Political knowledge index	0.311*** [0.028]	0.289*** [0.028]	0.371*** [0.028]	0.360*** [0.029]	0.270*** [0.048]	0.258*** [0.050]	0.361*** [0.049]	0.351*** [0.050]
Self-assessed leadership index	0.191*** [0.026]	0.173*** [0.027]	0.201*** [0.027]	0.201*** [0.027]	0.190*** [0.045]	0.173*** [0.047]	0.151*** [0.044]	0.155*** [0.044]
Public locus of control index	−0.028 [0.024]	−0.019 [0.024]	−0.005 [0.024]	−0.001 [0.024]	−0.049 [0.041]	−0.045 [0.041]	0 [0.041]	0.003 [0.041]
Personal locus of control index	−0.042 [0.026]	−0.041 [0.026]	0.005 [0.028]	0.005 [0.028]	−0.053 [0.044]	−0.052 [0.044]	−0.003 [0.046]	−0.005 [0.046]
Voice index		0.081*** [0.029]		−0.017 [0.031]		0.110* [0.058]		−0.017 [0.055]
Mobility index		0.138*** [0.030]		0.105*** [0.030]		0.078 [0.055]		0.087 [0.053]
R-squared	0.27	0.28	0.34	0.35	0.33	0.33	0.44	0.44
N	2573	2573	2573	2573	1161	1161	1161	1161

Notes: Standard errors in brackets, corrected for within-village clustering. * represents significance at 10% level, ** at 5% level, *** at 1% level. All regressions control for village fixed effects and respondent demographic and economic characteristics (illiteracy, landlessness, religion and caste categories, a household assets index and an index of housing quality).

standard deviations (Table 1, panel A) to 0.368 standard deviations after the inclusion of these variables, a decline of 37%. Similarly, the gender gap in non-electoral participation declines by 29% after the inclusion of these variables. Somewhat surprisingly, the locus of control variables do not have a statistically significant relationship with political participation.

Addition of the voice and mobility indices further helps to reduce the gender gap in political participation. Women's voice in household decisions and their mobility outside the home are both statistically significant predictors of electoral political participation, but only mobility is a significant predictor of non-electoral participation (Table 4, columns 2 and 4). This suggests that household financial resources are an important determinant of electoral political participation, which makes sense since most components of non-electoral political participation do not involve spending money but do require women to go outside the home (e.g. to meet the village *pradhan*). Addition of the voice and mobility indices reduces the gender gap in electoral participation by 73% and in non-electoral participation by 40%.

Our results remain similar when restricted to the randomly selected respondents sample: political knowledge and self-assessed leadership are important determinants of political participation. The reduction in the gender gap is of the same order of magnitude: controlling for these supply-side factors reduces the gender gap in both electoral and non-electoral participation by 32% and 26% respectively (Table 4, columns 5 and 7). As with the full sample, women's voice and mobility indices are quantitatively more important for electoral participation than non-electoral participation: addition of these variables reduces the gender gap in electoral and non-electoral participation by 59% and 34% respectively (Table 4, columns 6 and 8).

The fact that a significant gender gap remains even after controlling for these supply-side factors suggests that changing women's relevant attributes (knowledge, confidence, education, voice in household decisions, mobility) may not be enough to bring their political participation in line with those of men. In particular, we should note that women lag behind men by 0.16 standard deviations on the electoral participation index and by 0.54 standard deviations on the non-electoral participation index, even after controlling for all of these factors. Analysis of the different components of the electoral participation index suggests that controlling for

these supply-side determinants eliminates the gender gap in political candidacy and in respondents' willingness to discuss politics with friends and family; however, women are still 26 percentage points less likely to have listened to a candidate speech, 6.7 percentage points less likely to have engaged in door-to-door campaigning and 5.2 percentage points less likely to be a member of a political party (results available upon request). A large and statistically significant gender gap persists on all components of the non-electoral participation index, even after controlling for supply-side factors. In particular, women are 16 percentage points less likely to attend the village meeting (*gram sabha*) meeting and 13 percentage points less likely to try meet with the village *pradhan*.

4.2. Oaxaca-Blinder decomposition

A different way to examine the relative importance of supply-side versus demand-side factors is to perform a Oaxaca-Blinder decomposition, along the lines used to estimate the presence of discrimination in the labor market (Blinder, 1973; Oaxaca, 1973). Suppose that the political participation of men and women depends on their characteristics as follows:

$$Y_M = Z_M b_M$$

$$Y_W = Z_W b_W$$

where Y_M denotes the political participation of men, Z_M are the average characteristics of men (demographics, knowledge of political institutions, self-assessed leadership etc) and b_M is a vector of "returns" to these characteristics. Y_W , Z_W and b_W denote similar variables for women. Then the gender gap, or the difference between the outcomes of men and women, can be written as:

$$Y_W - Y_M = (Z_W - Z_M)b_M + Z_M(b_W - b_M) + (Z_W - Z_M)(b_W - b_M) \quad (3)$$

The first term on the right hand side of (3) denotes how much of the gender gap arises purely because of differences in women's characteristics (Z) relative to men, the second term denotes how much of the gender gap is attributable purely to the differences in the returns to different characteristics for men versus women

Table 5
Oaxaca-Blinder Decomposition of Political Participation.

	All respondents				Randomly selected respondents only			
	Electoral participation index		Non-electoral participation index		Electoral participation index		Non-electoral participation index	
	Men 1	Women 2	Men 3	Women 4	Men 5	Women 6	Men 7	Women 8
Political knowledge index	0.324*** [0.054]	0.308*** [0.037]	0.432*** [0.059]	0.320*** [0.035]	0.294*** [0.092]	0.257*** [0.092]	0.420*** [0.094]	0.279*** [0.089]
Self-assessed leadership index	0.283*** [0.056]	0.158*** [0.031]	0.293*** [0.062]	0.180*** [0.031]	0.226** [0.093]	0.144* [0.082]	0.183* [0.103]	0.087 [0.066]
Public locus of control index	-0.052 [0.050]	-0.014 [0.030]	-0.024 [0.053]	0.003 [0.030]	-0.051 [0.082]	-0.131* [0.074]	0.019 [0.094]	-0.047 [0.059]
Personal locus of control index	-0.04 [0.048]	-0.025 [0.033]	0.01 [0.053]	-0.008 [0.035]	-0.086 [0.092]	0.06 [0.078]	0.089 [0.102]	0.019 [0.070]
Illiteracy dummy	-0.074 [0.107]	0.274*** [0.066]	-0.14 [0.115]	0.021 [0.064]	0.019 [0.204]	0.388** [0.173]	0.056 [0.216]	-0.066 [0.141]
Landless dummy	-0.161 [0.116]	-0.05 [0.087]	-0.301** [0.134]	0.039 [0.090]	-0.137 [0.219]	0.116 [0.221]	-0.321 [0.199]	0.141 [0.209]
Household asset index	-0.003 [0.033]	0.004 [0.025]	0.003 [0.034]	-0.064*** [0.022]	-0.052 [0.056]	0.002 [0.058]	-0.054 [0.060]	-0.051 [0.054]
Housing quality index	0.001 [0.041]	0.036 [0.027]	-0.082* [0.045]	-0.001 [0.029]	0.005 [0.073]	0.036 [0.071]	-0.039 [0.085]	-0.008 [0.067]
R-squared	0.32	0.3	0.37	0.32	0.45	0.54	0.49	0.54
N	1128	1445	1128	1445	630	531	630	531
<i>Oaxaca-Blinder Decomposition</i>								
Change in women's outcome if they had the same characteristics as men		0.165		0.259		0.079		0.247
Change in women's outcome if they had the same coefficients as men		0.248		0.525		0.318		0.723
Interaction term		0.160		-0.189		0.189		0.095

Notes: Standard errors in brackets, corrected for within-village clustering. * represents significance at 10% level, ** at 5% level, *** at 1% level. All regressions control for village fixed effects and dummies for religion and caste categories.

and the third term is an interaction effect between the first two components. Conceptually, these correspond to purely supply-side factors (characteristics of women), purely demand-side factors (e.g. views of voters, parties etc) and the interaction between supply and demand side factors.

We perform such a Oaxaca-Blinder decomposition for our political participation variables in Table 5. We first run separate regressions for men and women, and note that several of the coefficients are different across men and women. For instance, the self-assessed leadership variable has a bigger impact on men's political participation. We should note that we are unable to include the voice and mobility indices in this decomposition, since there is no variation in these indices among men, with all men being assigned the highest value. The Oaxaca-Blinder decomposition at the bottom of the table suggests that both supply-side and demand-side factors are important, but that the latter play a bigger role. For instance, women's electoral participation index would increase by 0.165 standard deviations if women's characteristics (education, knowledge, assets, self-confidence) were the same as men and by 0.248 standard deviations if they had the same "returns" to those characteristics as men; the interaction term would lead to a further increase of 0.16 standard deviations (based on the regressions in Table 5, columns 1 and 2).¹¹ Similarly, non-electoral participation of women would increase by 0.259 standard deviations if they had the same supply-side factor levels as men and by 0.525 if they had the same coefficients as men; the interaction effects accounts for 0.164 standard deviations (regressions in columns 3 and 4). The Oaxaca-Blinder decomposition analysis for the subsample of randomly selected respondents shows a similar pattern (columns 5–8).

The relative contribution of demand-side factors becomes even larger when we restrict our sample to the randomly selected respondents only (Table 5, columns 5–8). In terms of specific com-

ponents of these indices, we find that the supply-side factors account for more of the gender gap for some of the components of the electoral participation index, while demand-side factors account for more of this gap in other components of the electoral participation index. For the non-electoral participation index, by contrast, demand-side factors uniformly account for more of the gender gap than the supply-side factors (Appendix Table A1).

4.3. Do gender quotas narrow the gender gap?

The most prominent measure undertaken by the Indian government to increase women's political involvement has been the imposition of a gender quota in local governments. Following a constitutional amendment in 1993, all local councils at village, block and district levels are required to set aside one-third of member positions for women. Further, one-third of all village, block and district level councils are required to have women council heads.¹² The villages required to have women *pradhans* are randomly chosen by the State Election Commission, and in these places, only women can become candidates for the *pradhan* position. Since our survey took place in the last year of the *pradhan's* term of office, we have exogenously generated variation in whether or not the village had recently experienced a woman *pradhan's* term in office. In our data, 36% of our survey villages had their *pradhan* positions reserved for women in the 2010 election, and 46% of villages had women *pradhans* (since women can compete for non-reserved positions as well).

We examine whether experiencing a woman *pradhan* for the last five years increases either women's political participation or the supply-side determinants of participation using a regression specification as follows:

¹¹ These components sum to a total gender gap of 0.573 standard deviations, as reported in Table 1.

¹² Previous studies have examined the effects of this reform on public goods provision (Chattopadhyay & Duflo, 2004), attitudes towards women leaders (Beaman et al., 2009), aspirations and education attainment for girls (Beaman, Chattopadhyay, Duflo, Pande, & Topalova, 2012) and crimes against women (Iyer et al., 2012).

Table 6
Does the Presence of Women Leaders Affect Women's Political Participation or its Determinants?

	Full sample Impact of woman pradhan on		Randomly selected sample Impact of woman pradhan on	
	Women 1	Men 2	Women 3	Men 4
<i>Panel A: Political participation</i>				
Electoral participation index	0.034 [0.066]	−0.072 [0.088]	−0.043 [0.092]	−0.088 [0.106]
Non-electoral participation index	0.122* [0.065]	−0.106 [0.105]	0.020 [0.082]	−0.148 [0.128]
<i>Panel B: Supply side factors</i>				
Political knowledge index	0.100 [0.082]	−0.174** [0.070]	0.020 [0.111]	−0.152* [0.083]
Self-assessed leadership index	0.055 [0.065]	0.063 [0.062]	0.125 [0.102]	0.105 [0.074]
Public locus of control index	0.036 [0.070]	0.075 [0.067]	0.105 [0.096]	0.049 [0.085]
Private locus of control index	0.174** [0.077]	0.149** [0.070]	0.182* [0.103]	0.175* [0.091]

Notes: Standard errors in brackets, corrected for within-village clustering. ***indicates significance at 1% level, ** at 5% level, * at 10% level. Each cell represents the coefficient from a regression of the dependent variable on whether the village council head (pradhan) was a woman, instrumented by whether the pradhan position was reserved for a woman. All regressions control for respondent demographic and economic characteristics such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality.

$$Y_{iv} = a + p \text{FemalePradhan}_v + c X_{iv} + u_{iv} \quad (4)$$

where Y_{iv} measures political participation (or one of its components) of individual i living in village v , a is a constant term, FemalePradhan_v is a dummy variable that equals one if the village had a female pradhan for the past five years, X_{iv} is a vector of individual characteristics, and u_{iv} is the error term. We instrument FemalePradhan_v with a dummy for whether the village was reserved for a woman pradhan. This dummy variable generates exogenous variation in the gender of the pradhan that is uncorrelated with village characteristics (since such reservation is randomly assigned). We run this regression separately for men and women, with standard errors adjusted for within-village clustering.

We find that the presence of a woman pradhan does not lead to any significant change in the electoral political participation of women or men (Table 6, Panel A). The lack of increase in electoral participation is consistent with results in prior studies such as Beaman, Chattopadhyay, Duflo, Pande, and Topalova (2009), who find an increase in female political candidacy only after exposure to women leaders for two terms. In fact, women report a lower probability of voting in state elections in villages with a woman pradhan, while men are less likely to be discussing politics with family and friends (Appendix Table A2, panel A).

The presence of a woman pradhan does lead to an increase of 0.12 standard deviations in women's non-electoral political participation that is significant at the 10% level of significance, and a (non-significant) decrease of 0.106 standard deviations in the non-electoral participation of men (Table 6, panel A). The increase in women's non-electoral participation arises from their greater willingness to try and meet officials at the village and block level, including police officials.¹³ Men, on the other hand, become less likely to speak at village meetings when there is a woman pradhan, and also less likely to contact panchayat members (Appendix Table A2, panel B).

In terms of the supply-side determinants of political participation, we find no impact of women pradhans on women's knowledge of political institutions, self-assessed leadership and the

public locus of control index. Men in villages with women pradhans report lower levels of knowledge about political institutions, consistent with their lower values on measures of non-electoral participation (Table 6, panel B). Interestingly, both women and men report higher values on the private locus of control index when a woman pradhan is present; however, we have shown that this is not a significant predictor of electoral or non-electoral political participation.

5. Conclusions

Most studies of the gender gaps in political participation focus on two types of outcomes, voting behavior and the fraction of elected political representatives. However, this leaves out a wide range of activities that are an important and influential part of political and civic engagement. Our study fills this gap by providing systematic evidence on gender gaps in a broad range of such civic activities in the world's largest democracy, India.

Using original survey data from Uttar Pradesh, India's largest state, we document three important facts related to the civic and political engagement of women. First, the gender gap in non-electoral participation is larger than the gap in electoral participation. Specifically, there are no gender gaps in voting, women lag behind by 2.4 percentage points in candidacy and 13 percentage points in campaign involvement. In contrast, they lag behind by 31 percentage points in the likelihood of attempting to meet the village leader and 27 percentage points in attending village council meetings. Second, some of these gender political participation gaps can be attributed to supply-side factors where women lag behind, such as their knowledge of political institutions, self-assessed leadership skills, voice in household decisions and mobility within the village and beyond. Controlling for these determinants reduces the gender gap in electoral political participation by 73%, and in non-electoral political participation by 40%, but does not close either. This suggests a large role for other determinants of political participation beyond women's direct control. These are likely to be "demand side" factors such as the views of voters, political parties and other societal actors on women's suitability for politics. Third, we consider the effect of the main policy tool that has been used to increase women's political voice, namely political gender quotas. We find that the presence of a woman leader in the village does

¹³ This is consistent with the results in Iyer et al. (2012), who also find both greater willingness to approach police officials among women and greater police responsiveness to women in places with a woman pradhan.

narrow the observed gender gaps in both electoral and non-electoral participation, but only to a modest extent. The largest impact is on the probability of women attempting to meet the village leader, which increases by 5.8% when the leader is a woman, compared to the original gender gap of 31%.

Our findings have implications for the design of policies aimed at bridging the gender gap. First, they draw attention to an important missing piece of the picture on political and civic engagement of women relative to men that merits policy focus. The picture we document suggests that policies designed to improve supply-side determinants of women's political participation can have sizable effects in bridging the gender gap. In particular, bringing women's supply-side attributes on par with men would reduce the electoral participation index gap by 0.165 standard deviations (the overall gap is 0.58 standard deviations). However, such policies will be unable to close the gender gap; other policies that target the demand side are likely to have a bigger impact. Policies to address these latter set of challenges may be harder to implement than the former. Future research needs to better understand the feedback linkages between electoral and non-electoral participation of women and men, as well as explore both additional formal policy

innovations and informal approaches to increase women's political voice.

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Appendix

Tables A1 and A2.

Table A1
Oaxaca-Blinder Decomposition for the Full Range of Political Participation Indicators.

	Mean outcome differential	Change in women's outcome if they had the same characteristics as men	Change in women's outcome if they had the same coefficients as men	Interaction term
<i>Panel A: Electoral Political Participation</i>				
Voted in last village election	-0.019	-0.002	-0.017	0.000
Voted in last state election	-0.034	-0.009	-0.001	-0.024
Discussed politics with friends/family	0.087	0.031	0.027	0.028
Ever listened to candidate speech	0.383	0.065	0.260	0.058
Ever been a candidate	0.026	0.013	0.008	0.005
Member of any political party	0.084	0.018	0.027	0.040
Door-to-door campaigning	0.149	0.038	0.038	0.074
Distribute leaflets	0.135	0.038	0.053	0.044
Organize campaign events	0.080	0.039	0.003	0.038
Donate to a campaign	0.013	0.031	-0.001	-0.017
Index of electoral participation	0.573	0.165	0.248	0.160
<i>Panel B: Non-electoral Political Participation</i>				
Attended Gram Sabha meeting	0.267	0.083	0.168	0.016
Spoke in Gram Sabha meeting	0.168	0.058	0.080	0.030
Signed a petition or letter	0.097	0.032	0.034	0.030
Wrote a letter to a government official	0.090	0.038	0.040	0.012
Tried to meet local MLA	0.165	0.024	0.092	0.049
Tried to meet district officials	0.120	0.042	0.059	0.019
Tried to meet block officials	0.138	0.045	0.024	0.069
Tried to meet village pradhan	0.296	0.052	0.229	0.016
Tried to meet panchayat secretary	0.193	0.042	0.122	0.028
Tried to meet panchayat members	0.217	0.057	0.119	0.041
Tried to meet police official	0.128	0.041	0.075	0.013
Index of non-electoral participation	0.948	0.259	0.525	0.164

Table A2
Presence of Women Pradhans and Different Components of Political Participation.

	Full sample Impact of woman pradhan on		Randomly selected sample Impact of woman pradhan on	
	Women 1	Men 2	Women 3	Men 4
<i>Panel A: Electoral Political Participation</i>				
Voted in last village election	-0.022	-0.022	-0.007	-0.033
Voted in last state election	-0.034*	-0.035	-0.071**	-0.06
Discussed politics with friends/family	0.033	-0.058*	0.023	-0.106***
Ever listened to candidate speech	-0.001	0.009	0.014	-0.021
Ever been a candidate	0.01	-0.027	-0.002	0.013
Member of any political party	0.009	-0.012	-0.005	-0.028
Door-to-door campaigning	0.025	-0.014	-0.008	0.012
Distributed leaflets	0.008	0.025	-0.006	0.04
Organized campaign events	0.009	-0.006	-0.02	0.021
Donated to a campaign	0.014	0.008	0.037	0.007
Index of electoral participation	0.034	-0.072	-0.043	-0.088
<i>Panel B: Non-electoral Political Participation</i>				
Attended Gram Sabha meeting	0.011	-0.063	-0.012	-0.064
Spoke in Gram Sabha meeting	0.013	-0.082**	0.021	-0.061
Signed a petition or letter	0.009	-0.025	-0.013	-0.013
Wrote a letter to a government official	0.002	0.018	0.002	0.037
Tried to meet local MLA	0.009	-0.021	0.013	-0.052
Tried to meet district officials	-0.005	-0.014	-0.017	0.008
Tried to meet block officials	0.048**	-0.004	0.009	-0.031
Tried to meet village pradhan	0.058*	0.053	-0.012	0.029
Tried to meet panchayat secretary	0.035*	-0.011	0.013	-0.025
Tried to meet panchayat members	0.02	-0.061*	0.031	-0.107**
Tried to meet police official	0.040**	0.005	0.005	-0.013
Index of non-electoral participation	0.122*	-0.106	0.020	-0.148

Notes: ***indicates significance at 1% level, ** at 5% level, * at 10% level. Each cell represents the coefficient from a regression of the dependent variable on whether the village council head (pradhan) was a woman, instrumented by whether the pradhan position was reserved for a woman. All regressions control for respondent demographic and economic characteristics such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality.

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