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**The Road Not Taken: Gender Gaps along
Paths to Political Power**

Lakshmi Iyer and Anandi Mani

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The Road Not Taken: Gender Gaps along Paths to Political Power*

Lakshmi Iyer
University of Notre Dame

Anandi Mani
Blavatnik School of Government, Oxford University

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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. The 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 an Oaxaca-Blinder decomposition approach, we find that bringing women's attributes on par with men would bridge less than half the gender gap. This suggests that external factors, such as the role played by voters, 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. Our evidence points to the need to consider a wider set of policy tools beyond quotas to encourage women's civic and political engagement.

Keywords: political participation, civic engagement, gender gap, India, women leaders, gender quotas

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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 in 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 that are better attuned to women's needs and concerns (Chattopadhyay and Duflo, 2004; Rehavi, 2012; Iyer et al, 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 and Clots-Figueras, 2014; Brollo and Troiano, 2016; Clots-Figueras, 2012; Dollar, Fisman and Gatti, 2001; Miller, 2008; Swamy et al, 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 have inherent differences in their policy preferences and interests (Madison, Federalist No. 10), and can engage in a rich array of activities to ensure the representation of their interests 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.

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 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 et al, 1999). Unequal participation in these activities could result in unequal political voice. India, in particular, 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 and 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 and 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.³

Systematic evidence on citizen participation in these other political and civic activities is largely based on the experience of developed countries: Burns et al (2001)

³ 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 (Saxenla, 2015).

document the gender gaps in political participation in the United States, while Dal Bo et al (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.⁴

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 ("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/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

⁴ For instance, Chattopadhyay and Duflo (2004) and Deininger et al (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 and writing a letter to a public official is 0.10, and the correlation with attempting to meet the village council head is 0.31.

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 0.57 standard deviations behind 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. However, what is significant here is that 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 34% (30%) 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 35% (12%) of the electoral (non-electoral) participation gender gap. This still leaves 31% (58%) of the electoral (non-electoral) gender gap in participation unexplained. An 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, self-confidence) 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.⁵

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 2015.⁶ 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 average of 74% and 65% respectively.

⁵ Our results on the impact of female *pradhans* on non-electoral participation is consistent with those of other studies (Chattopadhyay and Duflo, 2004; Deininger et al, 2015; Priebe, 2017). 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 and Campa, 2017; Baudino, 2003; Casas-Arce and Saiz, 2015). Other studies have shown important spillover effects such as fewer women being fielded in non-quota constituencies (Sekhon and Titunik (2012)'s reanalysis of Bhavnani (2009)) or changes in the quality of male candidates (Besley et al, 2017).

⁶ Each *gram panchayat* consists of elected representatives from 2-4 villages. We selected the largest village of the village council for our survey.

We surveyed 2573 men and women across 256 selected villages, approximately 10 respondents in each village. The villages chosen were those in which women's self-help groups had been established.⁷ Of the 10 respondents in each village, three were women chosen from the members of the self-help groups, three were chosen as family members of these women and the remaining four were randomly selected village residents, two men and two women. 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. Overall, 56% of our survey respondents are female, 42% belong to Other Backward Castes and 8% are Muslims. A large fraction (41%) of our respondents are illiterate and 18% belong to landless households.

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 then sum these ten indicators to create an "index of

⁷ This survey formed the baseline data for the implementation of a leadership training program targeted towards self-help group members.

electoral participation” that is normalized with respect to the values for women respondents.⁸

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.”

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 and Paxton, 2005). Nor do we focus on other external determinants, such as electoral rules or practices that may systematically disadvantage women (Krook and Schwindt-Bayer, 2013) or the role played by societal reactions to candidacy (Gulzar and 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 a their relative lack of knowledge about the political process and the opportunities for

⁸ For each respondent, after summing these different indicators, we subtract the mean for women respondents and divide by the standard deviation for women respondents. This creates a normalized (z-score) variable that has mean zero and standard deviation one for women.

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 which are open to all), 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 assessments of their 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. The government rules in fact 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 assess 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 the likelihood of women feeling more or less in control of their own lives, rather than their likelihood of affecting public issues. Improvements in such measures of individual agency have been shown to mediate better health and savings outcomes (Ghosal et al, 2017). We asked whether respondents agreed with the following statements: whether they can change their fate through their own efforts, whether they are certain of making their plans work and whether people get the respect they deserve, and combined these answers to create a “personal locus of control index.”

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. While 45% of women report a high level of input in decisions regarding food expenses, only 33% of women report the

same for household repair expenses. These six indicators 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 demographic differences, household characteristics or village level factors, we run the following regression:

$$(1) \quad Y_{iv} = a_v + b Female_i + X_{iv}d + e_{iv}$$

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 which equals one if individual i is female, X_i 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. X_i includes the following: a dummy for whether the respondent is illiterate,¹⁰ 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),¹¹ 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.¹² 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 et al, 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

¹⁰ Our results remain identical when we include six education category dummies rather than just the illiteracy dummy.

¹¹ 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.

¹² 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.

masks considerable diversity across the range of measures we consider. Within electoral participation, we find that women are just as likely as men to have voted in the previous village or state election, but much less likely to be discussing politics with friends or family or listening to candidate speeches. 61% of men report having heard a candidate speech in the past, 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, and 2.6 percentage points less likely to have been an electoral candidate in the past (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 continues to be large and statistically significant even after controlling for individual demographics, education 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 acts of political participation, this corresponds to men engaging in 1.8 more actions than women on this 11-point scale.¹³

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. (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).

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

¹³ 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 acts than women.

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 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, 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 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 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 that 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 and their beliefs in the ability of citizens to affect government functioning, and their empowerment in terms of being able to influence household decisions or their ability to move 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:

$$(2) Y_{iv} = a_v + b Female_i + X_{iv}d + f_1 Knowledge_{iv} + f_2 LeaderSelfPercep_{iv} + f_3 LocusPub_{iv} \\ + f_4 LocusPers_{iv} + f_5 Voice_{iv} + f_6 Mobility_{iv} + e_{iv}$$

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 which equals one if individual i is female, 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), $LeaderSelfPercep_{iv}$ 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). 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) 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 standard deviations (Table 1, panel A) to 0.385 standard deviations after the inclusion of these variables, a decline of 34%. Similarly, the gender gap in non-electoral participation declines by 30% 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 69% and in non-electoral participation by 42%.

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 28% (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 54% and 37% 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 internal resources (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 0.18 standard deviations on the electoral participation index and by 0.52 standard deviations on the non-electoral participation index. 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 25 percentage points less likely to have listened to a candidate speech, 6.1 percentage

points less likely to have engaged in any campaign-related activities and 4.4 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 17 percentage points less likely to attend the village meeting (*gram sabha*) meeting and 13 percentage points less likely to try meeting 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 an Oaxaca-Blinder decomposition, along the lines used to estimate the presence of discrimination in the labor market (Blinder, 1973; Oaxaca, 1973). Suppose 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:

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

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 and the third term is an interaction effect. 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 an 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 is likely to play a bigger role. For instance, women's electoral participation index would increase by 0.165 standard deviations if women's characteristics 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.¹⁴ Similarly, non-electoral participation of women would increase by 0.259 standard deviations if they had the same supply-side factors as women and by 0.525 if they had the same coefficients as men; the interaction effects accounts for 0.164 standard deviations.

¹⁴ These components sum to a total gender gap of 0.573 standard deviations, as reported in Table 1.

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 components 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 the gap in some components. 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.¹⁵ 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 thus 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

¹⁵ Previous studies have examined the effects of this reform on public goods provision (Chattopadhyay and Duflo, 2004), attitudes towards women leaders (Beaman et al, 2009), aspirations and education attainment for girls (Beaman et al, 2012) and crimes against women (Iyer et al, 2012).

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:

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

where Y_{iv} measures political participation (or a determinant of it) 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* to generate 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 et al (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.¹⁶ 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, especially from developing countries. Our study fills this

¹⁶ This is consistent with the results in Iyer et al (2012), who also find greater willingness among women to approach police officials and greater police responsiveness in places with a woman *pradhan*.

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 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 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, coming to the determinants of gender political participation gaps, some of these 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 69%, and by 42% in non-electoral political participation, but does not close the gender gap. This suggests a large role for other determinants of political participation, most of which are likely to be on the “demand side”, namely shaped by the views of voters, political parties and other societal actors. 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 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. In fact, other policies that target the demand side, such as changing social norms regarding women's involvement in public life, are likely to have a bigger impact. In this sense, our results are consistent with the evidence on the determinants of civic action from developed countries like the United States, inasmuch as they highlight how political participation of women is shaped by factors such as norms and attitudes women face in their non-political (personal) lives. It is likely that policies to address these latter set of challenges may be harder to implement than the former. Nevertheless, future research needs to better understand the feedback linkages between electoral and non-electoral participation of women and men, as well as explore both formal policy innovations and informal arrangements to increase women's political voice.

References

- Bagues, Manuel and Pamela Campa. (2017). ‘Women and Power: Unpopular, Unwilling, or Held Back? Comment’, Working paper.
- Baudino, Claudie. (2003). ‘Parity Reform in France: Promise and Pitfalls’, *Review of Policy Research* vol. 20: 385-400.
- Beaman, L., Chattopadhyay R., Duflo E., Pande R. and Topalova P. (2009). ‘Powerful women: does exposure reduce bias?’ *Quarterly Journal of Economics* vol. 124(4), pp. 1497-1540.
- Beaman, L., Chattopadhyay R., Duflo E., Pande R. and Topalova P. (2012). ‘Female leadership raises aspirations and educational attainment for girls: a policy experiment in India’, *Science* vol. 335(6068), pp. 582-586.
- Bertrand, M., Esther Duflo and Sendhil Mullainathan. (2004). ‘How Much Should We Trust Differences-In-Differences Estimates?’ *Quarterly Journal of Economics*, vol 119(1), pp. 249–275
- Besley, Timothy, Olle Folke, Torsten Persson and Johanna Rickne (2017) ‘Gender Quotas and the Crisis of the Mediocre Man: Theory and Evidence from Sweden’, *American Economic Review*, vol 107(8)
- Bhalotra, S. and Clots-Figueras, I., 2014. ‘Health and the political agency of women’, *American Economic Journal: Economic Policy*, vol. 6(2), pp.164-97.
- Bhavnani, R. (2009). ‘Do electoral quotas work after they are withdrawn? Evidence from a natural experiment in India’, *American Political Science Review* vol. 103(1), pp. 23-35.

- Blinder, A. S. 1973. 'Wage Discrimination: Reduced Form and Structural Estimates', *Journal of Human Resources*, vol. 8(4): 436–455.
- Brollo, F. and Troiano U. (2016). 'What happens when a woman wins a close election? evidence from Brazil', *Journal of Development Economics* vol. 122, pp. 28-45.
- Burns, Nancy, Kay Lehman Schlozman and Sidney Verba. (2001). *The Private Roots of Public Action: Gender, Equality and Political Participation*. Harvard University Press, Cambridge, MA.
- Chhibber, Pradeep. (2002). 'Why some Women are Politically Active: The Household, Public Space, and Political Participation in India', *International Journal of Comparative Sociology*.
- Casas-Arce, P. and Saiz A. (2015). 'Women and power: unwilling, ineffective, or held back?' *Journal of Political Economy*, vol. 123(3), pp. 641-669.
- Chattopadhyay, R. and Duflo E. (2004). 'Women as policy makers: evidence from a randomized policy experiment in India', *Econometrica*, vol. 72(5), pp. 1409-1443.
- Clots-Figueras, I. (2012). 'Are female leaders good for education? evidence from India', *American Economic Journal: Applied Economics*, vol. 4(1), pp. 212-44.
- Coffman, K. (2014). 'Evidence on self-stereotyping and the contribution of ideas', *Quarterly Journal of Economics*, vol. 129(4), pp. 1625 – 1660.
- Dal Bo, Ernesto, Olle Folke, Fred Finan, Torsten Persson and Johanna Rickne (2017) 'Who Becomes a Politician', *Quarterly Journal of Economics*, forthcoming.

- Deininger, Klaus, Songqing Jin, Hari K. Nagarajan and Fang Xia. (2015). ‘Does Female Reservation Affect Long-Term Political Outcomes? Evidence from Rural India.’ *Journal of Development Studies*, vol. 51(1): 32-49.
- Dollar, D., Fisman R., and Gatti R. (2001). ‘Are women really the ‘fairer’ sex? corruption and women in government.’ *Journal of Economic Behavior and Organization*, vol. 46(4), pp. 423-429.
- Gulzar, Saad and Muhammad Yasir Khan. 2017. ‘Why Do Citizens Become Politicians? Experimental Evidence on the Social Dimensions of Candidacy’, Working Paper.
- Ghosal, Sayantan, Anandi Mani, Sandip Mitra, Smarajit Jana and Sanchari Roy. (2017), ‘Stigma, Discrimination and Self-Image: Evidence from Kolkata Brothels’, Working paper.
- Iyer, L., Mani A., Mishra P. and Topalova P. (2012). ‘The power of political voice: women’s political representation and crime in India’, *American Economic Journal: Applied Economics*, vol. 4(4), pp. 165-193.
- Krook, Mona Lena and Leslie Schwindt-Bayer. (2013). ‘Electoral Institutions’, in *The Oxford Handbook of Gender and Politics*, edited by Georgina Waylen, Karen Celis, Johanna Kantola, and S. Laurel Weldon, Oxford University Press, 2013.
- Kruks-Wisner, Gabrielle. (2018). ‘The Pursuit of Social Welfare: Citizen Claim-Making in Rural India’, *World Politics* 70(1): 122-163.
- Kunovich, Sheri and Pamela Paxton. (2005). ‘Pathways to Power: The Role of Political Parties in Women’s National Political Representation’, *The American Journal of Sociology* vol 111: 505-552.

- Lawless, J. L. and Fox R.L. (2010). *It Still Takes A Candidate: Why Women Don't Run For Office*, New York: Cambridge University Press.
- Lawless, Jennifer L. (2012). *Becoming a Candidate: Political Ambition and the Decision to Run for Office*, New York: Cambridge University Press.
- Miller, G. (2008). ‘Women's suffrage, political responsiveness, and child survival in American history’, *Quarterly Journal of Economics*, vol.123(3), pp.1287–1327.
- Oaxaca, R. (1973). ‘Male-Female Wage Differentials in Urban Labor Markets’, *International Economic Review*, vol.14 (3): 693–709.
- Pittman, A. and R. Naciri. (2010). ‘Winning Women’s Rights in Morocco: Cultural Adaptations and Islamic Family Law’, In *Citizen Action and National Policy Reform: Making Change Happen*, edited by J. Gaventa and R. McGee. London: Zed Books.
- Priebe, Jan. (2017). ‘Political Reservation and Female Empowerment: Evidence from Maharashtra, India.’ *Oxford Development Studies*, vol. 45(4): 499-521.
- Prillaman, Soledad (2017). ‘Strength in Numbers: How Women’s Groups Close India’s Political Gender Gap’, Working paper.
- Pritchett, Lant. (2009). ‘Is India a Flailing State? Detours on the Four Lane Highway to Modernization.’ HKS Faculty Research Working Paper Series RWP09-013, John F. Kennedy School of Government, Harvard University.
- Rehavi, M. (2012). ‘Sex and politics: do female legislators affect state spending?’ Working Paper, University of British Columbia.
- Saxenal, Deshdeep (2015). ‘Now writ of sarpanch patis on display, attend meet on Swachch Bharat’, Times of India, May 24,

- <https://timesofindia.indiatimes.com/city/bhopal/Now-writ-of-sarpanch-patis-on-display-attend-meet-on-Swachch-Bharat/articleshow/47402491.cms>, accessed February 2018.
- Schlozman, Kay Lehman, Sidney Verba and Henry E. Brady. (1999). ‘Civic Engagement and the Equality Problem’, in *Civic Engagement in American Democracy* edited by Theda Skocpol and Morris P. Fiorina, Brookings Institution Press, Washington, D.C.
- Sekhon, J. S. and Titiunik R. (2012). ‘When natural experiments are neither natural nor experiments’, *American Political Science Review*, vol. 106 (1), pp. 35-57.
- Swamy, A., Azfar O., Knack S. and Lee Y. (2001). ‘Gender and corruption’, *Journal of Development Economics*, vol. 64(1), pp. 25-55.
- Todd, Chuck, Mark Murray and Carrie Dann. (2018). ‘A huge 2018 story: More than 500 women are running for major office’, NBC News, Jan 29, <https://www.nbcnews.com/politics/first-read/huge-2018-story-more-500-women-are-running-major-office-n841916>, accessed February 2018.
- UN Women. (2015). *Progress of the World’s Women 2015-2016: Transforming Economies, Realizing Rights*, ISBN: 978-1-63214-015-9
- World Economic Forum. (2017). *The Global Gender Gap Report 2017*. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf, accessed February 2018.

Table 1
Gender Gaps in Political Participation

| | Means | | Differences between men and women (gender gap) | | | |
|---|--------------|--------------|--|----------------|----------------------------------|----------------|
| | | | All respondents | | Randomly chosen respondents only | |
| | Men | Women | Coefficient | s.e. | Coefficient | s.e. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Panel A: Electoral Political Participation | | | | | | |
| Vote in last village election | 0.880 | 0.899 | -0.016 | [0.014] | -0.009 | [0.022] |
| Vote in last state election | 0.856 | 0.890 | -0.008 | [0.014] | 0.008 | [0.022] |
| Discuss 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] |
| Distribute leaflets | 0.237 | 0.102 | -0.124*** | [0.016] | -0.152*** | [0.025] |
| Organize campaign events | 0.167 | 0.087 | -0.059*** | [0.015] | -0.062*** | [0.023] |
| Donate 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] |
| Panel B: Non-electoral Political Participation | | | | | | |
| 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] |
| Ever signed a petition or letter | 0.218 | 0.121 | -0.089*** | [0.017] | -0.107*** | [0.027] |
| Ever wrote a letter to a government c | 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 | Women | All respondents | | Randomly chosen respondents only | |
| | | | Coefficient | s.e. | Coefficient | s.e. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Know about Gram Sabha <u>Answered correctly:</u> | 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] |
| <i>Index of knowledge of political institutions</i> | 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.

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

| | Means | | Difference between women and men (gender gap) | | | |
|---|-------|-------|--|---------|-------------------------------------|---------|
| | | | All respondents | | Randomly chosen respondents only | |
| | Men | Women | Coefficient | s.e. | Coefficient | s.e. |
| 1 | 2 | 3 | 4 | 5 | 6 | |
| Panel A: Self-assessed Leadership Skills | | | | | | |
| <u>Are you confident in your ability to</u> | | | | | | |
| 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] |
| Panel B: Locus of control: public life | | | | | | |
| <u>Do you agree that</u> | | | | | | |
| Our efforts can eliminate conflicts in society | 0.863 | 0.834 | -0.033** | [0.016] | -0.007 | [0.026] |
| 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] |
| Panel C: Locus of control: personal | | | | | | |
| <u>Do you agree that</u> | | | | | | |
| 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.

Table 4
Is the Political Participation Gender Gap Due to Women's Weaker Attributes?

| | 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 | -0.385*** [0.047] | -0.180*** [0.061] | -0.623*** [0.055] | -0.515*** [0.067] | -0.471*** [0.086] | -0.303*** [0.113] | -0.745*** [0.091] | -0.658*** [0.120] |
| Political knowledge index | 0.314*** [0.028] | 0.292*** [0.028] | 0.366*** [0.028] | 0.354*** [0.029] | 0.275*** [0.048] | 0.263*** [0.050] | 0.354*** [0.049] | 0.343*** [0.051] |
| Self-assessed leadership index | 0.193*** [0.026] | 0.176*** [0.027] | 0.202*** [0.027] | 0.201*** [0.027] | 0.189*** [0.045] | 0.173*** [0.047] | 0.153*** [0.045] | 0.158*** [0.044] |
| Public locus of control index | -0.029 [0.024] | -0.021 [0.024] | -0.005 [0.024] | 0 [0.024] | -0.049 [0.041] | -0.046 [0.041] | -0.004 [0.041] | -0.001 [0.041] |
| Personal locus of control index | -0.036 [0.025] | -0.036 [0.025] | 0.005 [0.028] | 0.003 [0.028] | -0.049 [0.043] | -0.049 [0.043] | -0.001 [0.047] | -0.004 [0.046] |
| Voice index | | 0.076*** [0.029] | | -0.013 [0.030] | | 0.103* [0.058] | | -0.02 [0.055] |
| Mobility index | | 0.134*** [0.030] | | 0.109*** [0.030] | | 0.071 [0.055] | | 0.093* [0.054] |
| R-squared | 0.28 | 0.29 | 0.35 | 0.35 | 0.33 | 0.34 | 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 such as a dummy for illiteracy, dummies for landlessness, religion and caste categories, a household assets index and an index of housing quality.

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 | Women | Men | Women | Men | Women | Men | Women |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 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 | | 0.164 | | 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.

Table 6

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

| | Full sample | | Randomly selected sample | |
|---|----------------------------|---------------------|----------------------------|--------------------|
| | Impact of woman pradhan on | | Impact of woman pradhan on | |
| | Women | Men | Women | Men |
| | 1 | 2 | 3 | 4 |
| Panel A: Political participation | | | | |
| 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] |
| Panel B: Supply side factors | | | | |
| 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.

Appendix Table A1
Oaxaca Blinder decomposition for the full range of political participation variables

| | 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 characteristics as men | Interaction term |
|---|---------------------------|---|---|------------------|
| Panel A: Electoral Political Participation | | | | |
| Vote in last village election | -0.019 | -0.002 | -0.017 | 0.000 |
| Vote in last state election | -0.034 | -0.009 | -0.001 | -0.024 |
| Discuss 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 |
| Panel B: Non-electoral Political Participation | | | | |
| 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 |
| Ever signed a petition or letter | 0.097 | 0.032 | 0.034 | 0.030 |
| Ever 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 |

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

| | Full sample | | Randomly selected sample | |
|---|----------------------------|----------|----------------------------|-----------|
| | Impact of woman pradhan on | | Impact of woman pradhan on | |
| | Women | Men | Women | Men |
| | 1 | 2 | 3 | 4 |
| Panel A: Electoral Political Participation | | | | |
| Vote in last village election | -0.022 | -0.022 | -0.007 | -0.033 |
| Vote in last state election | -0.034* | -0.035 | -0.071** | -0.06 |
| Discuss 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 |
| Distribute leaflets | 0.008 | 0.025 | -0.006 | 0.04 |
| Organize campaign events | 0.009 | -0.006 | -0.02 | 0.021 |
| Donate to a campaign | 0.014 | 0.008 | 0.037 | 0.007 |
| <i>Index of electoral participation</i> | 0.034 | -0.072 | -0.043 | -0.088 |
| Panel B: Non-electoral Political Participation | | | | |
| 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 |
| Ever signed a petition or letter | 0.009 | -0.025 | -0.013 | -0.013 |
| Ever 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: 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.